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Department of Environmental Protection
SOUTHWEST DISTRICT
BY

December 17, 1998

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of November 1998. In addition, the SWMD is providing the November 1998 field data forms for the Landfill, the daily leachate and collection system evaluation reports, the top of clay survey, and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for November 1998 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from Temporary Pump Station No. 5 (TPS-5) and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of November 1998 was 24.3 inches.

Regarding the flow meters, the dewatering system flow meter was replaced with a new flow meter on November 14, 1998. The dewatering pump was down for several days in November and was replaced on November 21, 1998.

The Leachate Treatment Plant was restarted on October 26, 1998 and is currently undergoing startup and testing.

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

Environmental Consultants

3012 U.S. Highway 301 North
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

December 18, 1998
File No. 0995029.24

Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Department
P. O. Box 1110
Tampa, Florida 33601

Subject: Leachate Water Balance Report Forms for November 1998,
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed the leachate management operational data from the Southeast County Landfill (SCLF) for November 1998. Attached is the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 1998 updated summary (Table 3). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD). SCS provides the following commentary on the monthly data, including recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations where appropriate.

Day (Column I)

This column presents the calendar day for the month of November 1998.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the average rainfall in inches as measured in the field from rainfall stations at the site. Total rainfall at the SCLF for November 1998 was 2.8 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. The effluent pond was drained for maintenance in March 1997, and any rainfall that accumulates in the pond is pumped

to stormwater Basin C. The average depth for recorded days of effluent in the effluent pond for November 1998 was 0 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (inches) at the bottom of the SCLF and is based on the daily piezometer measurements taken in the field. This measurement represents worst case conditions since the piezometer is currently located within the sump area of the SCLF. The average depth of recorded days of leachate over the liner for November 1998 was 24.3 inches (see Figure 1).

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 3 (TPS-3) and pumped to the Main Leachate Pump Station for subsequent treatment. The leachate pumped from TPS-3 represents the leachate being removed by the dewatering system. A new flow meter was installed on the dewatering system on November 14, 1998 and the HCSWMD began recording data on November 16, 1998. Additionally, the dewatering pump was down for some time on November 3,16,17, and was replaced on November 21, 1998. The average daily amount of leachate pumped from TPS-3 for November 1998 was approximately 3,498 gallons.

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at TPS-5 and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 currently is measured from the landfill flow meter minus the amount pumped from TPS-3. The average daily amount of leachate pumped from TPS-5 for November 1998 was approximately 71,960 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped from the main leachate pump station to the Leachate Treatment and Reclamation Facility (LTRF) for treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flow meter near TPS-3. The average daily amount of leachate pumped from the landfill to the LTRF for November 1998 was 75,224 gallons (total of 2,256,728 gallons for the month).

Leachate in 575,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 575,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily level reading. The average daily amount

of leachate stored in the tank for November 1998, based on recorded days, was 297,560 gallons.

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for November 1998 was 0 gallons.

Repairs to the treatment tanks at the LTRF have been completed and the LTRF was restarted on October 26, 1998. However, the LTRF currently is undergoing start up and testing and is expected back into service when the system stabilizes.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. During November 1998, a total of 1,889,500 gallons of leachate was hauled off site compared to 3,056,200 gallons during the previous month. The HCSWMD reduced hauling in November to provide sufficient leachate storage in the 575,000 gallon storage tank to support the LTRF operation.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF and is measured from the flow meter at the bypass loading arm. The average daily amount of leachate pumped from the leachate storage tank for use in dust control/evaporation, based on recorded days, was 5,910 gallons for November 1998 (total of 130,000 gallons for the month). Weather permitting, the HCSWMD should continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. The effluent pond was drained for maintenance in March 1997. The average daily amount of effluent stored in the effluent pond for November 1998 was 0 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF. Currently, any rainfall that accumulates in the effluent pond is pumped to stormwater Basin C.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flow meter at the irrigation pump station. Since the LTRF is shut down for repairs, effluent is not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in November 1998 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flow meter at the bypass-loading arm. Since the LTRF is shut down for repairs, effluent is not available for disposal. During November 1998, the total amount of effluent used for dust control/evaporation was 0 gallons.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site measured from the flow meter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent is not available for disposal. During November 1998, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site. The total estimated amount of leachate/effluent evaporation for November 1998 was 104,000 gallons.

Leachate Balance Summary

The leachate balance summary (see Table 3) presents a review of inflow and outflow for the LTRF as well as rainfall at the landfill. Total inflow to the LTRF (leachate pumped from the SCLF) was 2,256,728 gallons. Total outflow from the LTRF (leachate hauled, dust control and evaporation) was 2,019,500 gallons. The net change in storage for the month of November (237,228) is within the expected volume and flow measurement margin of error of the leachate collection and removal system. Similarly, the year to date net change in storage of 1.8 million is within the expected volume and flow measurement margin of error.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Project Manager

For Robert B. Gardner, P.E.
Vice President
SCS ENGINEERS

RBG/LER:blj
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
NOVEMBER 1998
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in	Est. Depth	Pumped	Pumped	Leachate	Leachate	Leachate	Total	Leachate	Effluent	Effluent	Effluent	Total	
Day	final	active	int.	Rainfall (in.)	Effluent Pond (in.)	Over Liner (in.)	From Sta. No 3 (gal.)	From Sta. No. 5 (gal.)	Pumped to LTRF (gal.)	in 575K Tank (gal.)	Treated at LTRF (gal.)	Leachate Hauled (gal.)	Dust Cont./ Evaporation (gal.)	Pond Storage (gal.)	Irrigation Evaporation (gal.)	Dust Cont./ Evaporation (gal.)	Effluent Hauled (gal.)	Landfill Evaporation (gal.)
1	25.2	5	90.2	0	0	NR	***3,100***	***81,380***	84,480	NR	0	0	0	0	0	0	0	0
2	25.2	5	90.2	0	0	26.0	**3,100**	79,090	82,190	124,000	0	198,000	3,000	0	0	0	0	2,400
3	25.2	5	90.2	0	0	27.0	**3,100**	77,870	80,970	127,000	0	60,000	3,000	0	0	0	0	2,400
4	25.2	5	90.2	2.22	0	28.0	**3,100**	85,690	88,790	190,000	0	60,000	0	0	0	0	0	0
5	25.2	5	90.2	0.13	0	27.0	**3,100**	74,245	77,345	202,000	0	72,000	0	0	0	0	0	0
6	25.2	5	90.2	0	0	25.0	**3,100**	67,785	70,885	173,000	0	72,000	3,000	0	0	0	0	2,400
7	25.2	5	90.2	0	0	24.5	**3,100**	72,450	75,550	274,000	0	36,500	4,000	0	0	0	0	3,200
8	25.2	5	90.2	0	0	NR	***3,100***	***72,450***	75,550	NR	0	0	0	0	0	0	0	0
9	25.2	5	90.2	0	0	25.0	3,100	74,100	77,200	317,000	0	43,000	3,000	0	0	0	0	2,400
10	25.2	5	90.2	0	0	24.5	3,100	78,100	81,200	302,000	0	72,000	3,000	0	0	0	0	2,400
11	25.2	5	90.2	0	0	24.5	3,100	73,730	76,830	282,000	0	90,000	6,000	0	0	0	0	4,800
12	25.2	5	90.2	0	0	24.5	3,100	73,540	76,640	248,000	0	103,000	6,000	0	0	0	0	4,800
13	25.2	5	90.2	0	0	25.0	3,100	74,820	77,920	219,000	0	114,000	3,000	0	0	0	0	2,400
14	25.2	5	90.2	0	0	25.5	3,100	75,595	78,695	331,000	0	49,000	6,000	0	0	0	0	4,80[illegible]
15	25.2	5	90.2	0	0	NR	***3,100***	***75,595***	78,695	NR	0	0	0	0	0	0	0	
16	25.2	5	90.2	0	0	24.0	385	74,880	75,265	345,000	0	72,000	6,000	0	0	0	0	4,80[illegible]
17	25.2	5	90.2	0	0	27.5	1,950	70,765	72,715	331,000	0	72,000	6,000	0	0	0	0	4,800
18	25.2	5	90.2	0	0	26.5	2,485	71,905	74,390	374,000	0	30,000	4,000	0	0	0	0	3,200
19	25.2	5	90.2	0	0	25.5	2,450	67,360	69,810	360,000	0	90,000	7,000	0	0	0	0	5,600
20	25.2	5	90.2	0	0	25.0	510	69,270	69,780	331,000	0	72,000	10,000	0	0	0	0	8,000
21	25.2	5	90.2	0.15	0	25.5	3,374	69,852	73,225	389,000	0	109,000	9,000	0	0	0	0	7,200
22	25.2	5	90.2	0	0	NR	***3,374***	***69,852***	73,225	NR	0	0	0	0	0	0	0	0
23	25.2	5	90.2	0	0	25.0	3,199	70,149	73,348	360,000	0	126,000	7,000	0	0	0	0	5,600
24	25.2	5	90.2	0	0	27.0	5,734	69,878	75,612	360,000	0	84,000	9,000	0	0	0	0	7,200
25	25.2	5	90.2	0.28	0	27.5	5,226	66,934	72,160	435,000	0	24,000	8,000	0	0	0	0	6,400
26	25.2	5	90.2	0	0	NR	***5,226***	***66,934***	72,160	NR	0	0	0	0	0	0	0	0
27	25.2	5	90.2	0	0	23.0	3,558	65,012	68,570	429,000	0	48,000	6,000	0	0	0	0	4,800
28	25.2	5	90.2	0	0	22.0	3,610	63,658	67,268	461,000	0	115,000	6,000	0	0	0	0	4,800
29	25.2	5	90.2	0	0	NR	***3,610***	***63,658***	67,268	NR	0	0	0	0	0	0	0	0
30	25.2	5	90.2	0	0	22.0	6,749	62,244	68,993	475,000	0	78,000	12,000	0	0	0	0	9,600
Total				2.8			97,939	2,158,789	2,256,728		0	1,889,500	130,000	0	0	0	0	104,000
Daily Average					0	24.3	3,498	71,960	75,224	297,560	0	78,729	5,910	0	0	0	0	4,730
Monthly Average					0	20.2	3,265	71,960	75,224	247,967	0	62,983	4,330	0	0	0	0	3,470

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VII calculated by subtracting VI from flow meter reading.
6. Column VIII, quantity from flow meter.
7. Column IX, calculated from depth in 575,000 gal. leachate tank.
8. Columns X and XIV, quantities from flow meters.
9. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
10. Column XVII, 30% of the daily values from Columns XII, XIV and XV.
11. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
12. Daily average calculated by dividing the total by the active days in the month.
13. Monthly average calculated by dividing the total by the number of days of the month.

TABLE 2. FIELD DATA ENTRY FORM
NOVEMBER 1998
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
									Leachate Hauled							Effluent Hauled		
Day	Active Area (ac.)	Piezometer Phase IV (in.)	Phase IV LCRS Cleanout (in.)	Phase III LCR Cleanout (in.)	Pump Sta. No. 4 (in.)	Pump Sta No. 3 Reading (gal.)	Landfill Flow Meter Pump Sta. No. 5 (gal.)	Depth in 575K Tank (ft.)	Contractor (gal.)	County (gal.)	Leachate Dust Cont./ Evaporation (gal.)	Rainfall (in.)	Depth in Effl. Pond (in.)	Leachate Treated at LTRF (gal.)	Effluent Irrigation Evaporation (gal.)	Contractor (gal.)	County (gal.)	Effluent Dust Cont./ Evaporation (gal)
1	5	NR	NR	NR	NR	***1,358,960***	***2,988,940***	NR	0	0	0	0	0	0	0	0	0	0
2	5	26.0	NR	NR	NR	**1,362,060**	3,073,420	8.4	198,000	0	3,000	0	0	0	0	0	0	0
3	5	27.0	NR	NR	NR	**1,365,160**	3,155,610	4.3	60,000	0	3,000	0	0	0	0	0	0	0
4	5	28.0	NR	NR	NR	**1,368,260**	3,236,580	4.4	60,000	0	0	2.22	0	0	0	0	0	0
5	5	27.0	NR	NR	NR	**1,371,360**	3,325,370	6.6	72,000	0	0	0.13	0	0	0	0	0	0
6	5	25.0	NR	NR	NR	**1,374,460**	3,402,715	7.0	72,000	0	3,000	0	0	0	0	0	0	0
7	5	24.5	NR	NR	NR	**1,377,560**	3,473,600	6.0	36,500	0	4,000	0	0	0	0	0	0	0
8	5	NR	NR	NR	NR	***1,380,660***	***3,549,150***	NR	0	0	0	0	0	0	0	0	0	0
9	5	25.0	NR	NR	NR	**1,383,760**	3,624,700	9.5	43,000	0	3,000	0	0	0	0	0	0	0
10	5	24.5	NR	NR	NR	**1,386,860**	3,701,900	11.0	72,000	0	3,000	0	0	0	0	0	0	0
11	5	24.5	NR	NR	NR	**1,389,960**	3,783,100	10.5	90,000	0	6,000	0	0	0	0	0	0	0
12	5	24.5	NR	NR	NR	**1,393,060**	3,859,930	9.8	103,000	0	6,000	0	0	0	0	0	0	0
13	5	25.0	NR	NR	NR	**1,396,160**	3,936,570	8.6	114,000	0	3,000	0	0	0	0	0	0	0
14	5	25.5	NR	NR	NR	**1,399,260**	4,014,490	7.6	49,000	0	6,000	0	0	0	0	0	0	0
15	5	NR	NR	NR	NR	***1,402,360***	***4,093,185***	NR	0	0	0	0	0	0	0	0	0	0
16	5	24.0	NR	NR	NR	4,950	4,171,880	11.5	72,000	0	6,000	0	0	0	0	0	0	0
17	5	27.5	NR	NR	NR	5,335	4,247,145	12.0	72,000	0	6,000	0	0	0	0	0	0	0
18	5	26.5	NR	NR	NR	7,285	4,319,860	11.5	30,000	0	4,000	0	0	0	0	0	0	0
19	5	25.5	NR	NR	NR	9,770	4,394,250	13.0	90,000	0	7,000	0	0	0	0	0	0	0
20	5	25.0	NR	NR	NR	12,220	4,464,060	12.5	72,000	0	10,000	0	0	0	0	0	0	0
21	5	25.5	NR	NR	NR	12,730	4,533,840	11.5	109,000	0	9,000	0.15	0	0	0	0	0	0
22	5	NR	NR	NR	NR	***16,104***	***4,607,065***	NR	0	0	0	0	0	0	0	0	0	0
23	5	25.0	NR	NR	NR	19,477	4,680,290	13.5	126,000	0	7,000	0	0	0	0	0	0	0
24	5	27.0	NR	NR	NR	22,676	4,753,638	12.5	84,000	0	9,000	0	0	0	0	0	0	0
25	5	27.5	NR	NR	NR	28,410	4,829,250	12.5	24,000	0	8,000	0.28	0	0	0	0	0	0
26	5	NR	NR	NR	NR	***33,636***	***4,901,410***	NR	0	0	0	0	0	0	0	0	0	0
27	5	23.0	NR	NR	NR	38,862	4,973,570	15.1	48,000	0	6,000	0	0	0	0	0	0	0
28	5	22.0	NR	NR	NR	42,420	5,042,140	14.9	115,000	0	6,000	0	0	0	0	0	0	0
29	5	NR	NR	NR	NR	***46,030***	***5,109,408***	NR	0	0	0	0	0	0	0	0	0	0
30	5	22.0	NR	NR	NR	49,640	5,176,675	16.0	78,000	0	12,000	0	0	0	0	0	0	0

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Notes:

1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column XIII, Trace is less than 0.01 inches.
5. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
6. Column III, Phase IV piezometer began monitoring on 7/10/95.
7. Columns VII, XV and XVI, quantities from flow meters.

TABLE 3. 1998 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change in Storage For Month (gal.)
January	4.1	0	3,423,300	2,730,000	46,000	0	0	0	0	3,423,300	2,776,000	647,300
February	9.7	0	3,077,220	2,773,500	50,000	0	0	0	0	3,077,220	2,823,500	253,720
March	7.1	0	3,004,230	2,965,600	83,000	0	0	0	0	3,004,230	3,048,600	-44,370
April	0.4	0	2,757,220	2,858,600	98,000	0	0	0	0	2,757,220	2,956,600	-199,380
May	0.8	0	2,299,310	1,798,300	115,000	0	0	0	0	2,299,310	1,913,300	386,010
June	1.3	0	1,892,775	1,923,000	94,000	0	0	0	0	1,892,775	2,017,000	-124,225
July	7.9	0	2,463,725	2,201,300	90,000					2,463,725	2,291,300	172,425
August	6.8	0	2,463,725	2,042,400	92,000	0	0	0	0	2,463,725	2,134,400	329,325
September	17.3	0	2,700,000	2,343,900	37,000	0	0	0	0	2,700,000	2,380,900	319,100
October	6.7	0	2,988,940	3,056,200	84,000	0	0	0	0	2,988,940	3,140,200	-151,260
November	2.8	0	2,256,728	1,889,500	130,000	0	0	0	0	2,256,728	2,019,500	237,228
December										0	0	0
YTD Total	64.9	0	29,327,173	26,582,300	919,000	0	0	0	0	29,327,173	27,501,300	

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Note:

1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

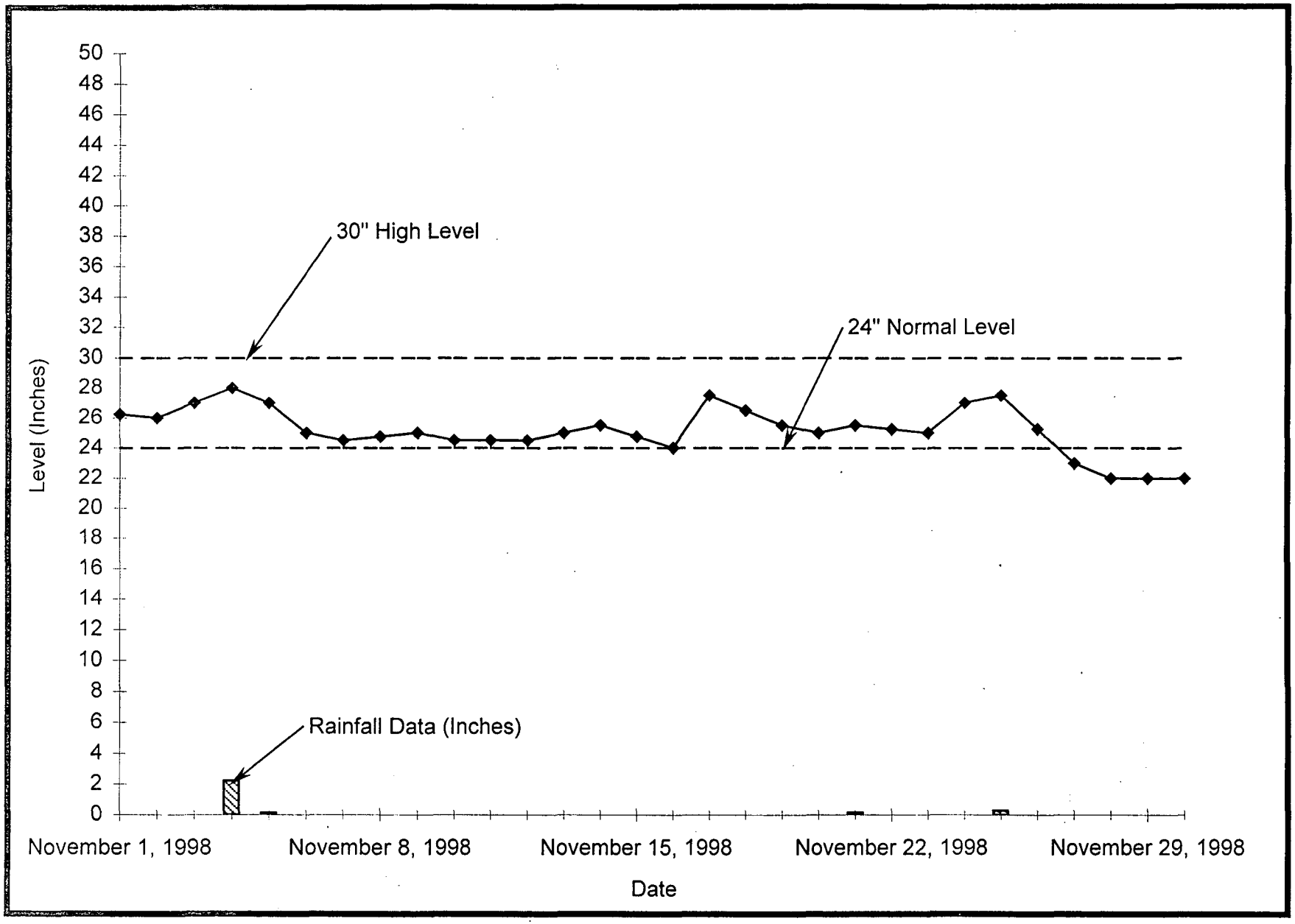

Figure 1. Phase IV Piezometer Levels for November 1998

12/18/1998 11-98bal.xls

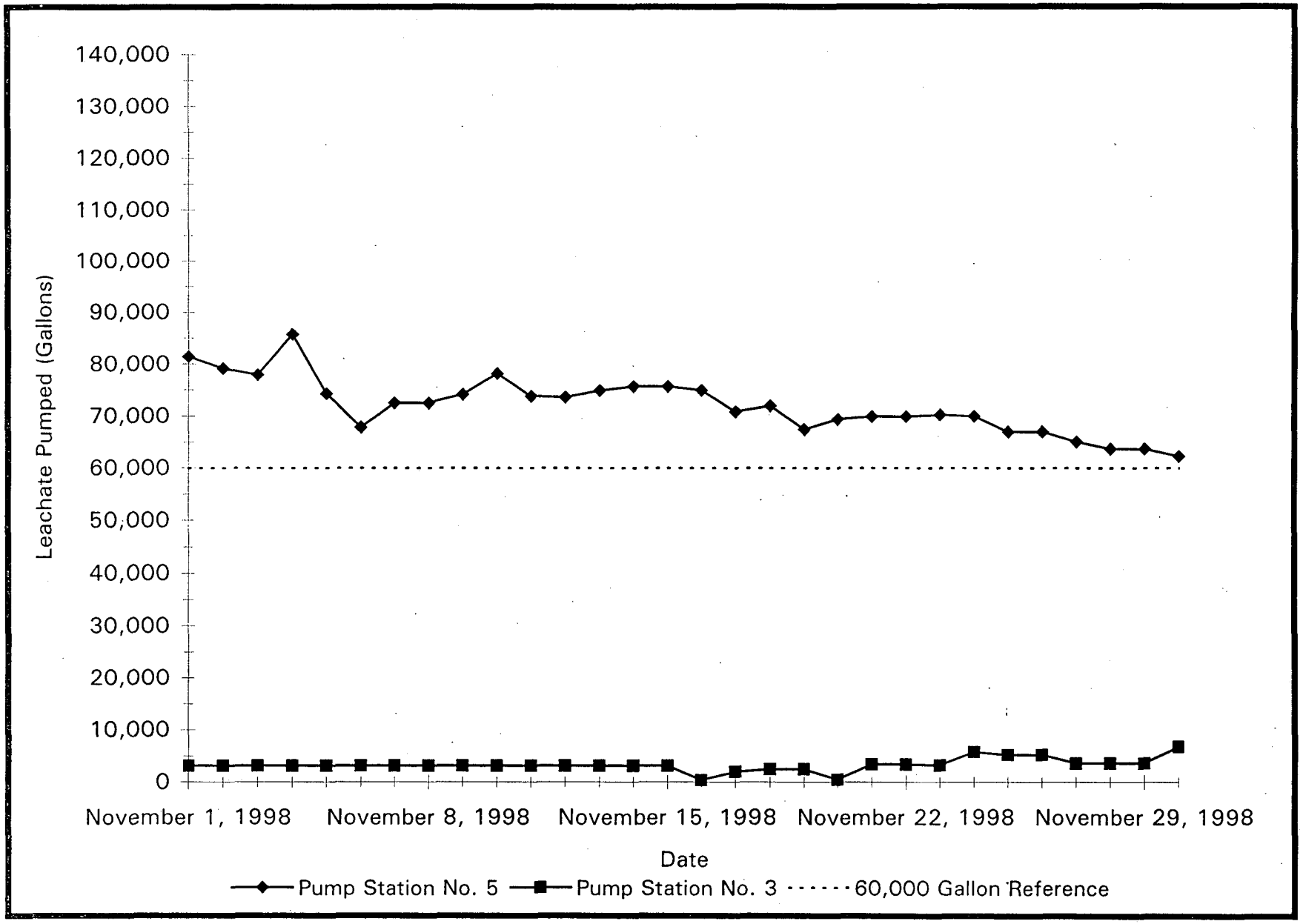

Figure 2. Flow Rates for Pump Station No. 3 and 5 for November 1998

12/18/1998 11-98bal.xls

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Nov. 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading ([redacted])	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		NR				NR	NR	NR	Ø	Ø	Ø	Ø
2		26				NR	3,073,420	8.4	198,000	Ø	3,000	Ø
3		27				NR	3,155,610	4.3	60,000	Ø	3,000	Ø
4		28				NR	3,236580	4.4	60,000	Ø	Ø	2.22
5		27				NR	3,325370	6.6	72,000	Ø	Ø	0.13
6		25				NR	3,402,715	7.0	72,000	Ø	3,000	Ø
7		24.5				NR	3,473,600	6	36,500	Ø	4,000	Ø
8		NR				NR	NR	NR	Ø	Ø	Ø	Ø
9		25				NR	3,624,700	9.5	43,000	Ø	3,000	Ø
10		24.5				NR	3,701,900	11.0	72,000	Ø	3,000	Ø
11		24.5				NR	3,783,100	10.5	90,000	Ø	6,000	Ø
12		24.5				NR	3,859930	9.8	103,000	Ø	6,000	Ø
13		25				NR	3,936,570	8.6	114,000	Ø	3,000	Ø
14		25.5				NR	4,014,490	7.6	49,000	Ø	6,000	Ø
15		NR				NR	NR	NR	Ø	Ø	Ø	Ø
16		24				4,950	4,171,880	11.5	72,000	Ø	6,000	

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Prepared by: M. Walker

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) Nov. 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (kWh)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		27.5				5,335	4,247,145	12.0	72,000	Ø	6,000	Ø
18		26.5				7,285	4,319,860	11.5	30,000	Ø	4,000	Ø
19		25.5				9,770	4,394250	13.0	90,000	Ø	7,000	Ø
20		25				12,220	4,464,060	12.5	72,000	Ø	10,000	Ø
21		25.5				12,730	4,533,840	11.5	109,000	Ø	9,000	0.15
22		NR				NR	NR	NR	Ø	Ø	Ø	Ø
23		25				19,477	4,680,290	13.5	126,000	Ø	7,000	Ø
24		27				22,676	4,753638	12.5	84,000	Ø	9,000	Ø
25		27.5				28,410	4,829,250	12.5	24,000	Ø	8,000	0.28
26		NR				NR	NR	NR	Ø	Ø	Ø	Ø
27		23				38,862	4,973,570	15.1	48,000	Ø	6,000	Ø
28		22				42,420	5,042,140	14.9	115,000	Ø	6,000	Ø
29		NR				NR	NR	NR	Ø	Ø	Ø	Ø
30		22				49,640	5,176,675	16	78,000	Ø	12,000	Ø
31												

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Leachate Hauled Month Total: _____

Prepared by: W. Walters

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Nov. 98

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									

(1) If yes: Contact Supervisor Immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: _____

Prepared by: K. Watters

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) Nov. 98

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

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(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: _____

Prepared by: _____

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL
(Month/Year) Nov. 98

Action	Date															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer Phase IV																
Low Level Operation, depth less than or equal to 12 inches.																
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.	NR							NR							NR	✓
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		
Sump No. 4 Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.																
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTRF																
Normal Operation.	NR	✓			✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	
If level is greater than 11 feet, increase treatment, hauling , or recirculation.																✓
If level is less than 6 feet, decrease or stop hauling, recirculation.			✓	✓												
Effluent Pond																
Normal Operation.																
If level is 6 inches or less, stop irrigation, recirculation, hauling.																
If level is greater than 4 feet, increase irrigation, recirculation, hauling.																
Observed runoff of effluent to stormwater basins?																
No.																
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.																
Runoff Type / To Basin																
1 = Severe / A, B, C, D																
2 = Moderate																
3 = Minor																

Comments/Remedial Action: _____

Prepared by W. Walters

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) Nov. 98

Action	Date														
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer-Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.						NR				NR	✓	✓	NR	✓	
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓	✓	✓		✓	✓	✓						
Pump Station No. 4-Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.															
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.						NR				NR			NR		
If level is greater than 11 feet, increase treatment, hauling , or recirculation.	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓		✓	
If level is less than 6 feet, decrease or stop hauling, recirculation.															
Effluent Pond															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.															
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.															
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.															

Runoff Type	To Basin
1=Severe	A, B, C, D
2=Moderate	
3=Minor	

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Comments/Remedial Action: _____

Prepared by: _____

BOARD OF COUNTY COMMISSIONERS
Pat Frank
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Hillsborough County
Florida

Office of the County Administrator
Daniel A. Kleman

Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimmie Keel

November 18, 1998

RECEIVED
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Depar... ...rotection
SOUTHWEST DISTRICT
BY _____

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of October 1998. In addition, the SWMD is providing the October 1998 field data forms for the Landfill, the daily leachate and collection system evaluation reports, the top of clay survey, and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for October 1998 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from Temporary Pump Station No. 5 (TPS-5) and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of October 1998 was 26.5 inches. The rehabilitation of the wellpoint dewatering system was completed on October 20, 1998. The leachate depth over the liner exceeded 30 inches during October 19 -21, 1998 due to the wellpoint system being down for rehabilitation.

Regarding the flow meters, the SWMD replaced the landfill flow meter near TPS-3 on October 1, 1998. The dewatering system flow meter was replaced with a new flow meter on November 14, 1998.

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

Environmental Consultants

3012 U.S. Highway 301 Nor
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

November 16, 1998
File No. 0995029.24

Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Department
P. O. Box 1110
Tampa, Florida 33601

Subject: Leachate Water Balance Report Forms for October 1998,
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed the leachate management operational data from the Southeast County Landfill (SCLF) for October 1998. Attached is the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 1998 updated summary (Table 3). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD). SCS provides the following commentary on the monthly data, including recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations where appropriate.

Day (Column I)

This column presents the calendar day for the month of October 1998.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the average rainfall in inches as measured in the field from rainfall stations at the site. Total rainfall at the SCLF for October 1998 was 6.7 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. The effluent pond was drained for maintenance in March 1997, and any rainfall that accumulates in the pond is pumped

to stormwater Basin C. The average depth for recorded days of effluent in the effluent pond for October 1998 was 0 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (inches) at the bottom of the SCLF and is based on the daily piezometer measurements taken in the field. This measurement represents worst case conditions since the piezometer is currently located within the sump area of the SCLF. The average depth of recorded days of leachate over the liner for October 1998 was 26.5 inches (see Figure 1).

The depth over the liner exceeded 30 inches on October 19, 20, and 21, 1998 because the dewatering system was shut down for retrofitting. The retrofit of the dewatering system was conducted from October 17 through October 20, 1998. The retrofit included installing new suction lines and valves at the wellpoints. The retrofit should improve the performance of the system and aid in lowering leachate depth over the liner.

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 3 (TPS-3) and pumped to the Main Leachate Pump Station for subsequent treatment. The leachate pumped from TPS-3 represents the leachate being removed by the dewatering system. The dewatering system was down from October 17 to October 20, 1998 for retrofitting and tuning. Additionally, the dewatering pump was down for some time on October 28, 29 and 30, 1998. An estimated value of 3,100 gallons per day (Figure 2) for the month of October was used for all missing data because the flow meter has been down since March 23, 1998. SCS recommends that the HCSWMD repair or replace the flow meter as soon as possible.

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at TPS-5 and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 currently is measured from the landfill flow meter minus the amount pumped from TPS-3. TPS-5 was down for some time on October 24, 1998. The average daily amount of leachate pumped from TPS-5 for October 1998 was approximately 93,617 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped from the main leachate pump station to the Leachate Treatment and Reclamation Facility (LTRF) for treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flow meter near TPS-3. A new flow meter was installed and began recording on October 1, 1998. The average daily amount of

leachate pumped from the landfill to the LTRF for October 1998 was 96,417 gallons (total of 2,988,940 gallons for the month).

Leachate in 575,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 575,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily level reading. The average daily amount of leachate stored in the tank for October 1998, based on recorded days, was 313,741 gallons.

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for October 1998 was 0 gallons.

Repairs to the treatment tanks at the LTRF have been completed and the LTRF was restarted on October 26, 1998. However, the LTRF currently is undergoing start up and testing and is expected back into service when the system stabilizes.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. During October 1998, a total of 3,056,200 gallons of leachate was hauled off site compared to a total of 2,343,900 gallons during the previous month. The HCSWMD should continue increased off site hauling of untreated leachate until the treatment plant comes back on line.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF and is measured from the flow meter at the bypass loading arm. The average daily amount of leachate pumped from the leachate storage tank for use in dust control/evaporation, based on recorded days, was 4,200 gallons for October 1998 (total of 84,000 gallons for the month). Weather permitting, the HCSWMD should continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. The effluent pond was drained for maintenance in March 1997. The average daily amount of effluent stored in the effluent pond for October 1998 was 0 gallons.

Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF. Currently, any rainfall that accumulates in the effluent pond is pumped to stormwater Basin C.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flow meter at the irrigation pump station. Since the LTRF is shut down for repairs, effluent is not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in October 1998 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flow meter at the bypass-loading arm. Since the LTRF is shut down for repairs, effluent is not available for disposal. During October 1998, the total amount of effluent used for dust control/evaporation was 0 gallons.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site measured from the flow meter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent is not available for disposal. During October 1998, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site. The total estimated amount of leachate/effluent evaporation for October 1998 was 67,200 gallons.

Leachate Balance Summary

The leachate balance summary (see Table 3) presents a review of inflow and outflow for the LTRF as well as rainfall at the landfill. Total inflow to the LTRF (leachate pumped from the SCLF) was 2,988,940 gallons. Total outflow from the LTRF (leachate hauled, dust control and evaporation) was 3,140,200 gallons. The net change in storage for the

month of October (-151,260) is within the expected volume and flow measurement margin of error of the leachate collection and removal system (i.e. 5 percent). Similarly, the year to date net change in storage of 1.5 million is within the expected volume and flow measurement margin of error.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Project Manager

Robert B. Gardner, P.E.
Vice President
SCS ENGINEERS

RBG/LER:blj
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
OCTOBER 1998
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in Effluent Pond	Est. Depth Over Liner	Pumped From Sta. No 3	Pumped From Sta. No. 5	Leachate Pumped to LTRF	Leachate in 575K Tank	Leachate Treated at LTRF	Total Leachate Hauled	Leachate Dust Cont./ Evaporation	Effluent Pond Storage	Effluent Irrigation Evaporation	Effluent Dust Cont./ Evaporation	Total Effluent Hauled	Landfill Evaporation
Day	final	active	int.	Rainfall (in.)	(in.)	(in.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)
1	25.2	5	90.2	0.1	0	28.0	3,100	116,800	119,900	438,000	0	66,700	0	0	0	0	0	0
2	25.2	5	90.2	0.0	0	27.5	3,100	56,100	59,200	452,000	0	102,000	0	0	0	0	0	0
3	25.2	5	90.2	0.0	0	27.5	3,100	130,750	133,850	417,000	0	78,000	0	0	0	0	0	0
4	25.2	5	90.2	0.0	0	NR	***3,100***	***130,750***	133,850	NR	0	157,000	0	0	0	0	0	0
5	25.2	5	90.2	0.0	0	26.5	3,100	101,800	104,900	389,000	0	162,000	3,000	0	0	0	0	2,400
6	25.2	5	90.2	0.0	0	26.5	3,100	99,700	102,800	345,000	0	120,000	3,000	0	0	0	0	2,400
7	25.2	5	90.2	0.0	0	26.0	3,100	98,300	101,400	343,000	0	96,000	3,000	0	0	0	0	2,400
8	25.2	5	90.2	0.0	0	26.0	3,100	91,500	94,600	299,000	0	138,000	6,000	0	0	0	0	4,800
9	25.2	5	90.2	0.0	0	26.0	3,100	96,430	99,530	302,000	0	72,000	3,000	0	0	0	0	2,400
10	25.2	5	90.2	0.0	0	26.0	3,100	86,885	89,985	374,000	0	114,000	4,000	0	0	0	0	3,200
11	25.2	5	90.2	0.0	0	NR	***3,100***	***86,885***	89,985	NR	0	42,000	0	0	0	0	0	0
12	25.2	5	90.2	5.6	0	24.5	3,100	89,400	92,500	302,000	0	162,000	3,000	0	0	0	0	2,400
13	25.2	5	90.2	0.0	0	25.0	3,100	96,900	100,000	302,000	0	84,000	0	0	0	0	0	0
14	25.2	5	90.2	0.0	0	25.0	3,100	101,550	104,650	305,000	0	114,000	4,000	0	0	0	0	3,200
15	25.2	5	90.2	0.0	0	25.0	3,100	96,100	99,200	302,000	0	78,000	5,000	0	0	0	0	4,000
16	25.2	5	90.2	0.0	0	25.0	3,100	96,330	99,430	294,000	0	156,000	5,000	0	0	0	0	4,000
17	25.2	5	90.2	0.0	0	27.0	3,100	95,260	98,360	360,000	0	78,000	4,000	0	0	0	0	3,200
18	25.2	5	90.2	0.0	0	NR	***3,100***	***95,260***	98,360	NR	0	0	0	0	0	0	0	0
19	25.2	5	90.2	0.0	0	32.0	0	98,600	98,600	331,000	0	150,000	3,000	0	0	0	0	2,400
20	25.2	5	90.2	0.0	0	32.0	0	97,480	97,480	271,000	0	198,000	3,000	0	0	0	0	2,400
21	25.2	5	90.2	1.0	0	31.0	0	94,320	94,320	253,000	0	78,000	0	0	0	0	0	0
22	25.2	5	90.2	0.0	0	30.0	3,100	87,980	91,080	282,000	0	36,000	3,000	0	0	0	0	2,400
23	25.2	5	90.2	0.0	0	26.5	3,100	84,600	87,700	253,000	0	120,000	9,000	0	0	0	0	7,200
24	25.2	5	90.2	0.0	0	24.5	3,100	88,610	91,710	348,000	0	42,000	4,000	0	0	0	0	3,200
25	25.2	5	90.2	0.0	0	NR	***3,100***	***88,610***	91,710	NR	0	0	0	0	0	0	0	0
26	25.2	5	90.2	0.0	0	22.5	3,100	82,400	85,500	331,000	0	97,000	3,000	0	0	0	0	2,400
27	25.2	5	90.2	0.0	0	22.5	3,100	84,780	87,880	279,000	0	150,000	0	0	0	0	0	0
28	25.2	5	90.2	0.0	0	23.5	3,100	83,145	86,245	282,000	0	65,500	7,000	0	0	0	0	5,600
29	25.2	5	90.2	0.0	0	24.5	3,100	79,290	82,390	213,000	0	114,000	3,000	0	0	0	0	2,400
30	25.2	5	90.2	0.0	0	27.5	3,100	84,245	87,345	164,000	0	186,000	0	0	0	0	0	0
31	25.2	5	90.2	0.0	0	26.5	3,100	81,380	84,480	240,000	0	0	6,000	0	0	0	0	4,800
Total				6.7			86,800	2,902,140	2,988,940		0	3,056,200	84,000	0	0	0	0	67,200
Daily Average					0	26.5	3,215	93,617	96,417	313,741	0	109,150	4,200	0	0	0	0	3,360
Monthly Average					0	23.0	2,800	93,617	96,417	273,258	0	98,587	2,710	0	0	0	0	2,170

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VII calculated by subtracting VI from flow meter reading.
6. Column VIII, quantity from flow meter.
7. Column IX, calculated from depth in 575,000 gal. leachate tank.
8. Columns X and XIV, quantities from flow meters.
9. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
10. Column XVII, 80% of the daily values from Columns XII, XIV and XV.
11. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
12. Daily average calculated by dividing the total by the active days in the month.
13. Monthly average calculated by dividing the total by the number of days of the month.

TABLE 2. FIELD DATA ENTRY FORM
OCTOBER 1998
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
									Leachate Hauled							Effluent Hauled		
Day	Active Area (ac.)	Piezometer Phase IV (in.)	Phase IV LCRS Cleanout (in.)	Phase III LCR Cleanout (in.)	Pump Sta. No. 4 (in.)	Pump Sta No. 3 Reading (gal.)	Landfill Flow Meter Pump Sta. No. 5 (gal.)	Depth in 575K Tank (ft.)	Contractor (gal.)	County (gal.)	Leachate Dust Cont./ Evaporation (gal.)	Rainfall (in.)	Depth in Effl. Pond (in.)	Leachate Treated at LTRF (gal.)	Effluent Irrigation Evaporation (gal.)	Contractor (gal.)	County (gal.)	Effluent Dust Cont./ Evaporation (gal)
1	5	28.0	NR	NR	NR	**1,272,160**	0	14.5	66,700	0	0	0.08	0	0	0	0	0	0
2	5	27.5	NR	NR	NR	**1,275,260**	119,900	15.2	102,000	0	0	0	0	0	0	0	0	0
3	5	27.5	NR	NR	NR	**1,278,360**	179,100	15.7	78,000	0	0	0	0	0	0	0	0	0
4	5	NR	NR	NR	NR	***1,281,460***	***312,950***	NR	157,000	0	0	0	0	0	0	0	0	0
5	5	26.5	NR	NR	NR	**1,284,560**	446,800	14.5	162,000	0	3,000	0	0	0	0	0	0	0
6	5	26.5	NR	NR	NR	**1,287,660**	551,700	13.5	120,000	0	3,000	0	0	0	0	0	0	0
7	5	26.0	NR	NR	NR	**1,290,760**	654,500	12.0	96,000	0	3,000	0	0	0	0	0	0	0
8	5	26.0	NR	NR	NR	**1,293,860**	755,900	11.9	138,000	0	6,000	0	0	0	0	0	0	0
9	5	26.0	NR	NR	NR	**1,296,960**	850,500	10.4	72,000	0	3,000	0	0	0	0	0	0	0
10	5	26.0	NR	NR	NR	**1,300,060**	950,030	10.5	114,000	0	4,000	0	0	0	0	0	0	0
11	5	NR	NR	NR	NR	***1,303,160***	***1,040,015***	NR	42,000	0	0	0	0	0	0	0	0	0
12	5	24.5	NR	NR	NR	**1,306,260**	1,130,000	13.0	162,000	0	3,000	5.63	0	0	0	0	0	0
13	5	25.0	NR	NR	NR	**1,309,360**	1,222,500	10.5	84,000	0	0	0	0	0	0	0	0	0
14	5	25.0	NR	NR	NR	**1,312,460**	1,322,500	10.5	114,000	0	4,000	0	0	0	0	0	0	0
15	5	25.0	NR	NR	NR	**1,315,560**	1,427,150	10.6	78,000	0	5,000	0	0	0	0	0	0	0
16	5	25.0	NR	NR	NR	**1,318,660**	1,526,350	10.5	156,000	0	5,000	0	0	0	0	0	0	0
17	5	27.0	NR	NR	NR	**1,321,760**	1,625,780	10.2	78,000	0	4,000	0	0	0	0	0	0	0
18	5	NR	NR	NR	NR	***1,324,860***	***1,724,140***	NR	0	0	0	0	0	0	0	0	0	0
19	5	32.0	NR	NR	NR	**0**	1,822,500	12.5	150,000	0	3,000	0	0	0	0	0	0	0
20	5	32.0	NR	NR	NR	**0**	1,921,100	11.5	198,000	0	3,000	0	0	0	0	0	0	0
21	5	31.0	NR	NR	NR	**0**	2,018,580	9.4	78,000	0	0	0.98	0	0	0	0	0	0
22	5	30.0	NR	NR	NR	**1,327,960**	2,112,900	8.8	36,000	0	3,000	0	0	0	0	0	0	0
23	5	26.5	NR	NR	NR	**1,331,060**	2,203,980	9.8	120,000	0	9,000	0	0	0	0	0	0	0
24	5	24.5	NR	NR	NR	**1,334,160**	2,291,680	8.8	42,000	0	4,000	0	0	0	0	0	0	0
25	5	NR	NR	NR	NR	***1,337,260***	***2,383,390***	NR	0	0	0	0	0	0	0	0	0	0
26	5	22.5	NR	NR	NR	**1,340,360**	2,475,100	12.1	97,000	0	3,000	0	0	0	0	0	0	0
27	5	22.5	NR	NR	NR	**1,343,460**	2,560,600	11.5	150,000	0	0	0	0	0	0	0	0	0
28	5	23.5	NR	NR	NR	**1,346,560**	2,648,480	9.7	60,000	5,500	7,000	0	0	0	0	0	0	0
29	5	24.5	NR	NR	NR	**1,349,660**	2,734,725	9.8	114,000	0	3,000	0	0	0	0	0	0	0
30	5	27.5	NR	NR	NR	**1,352,760**	2,817,115	7.4	186,000	0	0	0						
31	5	26.5	NR	NR	NR	**1,355,860**	2,904,460	5.7	0	0	6,000	0	0	0	0	0	0	0

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Notes:
1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column XIII, Trace is less than 0.01 inches.
5. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
6. Column III, Phase IV piezometer began monitoring on 7/10/95.
7. Columns VII, XV and XVI, quantities from flow meters.

TABLE 3. 1998 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change in Storage For Month (gal.)
January	4.1	0	3,423,300	2,730,000	46,000	0	0	0	0	3,423,300	2,776,000	647,300
February	9.7	0	3,077,220	2,773,500	50,000	0	0	0	0	3,077,220	2,823,500	253,720
March	7.1	0	3,004,230	2,965,600	83,000	0	0	0	0	3,004,230	3,048,600	-44,370
April	0.4	0	2,757,220	2,858,600	98,000	0	0	0	0	2,757,220	2,956,600	-199,380
May	0.8	0	2,299,310	1,798,300	115,000	0	0	0	0	2,299,310	1,913,300	386,010
June	1.3	0	1,892,775	1,923,000	94,000	0	0	0	0	1,892,775	2,017,000	-124,225
July	7.9	0	2,463,725	2,201,300	90,000					2,463,725	2,291,300	172,425
August	6.8	0	2,463,725	2,042,400	92,000	0	0	0	0	2,463,725	2,134,400	329,325
September	17.3	0	2,700,000	2,343,900	37,000	0	0	0	0	2,700,000	2,380,900	319,100
October	6.7	0	2,988,940	3,056,200	84,000	0	0	0	0	2,988,940	3,140,200	-151,260
November										0	0	0
December										0	0	0
YTD Total	62.1	0	27,070,445	24,692,800	789,000	0	0	0	0	27,070,445	25,481,800	

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Note:

1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

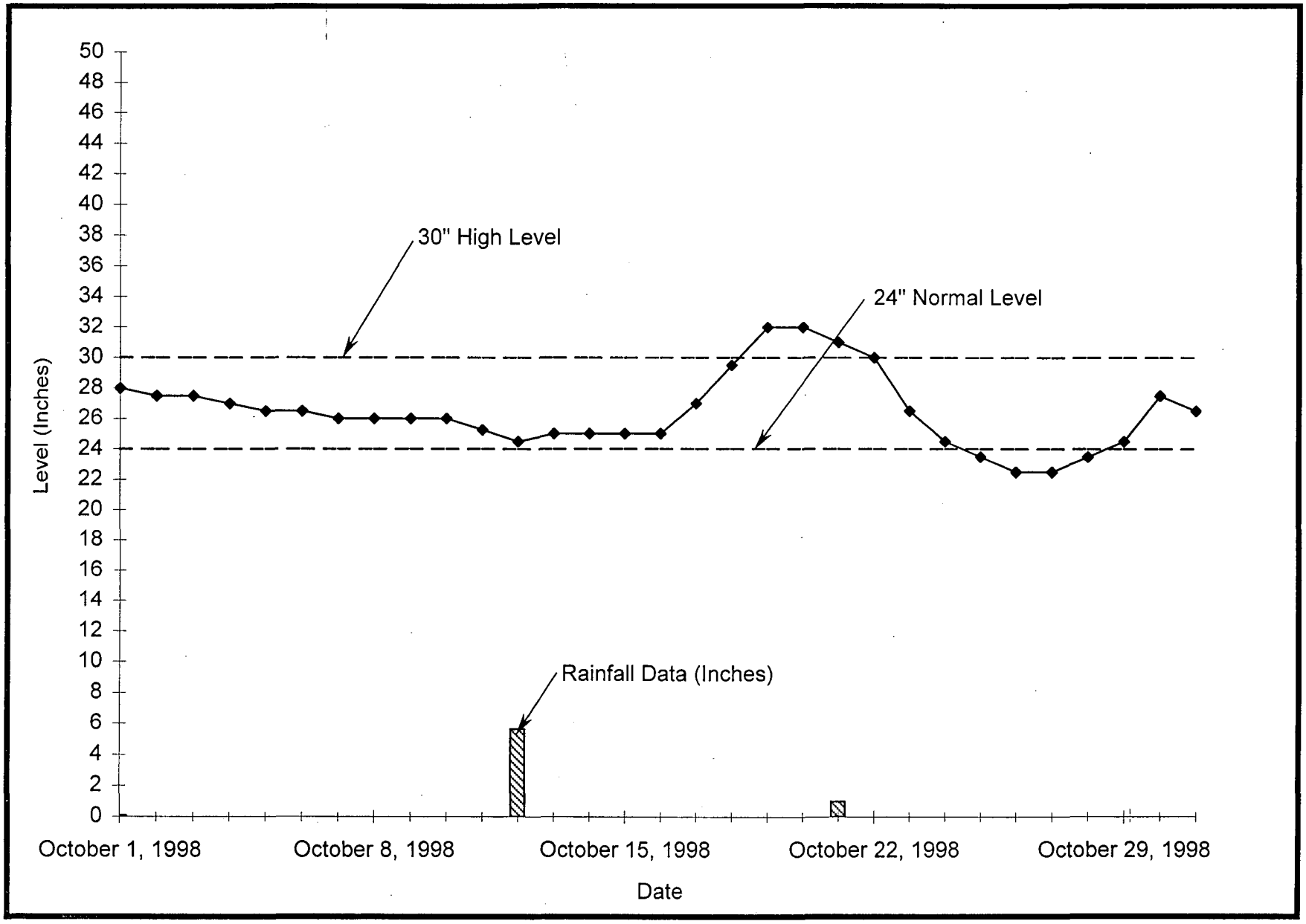

Figure 1. Phase IV Piezometer Levels for October 1998

11/16/98 10-98bal.xls

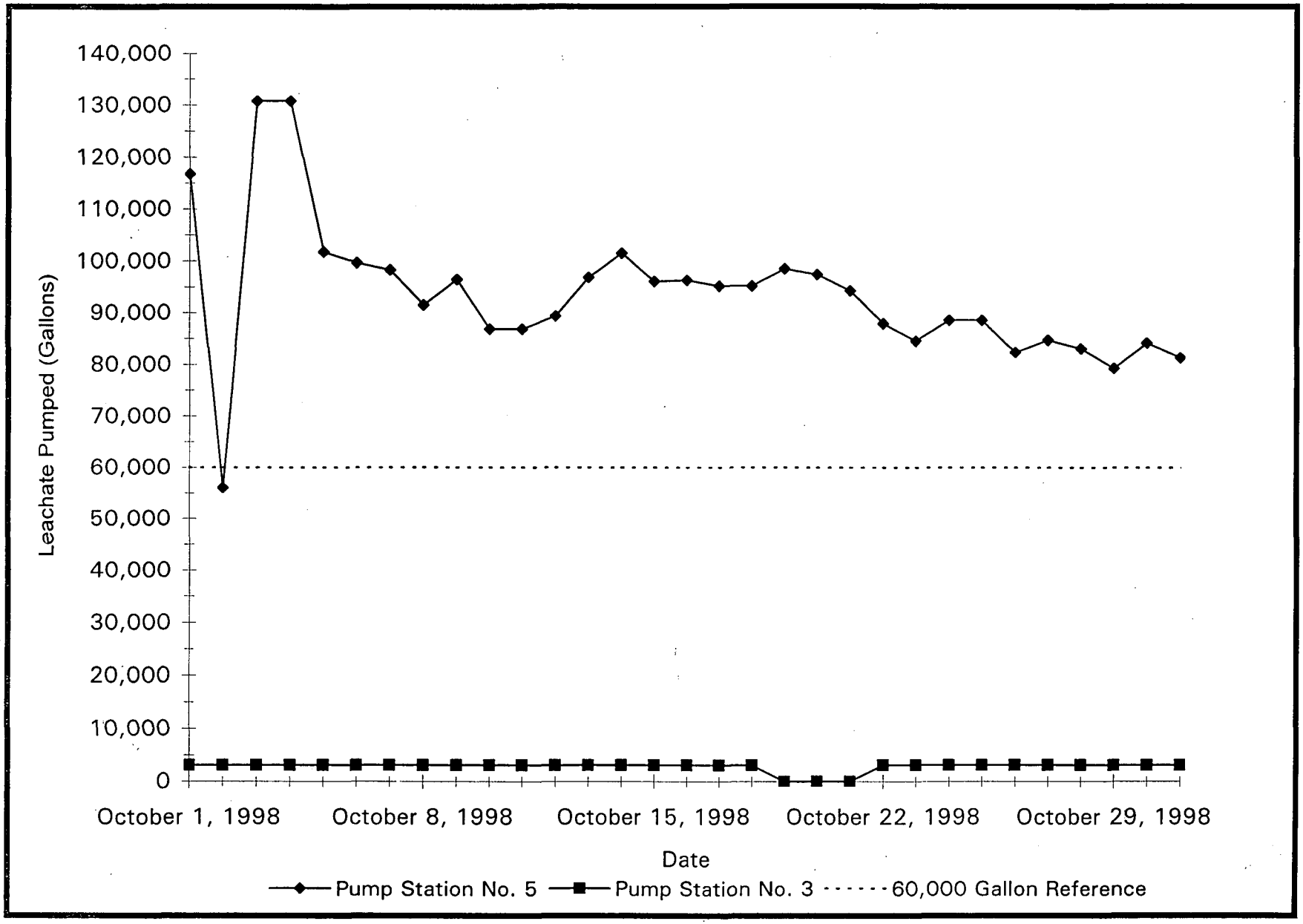

Figure 2. Flow Rates for Pump Station No. 3 and 5 for October 1998

11/16/98 10-98bal.xls

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Oct. 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		28					000000	14.5	66,700	Ø	Ø	0.08
2		27.5					119900	15.2	102,000	Ø	Ø	Ø
3		27.5					179100	15.7	78,000	Ø	Ø	Ø
4		NR					NR	NR	157,000	Ø	Ø	Ø
5		26.5					446,800	14.5	162,000	Ø	3,000	Ø
6		26.5					551700	13.5	120,000	Ø	3,000	Ø
7		26					654500	12	96,000	Ø	3,000	Ø
8		26					755900	11.9	138,000	Ø	6,000	Ø
9		26					850500	10.4	72,000	Ø	3,000	Ø
10		26					950030	10.5	114,000	Ø	4,000	Ø
11		NR					NR	NR	42,000	Ø	Ø	Ø
12		24.5					1130000	13	162,000	Ø	3,000	5.63
13		25					1222500	10.5	84,000	Ø	Ø	Ø
14		25					1322500	10.5	114,000	Ø	4,000	Ø
15		25					1427150	10.6	78,000	Ø	5,000	Ø
16		25					1526350	10.5	156,000	Ø	5,000	Ø

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor Immediately. Complete Evaluation Report Form.

Comments: _____

Prepared by: M. Matthews

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Oct. 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		27					1625780	10.2	78,000	Ø	4,000	Ø
18		NR					NR	NR	Ø	Ø	Ø	Ø
19		32					1822500	12.5	150,000	Ø	3,000	Ø
20		32					1921100	11.5	198,000	Ø	3,000	Ø
21		31					2018580	9.4	78,000	Ø	Ø	0.98
22		30					2112900	8.8	36,000	Ø	3,000	Ø
23		26.5					2203980	9.8	120,000	Ø	9,000	Ø
24		24.5					2291680	8.8	42,000	Ø	4,000	Ø
25		NR					NR	NR	Ø	Ø	Ø	Ø
26		22.5					2475100	12.10	97,000	Ø	3,000	Ø
27		22.5					2560600	11.5	150,000	Ø	Ø	Ø
28		23.5					2648480	9.7	60,000	5,500	7,000	Ø
29		24.5					2734725	9.8	114,000	Ø	3,000	Ø
30		27.5					2817115	7.4	186,000	Ø	Ø	Ø
31		26.5					2904460	5.7	Ø	Ø	6,000	Ø

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Leachate Hauled Month Total: _____

Prepared by: M. Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL
(Month/Year) Oct. 98

Action	Date 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer Phase IV																
Low Level Operation, depth less than or equal to 12 inches.																
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.				NR							NR					
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Sump No. 4 Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.																
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTRF																
Normal Operation.				NR					✓	✓	NR		✓	✓	✓	✓
If level is greater than 11 feet, increase treatment, hauling , or recirculation.	✓	✓	✓		✓	✓	✓	✓				✓				
If level is less than 6 feet, decrease or stop hauling, recirculation.																
* Effluent Pond																
Normal Operation.																
If level is 6 inches or less, stop irrigation, recirculation, hauling.																
If level is greater than 4 feet, increase irrigation, recirculation, hauling.																
Observed runoff of effluent to stormwater basins?																
No.																
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.																

Runoff Type — To Basin
1 = Severe — A, B, C, D
2 = Moderate
3 = Minor

Comments/Remedial Action: * Treatment Plant Not In Operation

Prepared by: K. Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM EVALUATION REPORT SOUTHEAST COUNTY LANDFILL

(Month/Year) Oct. 98

Action	Date 17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.		NR							NR	✓	✓	✓			
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓		✓	✓	✓	✓	✓	✓					✓	✓	✓
Sump No. 4 Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.															
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.	✓	NR			✓	✓	✓	✓	NR			✓	✓	✓	
If level is greater than 11 feet, increase treatment, hauling , or recirculation.			✓	✓						✓	✓				
If level is less than 6 feet, decrease or stop hauling, recirculation.															✓
Effluent Pond															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.															
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.															
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.															

Runoff Type	To Basin
1 = Severe	A, B, C, D
2 = Moderate	
3 = Minor	

Comments/Remedial Action: _____

Prepared by: H. Mathews

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Oct. 98

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									

(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: Treatment Plant Not In Operation

Prepared by: M. Matthews

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) Oct. 98

Date	Depth in Effluent Pond (Inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

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(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: _____

Prepared by: M. Matthews

HILLSBOROUGH COUNTY
FLORIDA

Office of the County Administrator
Daniel A. Kleman

RECEIVED
OCT 16 1998
Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

BOARD OF COUNTY COMMISSIONERS
Dottie Berger
Joe Chillura
Chris Hart
Jim Norman
Jan Platt
Thomas Scott
Ed Turanchik

Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimmie Keel

October 14, 1998

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of September 1998. In addition, the SWMD is providing the September 1998 field data forms for the Landfill, the daily leachate and collection system evaluation reports, the top of clay survey, and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for September 1998 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from Temporary Pump Station No. 5 (TPS-5) and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of September 1998 was 27.3 inches. The wellpoint dewatering system is scheduled for rehabilitation beginning October 15, 1998. The vendor's work schedule is attached for the DEP's files.

Regarding the flow meters referenced in SCS 's attached letter, the SWMD replaced the landfill flow meter on October 1, 1998. The dewatering system flow meter will be replaced in the near future.

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

GRIFFIN
Griffin Dewatering Corporation
509 S. Fetkenburg Road
Tampa, Florida 33619-8029
813-685-5599

October 14, 1998

ATTN: J. J.

FR: Griffin Dewatering Corp.

RE: SouthEast Landfill

Dear J.J.:

Griffin Dewatering schedule will be as follows:

Thursday October 15, 1998-Griffin will mobilize and proceed with day one of installation for rehabilitation wellpoints.

Friday October 16, 1998-Griffin Dewatering will complete job as specified.

We appreciate your business, and apologize for the delay. Should you require further assistance, please do not hesitate to call at your earliest convenience. Thank You!

Sincerely,

Griffin Dewatering Corp.

Environmental Consultants

3012 U.S. Highway 301 North
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

October 12, 1998
File No. 0995029.24

Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Department
P. O. Box 1110
Tampa, Florida 33601

Subject: Leachate Water Balance Report Forms for September 1998,
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed the leachate management operational data from the Southeast County Landfill (SCLF) for September 1998. Attached is the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 1998 updated summary (Table 3). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD). SCS provides the following commentary on the monthly data, including recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations where appropriate.

Day (Column I)

This column presents the calendar day for the month of September 1998.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the average rainfall in inches as measured in the field from rainfall stations at the site. Total rainfall at the SCLF for September 1998 was 17.3 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. The effluent pond was drained for maintenance in March 1997, and any rainfall that accumulates in the pond is pumped

to stormwater Basin C. The average depth for recorded days of effluent in the effluent pond for September 1998 was 0 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (inches) at the bottom of the SCLF and is based on the daily piezometer measurements taken in the field. This measurement represents worst case conditions since the piezometer is currently located within the sump area of the SCLF. The average depth of recorded days of leachate over the liner for September 1998 was 27.3 inches (see Figure 1).

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 3 (TPS-3) and pumped to the Main Leachate Pump Station for subsequent treatment. The leachate pumped from TPS-3 represents the leachate being removed by the dewatering system. The dewatering pump was down for some time on September 9 and 11, 1998, due to construction activities at the landfill. An estimated value of 3,100 gallons per day (Figure 2) for the month of September was used for all missing data because the flow meter has been down since March 23, 1998. SCS recommends that the HCSWMD repair or replace the flow meter as soon as possible.

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at TPS-5 and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 currently is measured from the landfill flow meter minus the amount pumped from TPS-3. TPS-5 was down for some time on September 9 and 11, 1998, due to construction activities at the landfill. In addition, the landfill flow meter stopped recording data and has been down since July 19, 1998. Since there was no recorded data for the month of September, SCS used an average flow rate based on the previous months recorded days for the missing data. The average estimated daily amount of leachate pumped from TPS-5 for September 1998 was approximately 86,900 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped from the main leachate pump station to the Leachate Treatment and Reclamation Facility (LTRF) for treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flow meter near TPS-3. Since the landfill flow meter stopped recording sometime on July 19, 1998, SCS used an average flow rate based on the previous months recorded days for the missing data. The average estimated daily

amount of leachate pumped from the landfill to the LTRF for September 1998 was 90,000 gallons (total of 2,700,000 gallons for the month).

Leachate in 575,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 575,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily gauge level reading. The 575,000 gallon tank was taken out of service on June 17, 1998, for cleaning and inspection. This process was completed and the 575,000 gallon tank resumed receiving leachate on September 9, 1998. The average daily amount of leachate stored in the tank for September 1998, based on recorded days, was 244,389 gallons.

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for September 1998 was 0 gallons.

The LTRF has not been operational since September 3, 1996, to allow for repairs to the treatment tanks. However, repairs to the treatment tanks at the LTRF have been completed and the LTRF is scheduled to be back on line October 26, 1998.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. During September 1998, a total of 2,343,900 gallons of leachate was hauled off site compared to a total of 2,042,400 gallons during the previous month. The HCSWMD should continue increased off site hauling of untreated leachate until the treatment plant comes back on line.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF and is measured from the flow meter at the bypass loading arm. The average daily amount of leachate pumped from the leachate storage tank for use in dust control/evaporation, based on recorded days, was 3,400 gallons for September 1998 (total of 37,000 gallons for the month). Weather permitting, the HCSWMD will continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth

of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. The effluent pond was drained for maintenance in March 1997. The average daily amount of effluent stored in the effluent pond for September 1998 was 0 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF. Currently, any rainfall that accumulates in the effluent pond is pumped to stormwater Basin C.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flow meter at the irrigation pump station. Since the LTRF is shut down for repairs and the effluent pond is empty for maintenance, effluent was not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in September 1998 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flow meter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During September 1998, the total amount of effluent used for dust control/evaporation was 0 gallons.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site measured from the flow meter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During September 1998, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site. The total estimated amount of leachate/effluent evaporation for September 1998 was 29,600 gallons.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Project Manager

for Robert B. Gardner, P.E.
Vice President
SCS ENGINEERS

LER/RBG:blj
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
SEPTEMBER 1998
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in Effluent	Est. Depth Over	Pumped From	Pumped From	Leachate Pumped	Leachate in 575K	Leachate Treated	Total Leachate	Leachate Dust Cont./	Effluent Pond	Effluent Irrigation	Effluent Dust Cont./	Total Effluent	Landfill
Day	final	active	Int.	Rainfall (In.)	Pond (in.)	Liner (in.)	Sta. No 3 (gal.)	Sta. No. 5 (gal.)	to LTRF (gal.)	Tank (gal.)	at LTRF (gal.)	Hauled (gal.)	Evaporation (gal.)	Storage (gal.)	Evaporation (gal.)	Evaporation (gal.)	Hauled (gal.)	Evaporation (gal.)
1	25.2	5	90.2	0.0	0	27.0	***3,100***	***86,900***	***90,000***	NR	0	36,000	3,000	0	0	0	0	2,400
2	25.2	5	90.2	0.0	0	27.5	***3,100***	***86,900***	***90,000***	NR	0	30,000	3,000	0	0	0	0	2,400
3	25.2	5	90.2	0.4	0	28.0	***3,100***	***86,900***	***90,000***	NR	0	114,000	0	0	0	0	0	0
4	25.2	5	90.2	0.0	0	27.0	***3,100***	***86,900***	***90,000***	NR	0	54,000	5,000	0	0	0	0	4,000
5	25.2	5	90.2	0.0	0	26.0	***3,100***	***86,900***	***90,000***	NR	0	102,300	3,000	0	0	0	0	2,400
6	25.2	5	90.2	1.9	0	NR	***3,100***	***86,900***	***90,000***	NR	0	30,000	0	0	0	0	0	0
7	25.2	5	90.2	0.5	0	NR	***3,100***	***86,900***	***90,000***	NR	0	54,000	0	0	0	0	0	0
8	25.2	5	90.2	0.5	0	28.5	***3,100***	***86,900***	***90,000***	NR	0	72,000	3,000	0	0	0	0	2,400
9	25.2	5	90.2	0.8	0	28.5	***3,100***	***86,900***	***90,000***	NR	0	30,000	0	0	0	0	0	0
10	25.2	5	90.2	0.0	0	27.0	***3,100***	***86,900***	***90,000***	89,000	0	24,000	5,000	0	0	0	0	4,000
11	25.2	5	90.2	0.0	0	28.0	***3,100***	***86,900***	***90,000***	127,000	0	42,000	2,000	0	0	0	0	1,600
12	25.2	5	90.2	0.0	0	27.5	***3,100***	***86,900***	***90,000***	248,000	0	30,000	3,000	0	0	0	0	2,400
13	25.2	5	90.2	0.0	0	NR	***3,100***	***86,900***	***90,000***	NR	0	0	0	0	0	0	0	0
14	25.2	5	90.2	0.0	0	26.0	***3,100***	***86,900***	***90,000***	173,000	0	90,000	0	0	0	0	0	0
15	25.2	5	90.2	1.6	0	27.0	***3,100***	***86,900***	***90,000***	118,000	0	114,000	0	0	0	0	0	0
16	25.2	5	90.2	0.0	0	27.0	***3,100***	***86,900***	***90,000***	153,000	0	66,000	5,000	0	0	0	0	4,000
17	25.2	5	90.2	0.2	0	27.5	***3,100***	***86,900***	***90,000***	101,000	0	120,000	0	0	0	0	0	0
18	25.2	5	90.2	2.0	0	28.0	***3,100***	***86,900***	***90,000***	115,000	0	78,000	2,000	0	0	0	0	1,600
19	25.2	5	90.2	2.8	0	29.0	***3,100***	***86,900***	***90,000***	337,000	0	24,000	0	0	0	0	0	0
20	25.2	5	90.2	1.4	0	NR	***3,100***	***86,900***	***90,000***	NR	0	0	0	0	0	0	0	0
21	25.2	5	90.2	0.1	0	30.0	***3,100***	***86,900***	***90,000***	345,000	0	126,000	0	0	0	0	0	0
22	25.2	5	90.2	0.0	0	26.0	***3,100***	***86,900***	***90,000***	343,000	0	126,900	3,000	0	0	0	0	2,400
23	25.2	5	90.2	0.9	0	24.5	***3,100***	***86,900***	***90,000***	302,000	0	164,000	0	0	0	0	0	0
24	25.2	5	90.2	0.5	0	25.5	***3,100***	***86,900***	***90,000***	279,000	0	132,000	0	0	0	0	0	0
25	25.2	5	90.2	2.7	0	26.0	***3,100***	***86,900***	***90,000***	432,000	0	120,000	0	0	0	0	0	0
26	25.2	5	90.2	0.5	0	NR	***3,100***	***86,900***	***90,000***	NR	0	126,000	0	0	0	0	0	0
27	25.2	5	90.2	0.1	0	NR	***3,100***	***86,900***	***90,000***	NR	0	0	0	0	0	0	0	0
28	25.2	5	90.2	0.0	0	28.0	***3,100***	***86,900***	***90,000***	417,000	0	156,000	0	0	0	0	0	0
29	25.2	5	90.2	0.0	0	28.0	***3,100***	***86,900***	***90,000***	403,000	0	138,000	0	0	0	0	0	0
30	25.2	5	90.2	0.4	0	28.5	***3,100***	***86,900***	***90,000***	417,000	0	144,700	0	0	0	0	0	0
Total				17.3			***93,000***	***2,607,000***	***2,700,000***		0	2,343,900	37,000	0	0	0	0	29,600
Daily Average					0	27.3	***3,100***	***86,900***	***90,000***	244,389	0	86,811	3,400	0	0	0	0	2,700
Monthly Average					0	21.9	***3,100***	***86,900***	***90,000***	146,633	0	78,130	1,200	0	0	0	0	1,000

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VII calculated by subtracting VI from flow meter reading.
6. Column VIII, quantity from flow meter.
7. Column IX, calculated from depth in 575,000 gal. leachate tank.
8. Columns X and XIV, quantities from flow meters.
9. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
10. Column XVII, 80% of the daily values from Columns XII, XIV and XV.
11. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
12. Daily average calculated by dividing the total by the active days in the month.
13. Monthly average calculated by dividing the total by the number of days of the month.

TABLE 2. FIELD DATA ENTRY FORM
SEPTEMBER 1998
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
							Landfill Flow		Leachate Hauled		Leachate Dust Cont./			Leachate	Effluent	Effluent Hauled		Effluent Dust Cont./
Day	Active Area (ac.)	Piezometer Phase IV (in.)	Phase IV LCRS Cleanout (in.)	Phase III LCR Cleanout (in.)	Pump Sta. No. 4 (in.)	Pump Sta No. 3 Reading (gal.)	Meter Pump Sta. No. 5 (gal.)	Depth in 575K Tank (ft.)	Contractor (gal.)	County (gal.)	Evaporation (gal.)	Rainfall (in.)	Depth in Effl. Pond (in.)	Treated at LTRF (gal.)	Irrigation Evaporation (gal.)	Contractor (gal.)	County (gal.)	Evaporation (gal)
1	5	27.0	NR	NR	NR	***1,179,160***	***10,993,550***	NR	36,000	0	3,000	0	0	0	0	0	0	0
2	5	27.5	NR	NR	NR	***1,182,260***	***11,083,550***	NR	30,000	0	3,000	0	0	0	0	0	0	0
3	5	28.0	NR	NR	NR	***1,185,360***	***11,173,550***	NR	114,000	0	0	0.40	0	0	0	0	0	0
4	5	27.0	NR	NR	NR	***1,188,460***	***11,263,550***	NR	54,000	0	5,000	0	0	0	0	0	0	0
5	5	26.0	NR	NR	NR	***1,191,560***	***11,353,550***	NR	102,300	0	3,000	0	0	0	0	0	0	0
6	5	NR	NR	NR	NR	***1,194,660***	***11,443,550***	NR	30,000	0	0	1.88	0	0	0	0	0	0
7	5	NR	NR	NR	NR	***1,197,760***	***11,533,550***	NR	54,000	0	0	0.52	0	0	0	0	0	0
8	5	28.5	NR	NR	NR	***1,200,860***	***11,623,550***	NR	72,000	0	3,000	0.83	0	0	0	0	0	0
9	5	28.5	NR	NR	NR	***1,203,960***	***11,713,550***	NR	30,000	0	0	0.15	0	0	0	0	0	0
10	5	27.0	NR	NR	NR	***1,207,060***	***11,803,550***	3.2	24,000	0	5,000	0	0	0	0	0	0	0
11	5	28.0	NR	NR	NR	***1,210,160***	***11,893,550***	3.1	42,000	0	2,000	0	0	0	0	0	0	0
12	5	27.5	NR	NR	NR	***1,213,260***	***11,983,550***	4.4	30,000	0	3,000	0	0	0	0	0	0	0
13	5	NR	NR	NR	NR	***1,216,360***	***12,073,550***	NR	0	0	0	0	0	0	0	0	0	0
14	5	26.0	NR	NR	NR	***1,219,460***	***12,163,550***	8.6	90,000	0	0	0	0	0	0	0	0	0
15	5	27.0	NR	NR	NR	***1,222,560***	***12,253,550***	6.0	114,000	0	0	1.60	0	0	0	0	0	0
16	5	27.0	NR	NR	NR	***1,225,660***	***12,343,550***	4.1	66,000	0	5,000	0.03	0	0	0	0	0	0
17	5	27.5	NR	NR	NR	***1,228,760***	***12,433,550***	5.3	120,000	0	0	0.23	0	0	0	0	0	0
18	5	28.0	NR	NR	NR	***1,231,860***	***12,523,550***	3.5	78,000	0	2,000	2.00	0	0	0	0	0	0
19	5	29.0	NR	NR	NR	***1,234,960***	***12,613,550***	4.0	24,000	0	0	2.77	0	0	0	0	0	0
20	5	NR	NR	NR	NR	***1,238,060***	***12,703,550***	NR	0	0	0	1.35	0	0	0	0	0	0
21	5	30.0	NR	NR	NR	***1,241,160***	***12,793,550***	11.7	126,000	0	0	0.07	0	0	0	0	0	0
22	5	26.0	NR	NR	NR	***1,244,260***	***12,883,550***	12.0	120,600	6,300	3,000	0.03	0	0	0	0	0	0
23	5	24.5	NR	NR	NR	***1,247,360***	***12,973,550***	11.9	164,000	0	0	0.90	0	0	0	0	0	0
24	5	25.5	NR	NR	NR	***1,250,460***	***13,063,550***	10.5	132,000	0	0	0.48	0	0	0	0	0	0
25	5	26.0	NR	NR	NR	***1,253,560***	***13,153,550***	9.7	120,000	0	0	2.70	0	0	0	0	0	0
26	5	NR	NR	NR	NR	***1,256,660***	***13,243,550***	NR	126,000	0	0	0.52	0	0	0	0	0	0
27	5	NR	NR	NR	NR	***1,259,760***	***13,333,550***	NR	0	0	0	0.05	0	0	0	0	0	0
28	5	28.0	NR	NR	NR	***1,262,860***	***13,423,550***	15.0	156,000	0	0	0	0	0	0	0	0	0
29	5	28.0	NR	NR	NR	***1,265,960***	***13,513,550***	14.5	138,000	0	0	0	0	0	0	0	0	0
30	5	28.5	NR	NR	NR	***1,269,060***	***13,603,550***	14.0	144,700	0	0	0.40	0	0	0	0	0	0

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Notes:
1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column XIII, Trace is less than 0.01 inches.
5. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
6. Column III, Phase IV piezometer began monitoring on 7/10/95.
7. Columns VII, XV and XVI, quantities from flow meters.

TABLE 3. 1998 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change in Storage For Month (gal.)
January	4.1	0	3,423,300	2,730,000	46,000	0	0	0	0	3,423,300	2,776,000	647,300
February	9.7	0	3,077,220	2,773,500	50,000	0	0	0	0	3,077,220	2,823,500	253,720
March	7.1	0	3,004,230	2,965,600	83,000	0	0	0	0	3,004,230	3,048,600	-44,370
April	0.4	0	2,757,220	2,858,600	98,000	0	0	0	0	2,757,220	2,956,600	-199,380
May	0.8	0	2,299,310	1,798,300	115,000	0	0	0	0	2,299,310	1,913,300	386,010
June	1.3	0	1,892,775	1,923,000	94,000	0	0	0	0	1,892,775	2,017,000	-124,225
July	7.9	0	2,463,725	2,201,300	90,000					2,463,725	2,291,300	172,425
August	6.8	0	2,463,725	2,042,400	92,000	0	0	0	0	2,463,725	2,134,400	329,325
September	17.3	0	2,700,000	2,343,900	37,000	0	0	0	0	2,700,000	2,380,900	319,100
October										0	0	0
November										0	0	0
December										0	0	0
YTD Total	55.4	0	24,081,505	21,636,600	705,000	0	0	0	0	24,081,505	22,341,600	

f:\project\hillsbor\0985029.24\leachate\98summ.xls (Revised 10/9/98 by BLJ)

Note:

1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

BEST AVAILABLE COPY

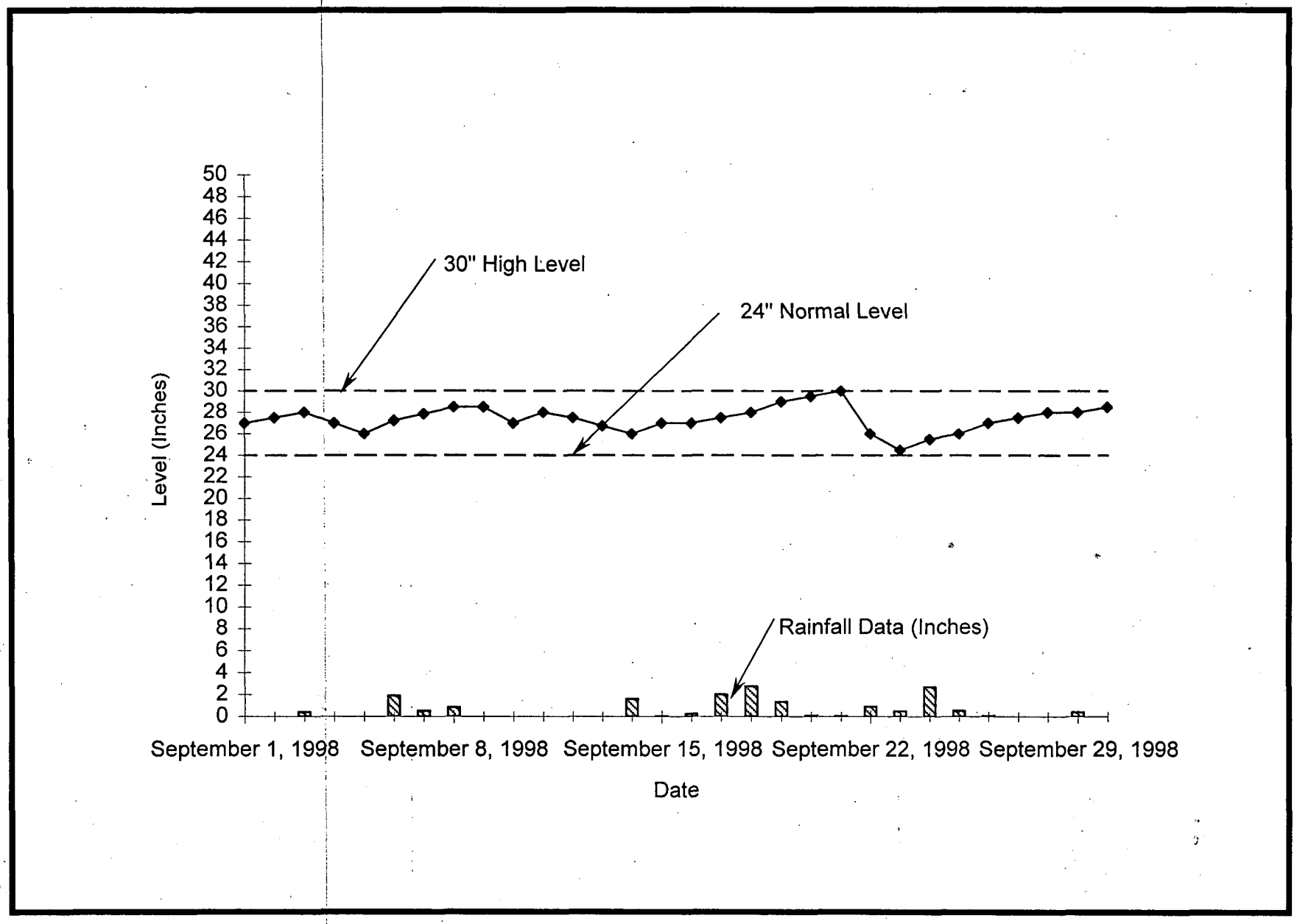

Figure 1. Phase IV Piezometer Levels for September 1998

10/12/98 09-98bal.xls

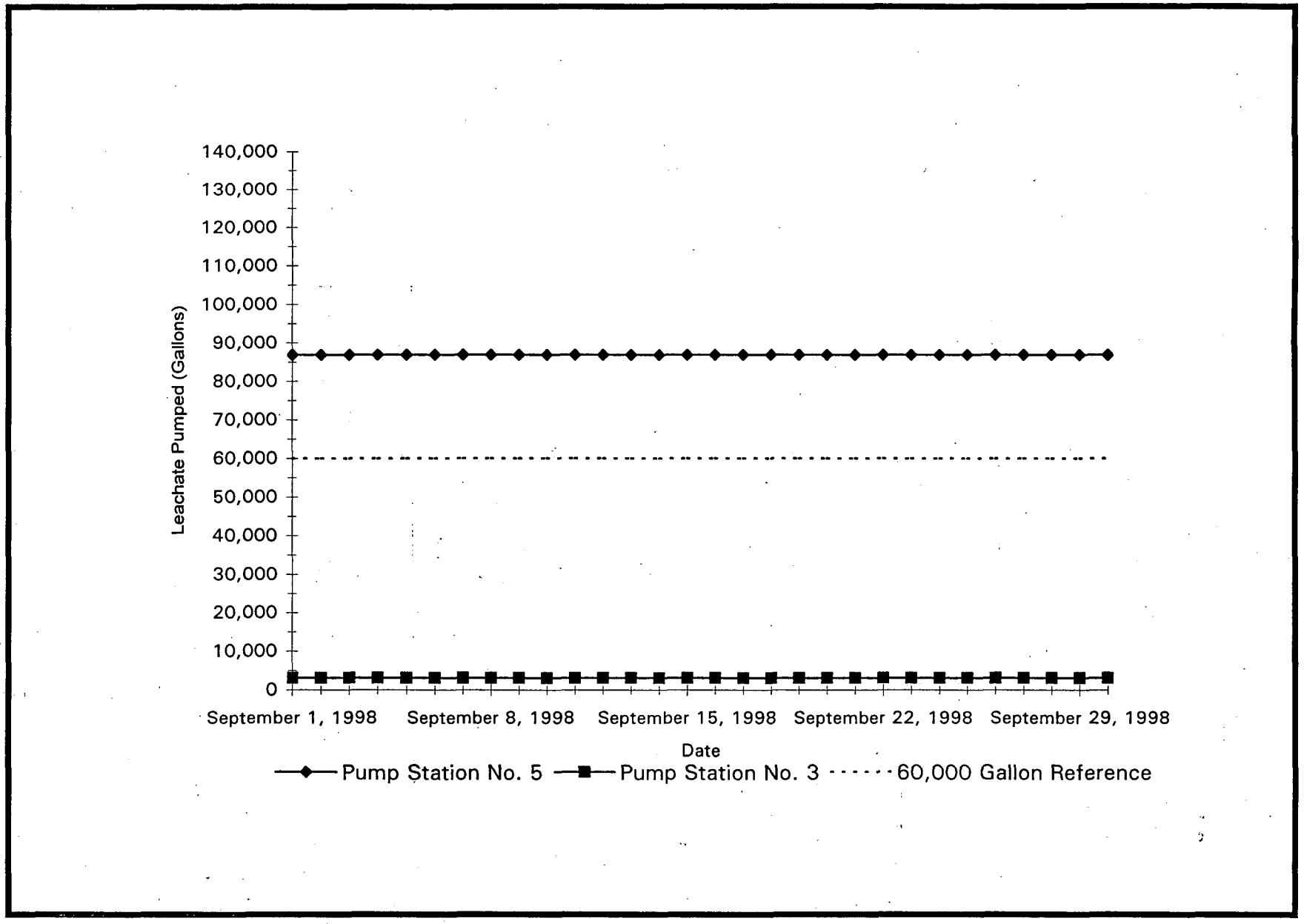

Figure 2. Flow Rates for Pump Station No. 3 and 5 for September 1998

10/12/98 09-98bal.xls

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Sept. 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading ([redacted])	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		27			NR	NR	NR	NR	36,000	Ø	3,000	Ø
2		27.5			NR	NR	NR	NR	30,000	Ø	3,000	Ø
3		28			NR	NR	NR	NR	114,000	Ø	Ø	0.40
4		27			NR	NR	NR	NR	54,000	Ø	5,000	Ø
5		26			NR	NR	NR	NR	102,300	Ø	3,000	Ø
6		NR			NR	NR	NR	NR	30,000	Ø	Ø	1.88
7		*NR			NR	NR	NR	NR	54,000	Ø	Ø	0.52
8		28.5			NR	NR	NR	NR	72,000	Ø	3,000	0.83
9		28.5			NR	NR	NR	NR	30,000	Ø	Ø	0.15
10		27			NR	NR	NR	**3.2	24,000	Ø	5,000	Ø
11		28			NR	NR	NR	3.1	42,000	Ø	2,000	Ø
12		27.5			NR	NR	NR	4.4	30,000	Ø	3,000	Ø
13		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
14		26			NR	NR	NR	8.6	90,000	Ø	Ø	Ø
15		27			NR	NR	NR	6	114,000	Ø	Ø	1.60
16		27			NR	NR	NR	4.11	66,000	Ø	5,000	0.03

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: *9-7-98 - No readings Holiday. **9-9-98 Starting to put Leachate in 500,000 gallon storage Tank

Prepared by: [signature]

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Sept 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading ([redacted])	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		27.5			NR	NR	NR	5.3	120,000	Ø	Ø	0.23
18		28			NR	NR	NR	3.5	78,000	Ø	2,000	2.00
19		29			NR	NR	NR	4.0	24,000	Ø	Ø	2.77
20		NR			NR	NR	NR	NR	Ø	Ø	Ø	1.35
21		30			NR	NR	NR	11.7	126,000	Ø	Ø	0.07
22		26			NR	NR	NR	12	120,600	6,300	3,000	0.03
23		24.5			NR	NR	NR	11.9	164,000	Ø	Ø	0.90
24		25.5			NR	NR	NR	10.5	132,000	Ø	Ø	0.48
25		26			NR	NR	NR	9.7	120,000	Ø	Ø	2.70
26		NR			NR	NR	NR	NR	126,000	Ø	Ø	0.52
27		NR			NR	NR	NR	NR	Ø	Ø	Ø	0.05
28		28			NR	NR	NR	15	156,000	Ø	Ø	Ø
29		28			NR	NR	NR	14.5	138,000	Ø	Ø	Ø
30		28.5			NR	NR	NR	14.0	144,700	Ø	Ø	0.40
31												

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Leachate Hauled Month Total: _____

Prepared by: M. Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) Sept 98

Action	Date 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer Phase IV																
Low Level Operation, depth less than or equal to 12 inches.																
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.						NR							NR			
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓
Sump No. 4 Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTRF																
Normal Operation.	NR	NR	NR	NR	NR	NR	NR	NR	NR				NR	✓	✓	
If level is greater than 11 feet, increase treatment, hauling , or recirculation.																
If level is less than 6 feet, decrease or stop hauling, recirculation.										✓	✓	✓				✓
* Effluent Pond																
Normal Operation.																
If level is 6 inches or less, stop irrigation, recirculation, hauling.																
If level is greater than 4 feet, increase irrigation, recirculation, hauling.																
Observed runoff of effluent to stormwater basins?																
No.																
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.																
Runoff Type / To Basin																
1 = Severe / A, B, C, D																
2 = Moderate																
3 = Minor																

Comments/Remedial Action: * Treatment Plant Not In Operation

Prepared by: M. Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) Sept. 98

Action	Date														
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.				NR							NR				
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	
Sump No. 4 Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.				NR				✓	✓	NR	NR				
If level is greater than 11 feet, increase treatment, hauling , or recirculation.					✓	✓	✓					✓	✓	✓	
If level is less than 6 feet, decrease or stop hauling, recirculation.	✓	✓	✓												
Effluent Pond															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.															
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.															
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.															

Runoff Type: 1 = Severe; 2 = Moderate; 3 = Minor

To Basin: A, B, C, D

Comments/Remedial Action: _____

Prepared by: M. Matthews

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Sept. 98

Date	Depth in Effluent Pond (Inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									

(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: _____

Prepared by: M. Matthews

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) Sept. 98

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

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(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: _____

Prepared by: T. Matthews

HILLSBOROUGH COUNTY
FLORIDA

Office of the County Administrator
Daniel A. Kleman

RECEIVED
SEP 16 1998
D E P

BOARD OF COUNTY COMMISSIONERS
Dottie Berger
Joe Chillura
Chris Hart
Jim Norman
Jan Platt
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Assistant County Administrators
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Jimmie Keel

September 14, 1998

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of August 1998. In addition, the SWMD is providing the August 1998 field data forms for the Landfill, the daily leachate and collection system evaluation reports, the top of clay survey, and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for August 1998 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from Temporary Pump Station No. 5 (TPS-5) and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of August 1998 was 28.5 inches. The depth over the liner exceeded 30 inches on August 28, 1998. The County Purchasing Department issued a purchase order to the vendor to rehabilitate the well point dewatering system on August 28, 1998. The vendor is proceeding to order materials. The SWMD will forward the vendor's work schedule once it is submitted.

Regarding the flow meters referenced in SCS 's attached letter, the SWMD has had both flow meters evaluated by a vendor and the determination has been made that the meters are not repairable. The SWMD is proceeding with the purchase of new flow meters for both Pump Station No. 3 and Pump Station No. 5.

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

Environmental Consultants

3012 U.S. Highway 301 North
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

September 10, 1998
File No. 0995029.23

RECEIVED
SEP 16 1998
D E P

Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Department
P. O. Box 1110
Tampa, Florida 33601

Subject: August 1998, Leachate Water Balance Report Forms
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed the leachate management operational data from the Southeast County Landfill (SCLF) for August 1998. Attached is the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 1998 updated summary (Table 3), and the Approximate Top of Clay Elevations (Table 4). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD). SCS provides the following commentary on the monthly data, including recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations where appropriate.

Day (Column I)

This column presents the calendar day for the month of August 1998.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the average rainfall in inches as measured in the field from rainfall stations at the site. Total rainfall at the SCLF for August 1998 was 6.8 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. The effluent pond was drained for maintenance in March 1997, and any rainfall that accumulates in the pond is pumped to stormwater Basin C. The average depth for recorded days of effluent in the effluent

pond for August 1998 was 0 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (in inches) at the bottom of the SCLF and is based on the daily piezometer measurements taken in the field. This measurement represents worst case conditions since the piezometer is currently located within the sump area of the SCLF. The average depth of recorded days of leachate over the liner for August 1998 was 28.5 inches (see Figure 1).

The depth over the liner exceeded 30 inches on August 28. SCS understands the HCSWMD currently plans to rehabilitate the dewatering system to improve its performance which will aid in lowering leachate depth over the liner.

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 3 (TPS-3) and pumped to the Main Leachate Pump Station for subsequent treatment. The leachate pumped from TPS-3 represents the leachate being removed by the dewatering system. An estimated value of 3,100 gallons per day (Figure 2) for the month of August was used for all missing data because the flow meter has been down since March 23. SCS recommends the HCSWMD repair or replace the flow meter as soon as possible.

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at TPS-5 and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 currently is measured from the landfill flow meter minus the amount pumped from TPS-3. The landfill flow meter stopped recording data and has been down since July 19. Since there was no data for the month of August, SCS used an average flow rate based on the previous months recorded days for the missing data. The average estimated daily amount of leachate for days pumped from TPS-5 for August 1998 was approximately 76,375 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped from the main leachate pump station to the Leachate Treatment and Reclamation Facility (LTRF) for treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flow meter near TPS-3. Leachate is currently being pumped to the treatment tanks for storage until the 575,000 gallon raw leachate holding tank is cleaned and inspected. Since the landfill flow meter stopped recording sometime on July 19, SCS used an average flow rate based on the previous months recorded days

for the missing data. The average estimated daily amount of leachate pumped from the landfill to the LTRF for August was 79,475 gallons (total of 2,463,725 gallons for the month).

Leachate in 575,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 575,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily gauge level reading. On June 17 the 575,000 gallon tank was taken out of service for cleaning and inspection. Leachate is currently being pumped to the treatment tanks for storage until the 575,000 gallon tank is back on-line. The average daily amount of leachate stored in the tank for August 1998, based on recorded days, was 0 gallons.

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for August 1998 was 0 gallons.

The LTRF has not been operational since September 3, 1996 to allow for repairs to the treatment tanks. The repairs to the treatment tanks at the LTRF were completed on February 23, 1998. The LTRF is expected to be back on line after the 575,000 gallon tank is cleaned and inspected.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. Leachate is currently being pumped from the leachate treatment tank and into a tanker truck for transport. During August 1998, a total of 2,042,400 gallons of leachate was hauled off site compared to a total of 2,201,300 gallons during the previous month. The HCSWMD should continue increased off site hauling of untreated leachate until the treatment plant comes back on line.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF and is measured from the flow meter at the bypass loading arm. The average daily amount of leachate pumped from the leachate storage tank for use in dust control/evaporation, based on recorded days, was 4,600 gallons for August 1998 (total of 92,000 gallons for the month). Weather permitting, the HCSWMD will continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. The effluent pond was drained for maintenance in March 1997. The average daily amount of effluent stored in the effluent pond for August 1998 was 0 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF. Currently, any rainfall that accumulates in the Pond is pumped to stormwater Basin C.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flow meter at the irrigation pump station. Since the LTRF is shut down for repairs, and the effluent pond is empty for maintenance, effluent was not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in August 1998 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flow meter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During August 1998, the total amount of effluent used for dust control/evaporation was 0 gallons.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site measured from the flow meter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During August 1998, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site. The total estimated amount of leachate/effluent evaporation for August 1998 was 73,600 gallons.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Project Manager

Raymond J. Dever, P.E.
Solid Waste Division Director
SCS ENGINEERS

RJD/LER:blj
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
AUGUST 1998
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in	Est. Depth	Pumped	Pumped	Leachate	Leachate	Leachate	Total	Leachate	Effluent	Effluent	Effluent	Total	
Day	final	active	int.	Rainfall (in.)	Effluent Pond (in.)	Over Liner (in.)	From Sta. No 3 (gal.)	From Sta. No. 5 (gal.)	Pumped to LTRF (gal.)	in 575K Tank (gal.)	Treated at LTRF (gal.)	Leachate Hauled (gal.)	Dust Cont./ Evaporation (gal.)	Pond Storage (gal.)	Irrigation Evaporation (gal.)	Dust Cont./ Evaporation (gal.)	Effluent Hauled (gal.)	Landfill Evaporation (gal.)
1	25.2	5	90.2	0.1	0	28.5	***3,100***	***76,375***	***79,475***	0	0	66,000	0	0	0	0	0	0
2	25.2	5	90.2	0.0	0	NR	***3,100***	***76,375***	***79,475***	0	0	0	0	0	0	0	0	0
3	25.2	5	90.2	0.0	0	29.0	***3,100***	***76,375***	***79,475***	0	0	102,000	0	0	0	0	0	0
4	25.2	5	90.2	0.0	0	29.0	***3,100***	***76,375***	***79,475***	0	0	108,000	0	0	0	0	0	0
5	25.2	5	90.2	0.9	0	27.0	***3,100***	***76,375***	***79,475***	0	0	78,000	0	0	0	0	0	0
6	25.2	5	90.2	0.7	0	26.5	***3,100***	***76,375***	***79,475***	0	0	60,000	0	0	0	0	0	0
7	25.2	5	90.2	1.7	0	26.0	***3,100***	***76,375***	***79,475***	0	0	49,000	6,000	0	0	0	0	4,800
8	25.2	5	90.2	1.7	0	26.0	***3,100***	***76,375***	***79,475***	0	0	49,000	6,000	0	0	0	0	4,800
9	25.2	5	90.2	0.0	0	28.0	***3,100***	***76,375***	***79,475***	0	0	12,000	2,000	0	0	0	0	1,600
10	25.2	5	90.2	0.0	0	27.5	***3,100***	***76,375***	***79,475***	0	0	78,000	4,000	0	0	0	0	3,200
11	25.2	5	90.2	0.0	0	30.0	***3,100***	***76,375***	***79,475***	0	0	78,000	4,000	0	0	0	0	3,200
12	25.2	5	90.2	0.0	0	28.0	***3,100***	***76,375***	***79,475***	0	0	84,000	2,000	0	0	0	0	1,600
13	25.2	5	90.2	0.0	0	28.0	***3,100***	***76,375***	***79,475***	0	0	78,000	0	0	0	0	0	0
14	25.2	5	90.2	0.0	0	29.5	***3,100***	***76,375***	***79,475***	0	0	72,000	6,000	0	0	0	0	4,800
15	25.2	5	90.2	0.5	0	29.5	***3,100***	***76,375***	***79,475***	0	0	108,000	7,000	0	0	0	0	5,600
16	25.2	5	90.2	0.3	0	NR	***3,100***	***76,375***	***79,475***	0	0	36,000	0	0	0	0	0	0
17	25.2	5	90.2	0.2	0	29.0	***3,100***	***76,375***	***79,475***	0	0	120,000	3,000	0	0	0	0	2,400
18	25.2	5	90.2	0.3	0	29.0	***3,100***	***76,375***	***79,475***	0	0	78,000	0	0	0	0	0	0
19	25.2	5	90.2	0.0	0	29.0	***3,100***	***76,375***	***79,475***	0	0	72,000	4,000	0	0	0	0	3,200
20	25.2	5	90.2	0.0	0	28.5	***3,100***	***76,375***	***79,475***	0	0	60,000	6,000	0	0	0	0	4,800
21	25.2	5	90.2	0.0	0	29.0	***3,100***	***76,375***	***79,475***	0	0	48,100	6,000	0	0	0	0	4,800
22	25.2	5	90.2	0.1	0	29.5	***3,100***	***76,375***	***79,475***	0	0	66,000	2,000	0	0	0	0	1,600
23	25.2	5	90.2	0.0	0	NR	***3,100***	***76,375***	***79,475***	0	0	24,000	0	0	0	0	0	0
24	25.2	5	90.2	0.0	0	29.0	***3,100***	***76,375***	***79,475***	0	0	96,000	6,000	0	0	0	0	4,800
25	25.2	5	90.2	0.1	0	29.0	***3,100***	***76,375***	***79,475***	0	0	60,000	6,000	0	0	0	0	4,800
26	25.2	5	90.2	0.0	0	29.0	***3,100***	***76,375***	***79,475***	0	0	72,300	6,000	0	0	0	0	4,800
27	25.2	5	90.2	0.2	0	30.0	***3,100***	***76,375***	***79,475***	0	0	30,000	6,000	0	0	0	0	4,800
28	25.2	5	90.2	0.0	0	30.5	***3,100***	***76,375***	***79,475***	0	0	36,000	4,000	0	0	0	0	3,200
29	25.2	5	90.2	0.0	0	28.0	***3,100***	***76,375***	***79,475***	0	0	102,000	3,000	0	0	0	0	2,400
30	25.2	5	90.2	0.0	0	NR	***3,100***	***76,375***	***79,475***	0	0	48,000	0	0	0	0	0	0
31	25.2	5	90.2	0.0	0	28.0	***3,100***	***76,375***	***79,475***	0	0	72,000	3,000	0	0	0	0	2,400
Total				6.8			***96,100***	***2,367,625***	***2,463,725***		0	2,042,400	92,000	0	0	0	0	73,600
Daily Average					0	28.5	***3,100***	***76,375***	***79,475***	0	0	68,080	4,600	0	0	0	0	3,700
Monthly Average					0	24.8	***3,100***	***76,375***	***79,475***	0	0	65,884	3,000	0	0	0	0	2,000

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VII calculated by subtracting VI from flow meter reading.
6. Column VIII, quantity from flow meter.
7. Column IX, calculated from depth in 575,000 gal. leachate tank.
8. Columns X and XIV, quantities from flow meters.
9. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
10. Column XVII, 80% of the daily values from Columns XII, XIV and XV.
11. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
12. Daily average calculated by dividing the total by the active days in the month.
13. Monthly average calculated by dividing the total by the number of days of the month.

TABLE 2. FIELD DATA ENTRY FORM
AUGUST 1998
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
							Landfill Flow		Leachate Hauled		Leachate			Leachate	Effluent	Effluent Hauled		Effluent
Day	Active Area (ac.)	Piezometer Phase IV (in.)	Phase IV LCRS Cleanout (in.)	Phase III LCR Cleanout (in.)	Pump Sta. No. 4 (in.)	Pump Sta No. 3 Reading (gal.)	Meter Pump Sta. No. 5 (gal.)	Depth in 575K Tank (ft.)	Contractor (gal.)	County (gal.)	Dust Cont./ Evaporation (gal.)	Rainfall (in.)	Depth in Effl. Pond (in.)	Treated at LTRF (gal.)	Irrigation Evaporation (gal.)	Contractor (gal.)	County (gal.)	Dust Cont./ Evaporation (gal)
1	5	28.5	NR	NR	NR	***1,083,060***	***8,519,300***	0	66,000	0	0	0.10	0	0	0	0	0	0
2	5	NR	NR	NR	NR	***1,086,160***	***8,598,775***	0	0	0	0	0	0	0	0	0	0	0
3	5	29.0	NR	NR	NR	***1,089,260***	***8,678,250***	0	102,000	0	0	0	0	0	0	0	0	0
4	5	29.0	NR	NR	NR	***1,092,360***	***8,757,725***	0	108,000	0	0	0	0	0	0	0	0	0
5	5	27.0	NR	NR	NR	***1,095,460***	***8,837,200***	0	78,000	0	0	0.93	0	0	0	0	0	0
6	5	26.5	NR	NR	NR	***1,098,560***	***8,916,675***	0	60,000	0	0	0.67	0	0	0	0	0	0
7	5	26.0	NR	NR	NR	***1,101,660***	***8,996,150***	0	49,000	0	6,000	1.67	0	0	0	0	0	0
8	5	28.0	NR	NR	NR	***1,104,760***	***9,075,625***	0	12,000	0	2,000	0	0	0	0	0	0	0
9	5	NR	NR	NR	NR	***1,107,860***	***9,155,100***	0	6,000	0	0	0	0	0	0	0	0	0
10	5	27.5	NR	NR	NR	***1,110,960***	***9,234,575***	0	78,000	0	4,000	0	0	0	0	0	0	0
11	5	30.0	NR	NR	NR	***1,114,060***	***9,314,050***	0	78,000	0	4,000	0	0	0	0	0	0	0
12	5	28.0	NR	NR	NR	***1,117,160***	***9,393,525***	0	84,000	0	2,000	0	0	0	0	0	0	0
13	5	28.0	NR	NR	NR	***1,120,260***	***9,473,000***	0	78,000	0	0	0	0	0	0	0	0	0
14	5	29.5	NR	NR	NR	***1,123,360***	***9,552,475***	0	72,000	0	6,000	0	0	0	0	0	0	0
15	5	29.5	NR	NR	NR	***1,126,460***	***9,631,950***	0	108,000	0	7,000	0.47	0	0	0	0	0	0
16	5	NR	NR	NR	NR	***1,129,560***	***9,711,425***	0	36,000	0	0	0.33	0	0	0	0	0	0
17	5	29.0	NR	NR	NR	***1,132,660***	***9,790,900***	0	120,000	0	2,500	0.22	0	0	0	0	0	0
18	5	29.0	NR	NR	NR	***1,135,760***	***9,870,375***	0	78,000	0	0	0.33	0	0	0	0	0	0
19	5	29.0	NR	NR	NR	***1,138,860***	***9,949,850***	0	72,000	0	4,000	0	0	0	0	0	0	0
20	5	28.5	NR	NR	NR	***1,141,960***	***10,029,325***	0	60,000	0	6,000	0	0	0	0	0	0	0
21	5	29.0	NR	NR	NR	***1,145,060***	***10,108,800***	0	48,100	0	6,000	0	0	0	0	0	0	0
22	5	29.5	NR	NR	NR	***1,148,160***	***10,188,275***	0	66,000	0	2,000	0.10	0	0	0	0	0	0
23	5	NR	NR	NR	NR	***1,151,260***	***10,267,750***	0	24,000	0	0	0	0	0	0	0	0	0
24	5	29.0	NR	NR	NR	***1,154,360***	***10,347,225***	0	96,000	0	6,000	0	0	0	0	0	0	0
25	5	29.0	NR	NR	NR	***1,157,460***	***10,426,700***	0	60,000	0	6,000	0.05	0	0	0	0	0	0
26	5	29.0	NR	NR	NR	***1,160,560***	***10,506,175***	0	66,000	6,300	6,000	0	0	0	0	0	0	0
27	**5**	**30.0**	**NR**	**NR**	**NR**	***1,163,660***	***10,585,650***	0	30,000	0	6,000	0.22	0	0	0	0	0	0
28	**5**	**30.5**	NR	NR	NR	***1,166,760***	***10,665,125***	0	36,000	0	4,000	0	0	0	0	0	0	0
29	5	**28.0**	NR	NR	NR	***1,169,860***	***10,744,600***	0	102,000	0	3,000	0	0	0	0	0	0	0
30	5	NR	NR	NR	NR	***1,172,960***	***10,824,075***	0	48,000	0	0	0	0	0	0	0	0	0
31	5	28.0	NR	NR	NR	***1,176,060***	***10,903,550***	0	72,000	0	3,000	0	0	0	0	0	0	0

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Notes:
1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column XIII, Trace is less than 0.01 inches.
5. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
6. Column III, Phase IV piezometer began monitoring on 7/10/95.
7. Columns VII, XV and XVI, quantities from flow meters.

TABLE 3. 1998 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change in Storage For Month (gal.)
January	4.1	0	3,423,300	2,730,000	46,000	0	0	0	0	3,423,300	2,776,000	647,300
February	9.7	0	3,077,220	2,773,500	50,000	0	0	0	0	3,077,220	2,823,500	253,720
March	7.1	0	3,004,230	2,965,600	83,000	0	0	0	0	3,004,230	3,048,600	-44,370
April	0.4	0	2,757,220	2,858,600	98,000	0	0	0	0	2,757,220	2,956,600	-199,380
May	0.8	0	2,299,310	1,798,300	115,000	0	0	0	0	2,299,310	1,913,300	386,010
June	1.3	0	1,892,775	1,923,000	94,000	0	0	0	0	1,892,775	2,017,000	-124,225
July	7.9	0	2,463,725	2,201,300	90,000					2,463,725	2,291,300	172,425
August	6.8	0	2,463,725	2,042,400	92,000	0	0	0	0	2,463,725	2,134,400	329,325
September										0	0	0
October										0	0	0
November										0	0	0
December										0	0	0
YTD Total	38.1	0	21,381,505	19,292,700	668,000	0	0	0	0	21,381,505	19,960,700	

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Note:

1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

TABLE 4. APPROXIMATE TOP OF CLAY ELEVATIONS
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FL

	PHASE III	PHASE IV			PHASE VI		
DATE	LCRS Cleanout	LCRS Cleanout	Piezometer	Pump Control Well	Pump Station No. 3	Pump Station No. 4	Settling Plate
December 28, 1993	NR	NR	NR	NR	*116.81*	NR	NR
December 5, 1994	NR	NR	NR	NR	*116.61*	NR	NR
January 26, 1995	NR	NR	NR	NR	*116.44*	*119.73*	NR
February 22, 1995	119.89	118.09	NR	NR	*116.44*	*119.72*	NR
July 13, 1995	NR	NR	NR	NR	*116.35*	*119.70*	NR
November 21, 1995	119.81	117.80	116.45	116.55	*116.30*	*119.65*	NR
December 7, 1995	NR	NR	NR	NR	NR	NR	117.35
June 6, 1996	119.75	117.69	116.20	116.26	*116.20*	*119.59*	116.96
October 2, 1996	119.80	117.66	116.14	116.21	*116.00*	*119.69*	116.95
January 20, 1997	119.70	117.54	115.97	116.00	*115.89*	*119.60*	116.85
May 2, 1997	119.68	117.43	115.92	115.94	*115.89*	*119.60*	116.79
August 1, 1997	119.70	117.50	115.88	115.89	*115.89*	*119.60*	116.81
January 13, 1998	119.68	117.48	115.83	115.83	*115.90*	*119.60*	116.81
April 6, 1998	119.66	117.40	115.75	115.71	*115.90*	*119.60*	116.71
September 3, 1998	119.65	117.25	115.69	115.62	115.64	119.50	116.54

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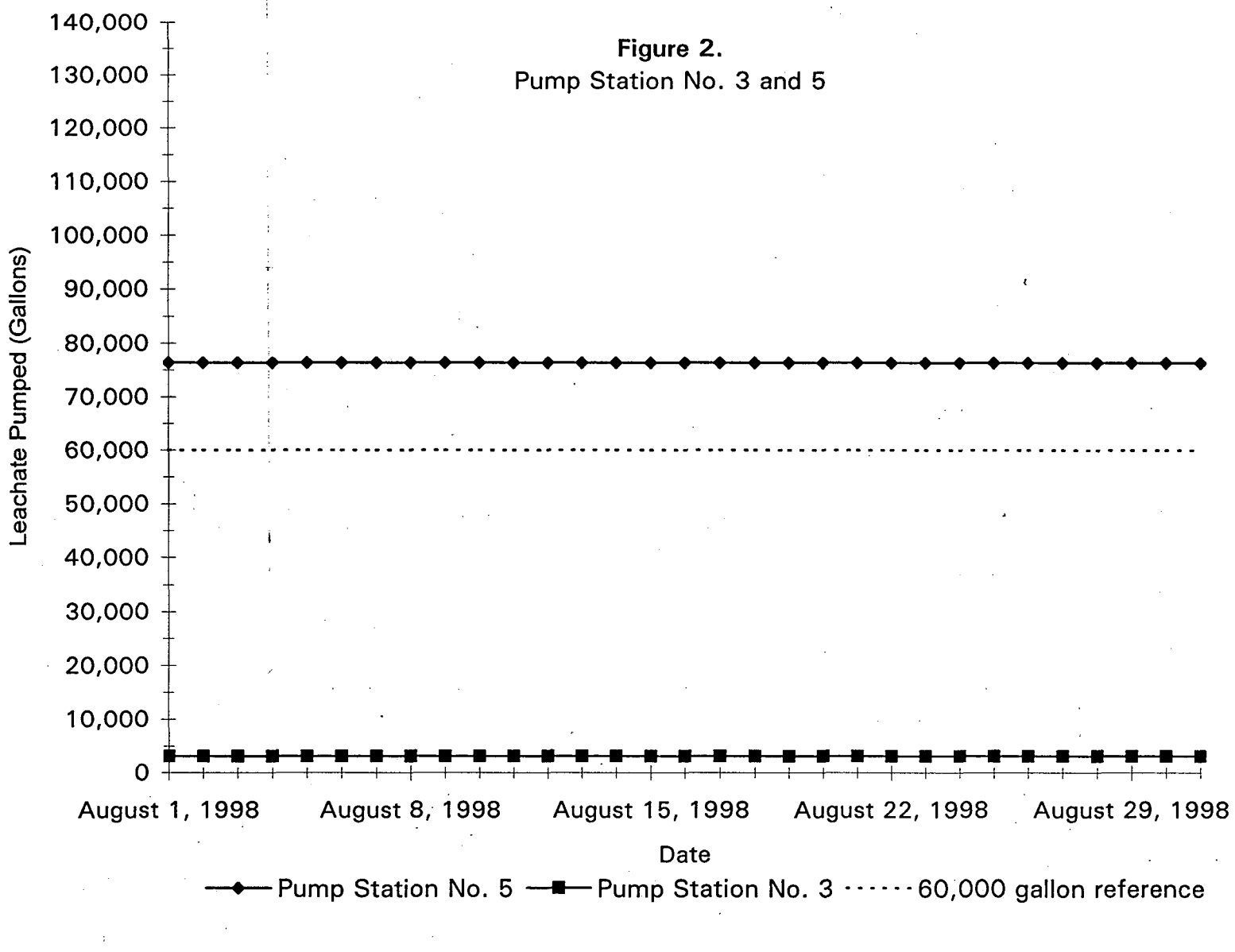
Notes: 1. Values in italic represent adjusted elevations per field exploration on 5/18/98.
2. Vertical Datum based on feet NGVD 1929.

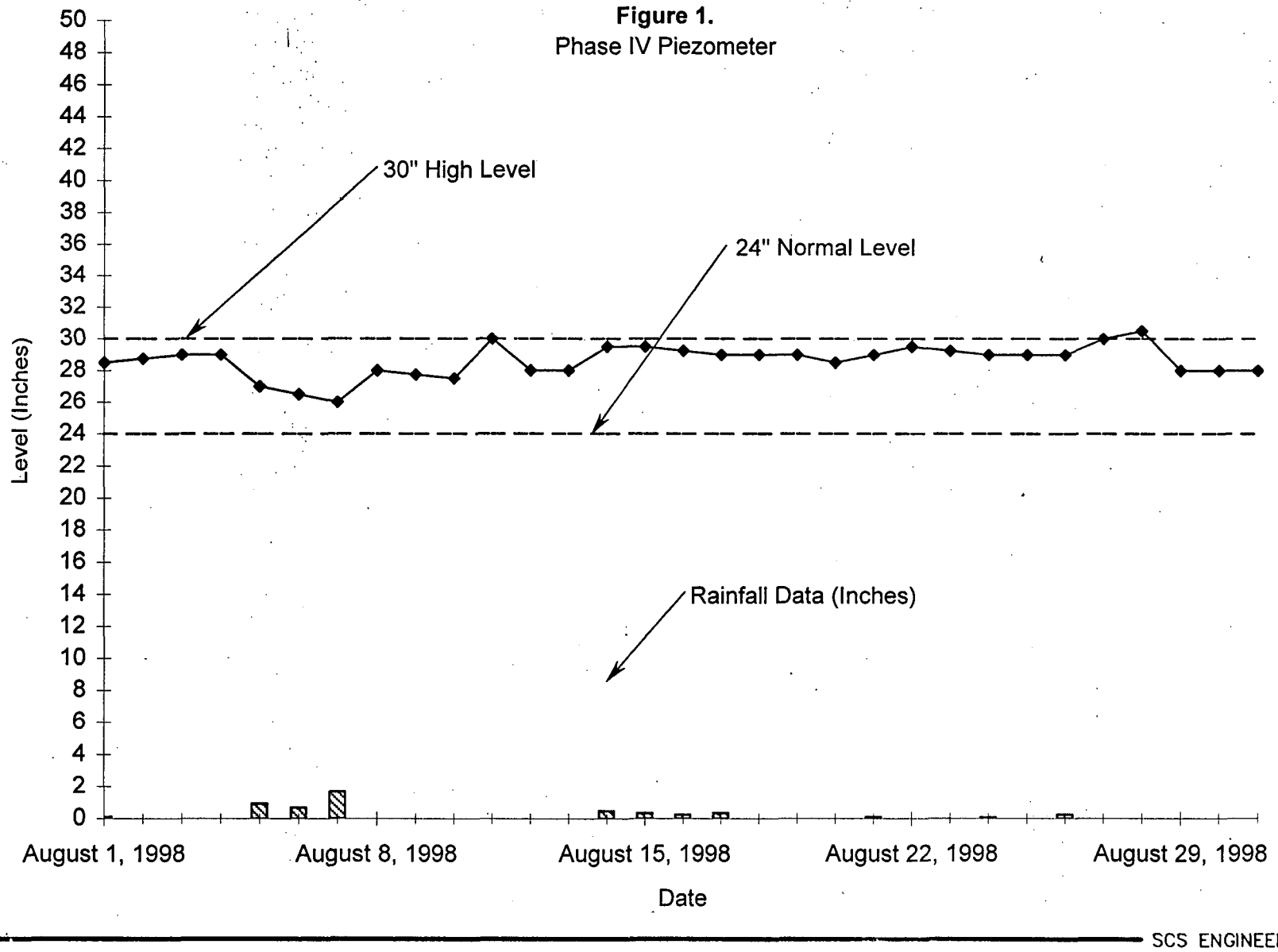
Figure 2.
Pump Station No. 3 and 5



SCS ENGINEERS

9/9/98 08-98bal.xls

Figure 1.
Phase IV Piezometer



LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Aug. 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		28.5				NR	NR	NR	66,000	Ø	Ø	.10
2		NR				NR	NR	NR	Ø	Ø	Ø	Ø
3		29				NR	NR	NR	102,000	Ø	Ø	T
4		29				NR	NR	NR	108,000	Ø	Ø	
5		27				NR	NR	NR	78,000	Ø	Ø	.93
6		26.5				NR	NR	NR	60,000	Ø	Ø	.67
7		26				NR	NR	NR	49,000	Ø	6,000	1.67
8		28				NR	NR	NR	12,000	Ø	2,000	Ø
9		NR				NR	NR	NR	6,000	Ø	Ø	Ø
10		27.5				NR	NR	NR	78,000	Ø	4,000	Ø
11		30				NR	NR	NR	78,000	Ø	4,000	Ø
12		28				NR	NR	NR	84,000	Ø	2,000	Ø
13		28				NR	NR	NR	78,000	Ø	Ø	Ø
14		29.5				NR	NR	NR	72,000	Ø	6,000	Ø
15		29.5				NR	NR	NR	108,000	Ø	7,000	.47
16		NR				NR	NR	NR	36,000	Ø	Ø	

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: NR = No Reading

Prepared by: T. Mather

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Aug 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading ([redacted])	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		29				NR	NR	NR	120,000	Ø	2,500	.22
18		29				NR	NR	NR	78,000	Ø	Ø	.33
19		29				NR	NR	NR	72,000	Ø	4,000	Ø
20		28.5				NR	NR	NR	60,000	Ø	6,000	Ø
21		29				NR	NR	NR	48,100	Ø	6,000	Ø
22		29.5				NR	NR	NR	66,000	Ø	2,000	.10
23		NR				NR	NR	NR	24,000	Ø	Ø	Ø
24		29				NR	NR	NR	96,000	Ø	6,000	Ø
25		29				NR	NR	NR	60,000	Ø	6,000	.05
26		29				NR	NR	NR	66,000	6,300	6,000	Ø
27		30				NR	NR	NR	30,000	Ø	6,000	.22
28		30.5				NR	NR	NR	36,000	Ø	4,000	Ø
29		28				NR	NR	NR	102,000	Ø	3000	Ø
30		NR				NR	NR	NR	48,000	Ø	Ø	Ø
31		28				NR	NR	NR	72,000	Ø	3,000	Ø

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Leachate Hauled Month Total: _____

Prepared by: [redacted]

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) Aug 98

Action	Date 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer Phase IV																
Low Level Operation, depth less than or equal to 12 inches.																
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.		NR							NR							NR
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	
Sump No. 4 Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.																
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
* 500,000 Gallon Tank at LTRF																
Normal Operation.																
If level is greater than 11 feet, increase treatment, hauling , or recirculation.																
If level is less than 6 feet, decrease or stop hauling, recirculation.																
Effluent Pond																
Normal Operation.																
If level is 6 inches or less, stop irrigation, recirculation, hauling.																
If level is greater than 4 feet, increase irrigation, recirculation, hauling.																
Observed runoff of effluent to stormwater basins?																
No.																
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.																

Runoff Type — To Basin

1 = Severe — A, B, C, D

2 = Moderate

3 = Minor

Comments/Remedial Action: * 500,000 Gallon Tank Empty - For Repairs

Prepared by: M. Wood Weather

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) Aug. 98

Action	Date														
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.							NR							NR	
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓
Sump No. 4 Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.															
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.															
If level is greater than 11 feet, increase treatment, hauling , or recirculation.															
If level is less than 6 feet, decrease or stop hauling, recirculation.															
Effluent Pond															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.															
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.															
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.															
Runoff Type: 1 = Severe; 2 = Moderate; 3 = Minor — To Basin: A, B, C, D															

Comments/Remedial Action: _____

Prepared W. Wachsmuth

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Aug 98

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									

(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: Treatment Plant Not In Operation

Prepared by: M. Mackey

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) Aug 98

Date	Depth In Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

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(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: _____

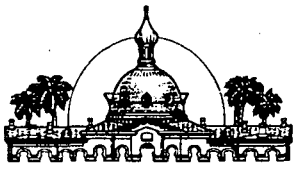
Prepared by W. Wallace

HILLSBOROUGH COUNTY

FLORIDA

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS
Dottie Berger
Joe Chillura
Chris Hart
Jim Norman
Jan Platt
Thomas Scott
Ed Turanchik



Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimmie Keel

September 14, 1998

D.E.P.
SEP 16 1998
SOUTHWEST DISTRICT
TAMPA

Mr. Steven G. Morgan
Section Supervisor
Solid Waste Compliance/Enforcement
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Force Main Incident

Dear Mr. Morgan:

On Friday, September 11, 1998, the Hillsborough County Solid Waste Management Department (SWMD) notified the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission (EPC) that a contractor at the Southeast County Landfill had damaged a section of the six inch diameter leachate force main during construction of the tire chip leachate trenches.

Attached is correspondence from Waste Management Inc. of Florida's (WMI) quality control firm, Globex, outlining the incident and describing the action that WMI's subcontractor, ERC, has undertaken to correct the situation.

As of this date, all corrective action has been completed and approved by the SWMD. Please contact me at 276-2908 should you have any questions or require additional information concerning this correspondence.

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Ron Cope, EPC
Larry Ruiz, SCS
Kim Ford, DEP

MEMORANDUM

TO: John Wong, Waste Management

COPY: Matt Matthews, HCSWMD

Jerry Pinder, ERC

FROM: Ali Khatami, Globex

DATE: 11 September 1998

SUBJECT: Incident Report

At approximately 7:00 p.m. on 10 September 1998, a 6-in. diameter leachate force main crossing Trench 18 was damaged during excavation of Trench 18. The location of the damage is approximately 15 ft west of the excavated area for Trench 18.

The pump was immediately shut off by Mr. Matthews. The area around the pipe was immediately bermed off to control water reaching the surface. Approximately 150 gallons of water exited the pipe and contained within the bermed area.

ERC has scheduled for a repair crew arriving on site this morning to repair the pipe. The repair is expected to be completed within a few hours since the extent of the damage is limited to two small holes on the upper surface of the pipe.

Following completion of the repair, the soil in the vicinity of the damaged pipe will be excavated and transported to the landfill active face. The completion of the above described work will be reported in my daily report.

* * *

HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
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Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimmie Keel

August 17, 1998

RECEIVED
AUG 19 1998
Department of Environmental Protection
SOUTHWEST DISTRICT
BY

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of July 1998. In addition, the SWMD is providing the July 1998 field data forms for the Landfill, the daily leachate and collection system evaluation reports, the top of clay survey, and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for July 1998 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from Temporary Pump Station No. 5 (TPS-5) and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of July 1998 was 27.2 inches. The depth over the liner exceeded 30 inches from July 1 through July 10 due to continued malfunctions in the dewatering system. The bid quotes to have the dewatering system rehabilitated to improve its performance were received by the County on Friday, August 14, 1998. The County Purchasing Department should be issuing a purchase order to the vendor within a week.

Regarding the flow meter referenced in SCS 's attached letter, the SWMD has had the flow meter evaluated by a vendor and the determination has been made that the meter is not repairable. The SWMD is proceeding with the purchase of a new flow meter for Pump Station No. 3.

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

Environmental Consultants

3012 U.S. Highway 301 North
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

August 13, 1998
File No. 0995029.23

Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Department
P. O. Box 1110
Tampa, Florida 33601

Subject: July 1998, Leachate Water Balance Report Forms
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed the leachate management operational data from the Southeast County Landfill (SCLF) for July 1998. Attached is the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 1998 updated summary (Table 3). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD). SCS provides the following commentary on the monthly data, including recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations where appropriate.

Day (Column I)

This column presents the calendar day for the month of July 1998.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the average rainfall in inches as measured in the field from rainfall stations at the site. Total rainfall at the SCLF for July 1998 was 7.9 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. The effluent pond was drained for maintenance in March 1997, and any rainfall that accumulates in the pond is pumped to stormwater Basin C. The average depth for recorded days of effluent in the effluent pond for July 1998 was 0 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (in inches) at the bottom of the SCLF and is based on the daily piezometer measurements taken in the field. This measurement represents worst case conditions since the piezometer is currently located within the sump area of the SCLF. The average depth of recorded days of leachate over the liner for July 1998 was 27.2 inches (see Figure 1).

The depth over the liner exceeded 30 inches from July 1 through July 10. SCS understands the HCSWMD currently plans to rehabilitate the dewatering system to improve its performance which will aid in lowering leachate depth over the liner.

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 3 (TPS-3) and pumped to the Main Leachate Pump Station for subsequent treatment. The leachate pumped from TPS-3 represents the leachate being removed by the dewatering system. An estimated value of 3,100 gallons per day (Figure 2) for the month of July was used for all other missing data because the flow meter has been down since March 23. SCS recommends the HCSWMD repair or replace the flow meter as soon as possible.

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at TPS-5 and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 currently is measured from the landfill flow meter minus the amount pumped from TPS-3. The landfill flow meter stopped recording sometime on July 19 and was down for the remainder of the month. Since there was no data from July 20 through the end of the month, SCS used an average flow rate based on this months recorded days for the missing data. The average daily amount of leachate for days pumped from TPS-5 for July 1998 was approximately 76,375 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped from the main leachate pump station to the Leachate Treatment and Reclamation Facility (LTRF) for treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flow meter near TPS-3. Leachate is currently being pumped to the treatment tanks for storage until the 575,000 gallon raw leachate holding tank is cleaned and inspected. The landfill flow meter stopped recording sometime on July 19 and was down for the remainder of the month. Since there was no data from July 20 through the end of the month, SCS used an average flow rate based on this

months recorded days for the missing data. The average daily amount of leachate pumped from the landfill to the LTRF for July was 79,475 gallons (total of 2,463,725 gallons for the month).

Leachate in 575,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 575,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily gauge level reading. On June 17 the 575,000 gallon tank was taken out of service for cleaning and inspection. Leachate is currently being pumped to the treatment tanks for storage until the 575,000 gallon tank is back on-line. The average daily amount of leachate stored in the tank for July 1998, based on recorded days, was 0 gallons. Under normal operating conditions, the amount of leachate stored in the tank fluctuates based on the daily amount of leachate pumped to the LTRF, the daily amount of leachate treated, and the daily amount of leachate hauled from the tank.

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for July 1998 was 0 gallons. The daily amount of leachate treated at the LTRF may increase or decrease depending on the influent loading/concentrations.

The LTRF has not been operational since September 3, 1996 to allow for repairs to the treatment tanks. The repairs to the treatment tanks at the LTRF were completed on February 23, 1998. The LTRF is expected to be back on line after the 575,000 gallon tank is cleaned and inspected.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. Leachate is currently being pumped from the leachate treatment tank and into a tanker truck for transport. During July 1998, a total of 2,201,300 gallons of leachate was hauled off site compared to a total of 1,923,000 gallons during the previous month. The HCSWMD should continue increased off site hauling of untreated leachate until the treatment plant comes back on line.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF and is measured from the flow meter at the bypass loading arm. The average daily amount of leachate pumped from the leachate storage tank for use in dust control/evaporation, based on recorded days, was 6,900 gallons for July 1998 (total of 90,000 gallons for the month). Weather permitting, the HCSWMD will continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. The effluent pond was drained for maintenance in March 1997. The average daily amount of effluent stored in the effluent pond for July 1998 was 0 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF. Currently, any rainfall that accumulates in the Pond is pumped to stormwater Basin C.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flow meter at the irrigation pump station. Since the LTRF is shut down for repairs, and the effluent pond is empty for maintenance, effluent was not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in July 1998 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flow meter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During July 1998, the total amount of effluent used for dust control/evaporation was 0 gallons.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site measured from the flow meter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During July 1998, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site. The total estimated amount of leachate/effluent evaporation for July 1998 was 72,000 gallons.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Project Manager

Raymond J. Dever, P.E.
Solid Waste Division Director
SCS ENGINEERS

RJD/LER:blj
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
JULY 1998
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in Effluent Pond	Est. Depth Over Liner	Pumped From Sta. No 3	Pumped From Sta. No. 5	Leachate Pumped to LTRF	Leachate in 575K Tank	Leachate Treated at LTRF	Total Leachate Hauled	Leachate Dust Cont./ Evaporation	Effluent Pond Storage	Effluent Irrigation Evaporation	Effluent Dust Cont./ Evaporation	Total Effluent Hauled	Landfill Evaporation
Day	final	active	int.	Rainfall (in.)	(in.)	(in.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)
1	25.2	5	90.2	0.0	0	31.0	3,100	84,175	87,275	NR	0	66,000	2,000	0	0	0	0	1,600
2	25.2	5	90.2	0.0	0	31.0	3,100	68,200	71,300	NR	0	60,000	4,000	0	0	0	0	3,200
3	25.2	5	90.2	0.0	0	30.5	3,100	63,747	66,847	NR	0	90,000	4,000	0	0	0	0	3,200
4	25.2	5	90.2	0.1	0	NR	3,100	61,392	*64,492*	NR	0	46,000	0	0	0	0	0	0
5	25.2	5	90.2	0.0	0	NR	3,100	66,101	*69,201*	NR	0	0	0	0	0	0	0	0
6	25.2	5	90.2	0.0	0	32.0	3,100	70,810	73,910	NR	0	78,000	4,000	0	0	0	0	3,200
7	25.2	5	90.2	1.1	0	31.5	3,100	68,480	71,580	NR	0	72,000	2,000	0	0	0	0	1,600
8	25.2	5	90.2	1.1	0	31.5	3,100	61,600	64,700	NR	0	72,000	2,000	0	0	0	0	1,600
9	25.2	5	90.2	0.0	0	31.0	3,100	68,670	71,770	NR	0	84,000	0	0	0	0	0	0
10	25.2	5	90.2	0.9	0	30.0	3,100	74,860	77,960	NR	0	78,000	0	0	0	0	0	0
11	25.2	5	90.2	0.1	0	29.0	3,100	75,805	78,905	NR	0	48,000	0	0	0	0	0	0
12	25.2	5	90.2	0.5	0	NR	3,100	75,805	*78,905*	NR	0	18,000	0	0	0	0	0	0
13	25.2	5	90.2	0.3	0	25.0	3,100	76,290	79,390	NR	0	72,000	0	0	0	0	0	0
14	25.2	5	90.2	0.4	0	25.0	3,100	77,310	80,410	NR	0	72,000	0	0	0	0	0	0
15	25.2	5	90.2	1.9	0	26.0	3,100	95,940	99,040	NR	0	96,000	0	0	0	0	0	0
16	25.2	5	90.2	0.0	0	24.0	3,100	117,685	120,785	NR	0	102,000	0	0	0	0	0	0
17	25.2	5	90.2	0.0	0	23.5	3,100	111,315	114,415	NR	0	90,000	0	0	0	0	0	0
18	25.2	5	90.2	0.1	0	24.0	3,100	66,470	69,570	NR	0	30,000	0	0	0	0	0	0
19	25.2	5	90.2	0.5	0	NR	3,100	66,470	*69,570*	NR	0	84,000	0	0	0	0	0	0
20	25.2	5	90.2	0.0	0	24.0	3,100	76,375	79,475	NR	0	78,000	0	0	0	0	0	0
21	25.2	5	90.2	0.8	0	23.5	3,100	76,375	79,475	NR	0	90,000	0	0	0	0	0	0
22	25.2	5	90.2	0.0	0	24.5	3,100	76,375	79,475	NR	0	120,000	8,000	0	0	0	0	6,400
23	25.2	5	90.2	0.0	0	24.0	3,100	76,375	79,475	NR	0	72,000	6,000	0	0	0	0	4,800
24	25.2	5	90.2	0.0	0	25.0	3,100	76,375	79,475	NR	0	114,000	9,000	0	0	0	0	7,200
25	25.2	5	90.2	0.0	0	24.5	3,100	76,375	79,475	NR	0	0	14,000	0	0	0	0	11,200
26	25.2	5	90.2	0.0	0	NR	3,100	76,375	79,475	NR	0	67,000	0	0	0	0	0	0
27	25.2	5	90.2	0.0	0	24.0	3,100	76,375	79,475	NR	0	96,000	14,000	0	0	0	0	11,200
28	25.2	5	90.2	0.0	0	24.0	3,100	76,375	79,475	NR	0	84,000	14,000	0	0	0	0	11,200
29	25.2	5	90.2	0.0	0	29.0	3,100	76,375	79,475	NR	0	78,300	7,000	0	0	0	0	5,600
30	25.2	5	90.2	0.4	0	30.0	3,100	76,375	79,475	NR	0	78,000	0	0	0	0	0	0
31	25.2	5	90.2	0.0	0	28.5	3,100	76,375	79,475	NR	0	66,000	0	0	0	0	0	0
Total				7.9			96,100	2,367,625	2,463,725		0	2,201,300	90,000	0	0	0	0	72,000
Daily Average					0	27.2	3,100	76,375	79,475	0	0	75,907	6,900	0	0	0	0	5,500
Monthly Average					0	22.8	3,100	76,375	79,475	0	0	71,010	2,900	0	0	0	0	2,000

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VII calculated by subtracting VI from flow meter reading.
6. Column VIII, quantity from flow meter.
7. Column IX, calculated from depth in 575,000 gal. leachate tank.
8. Columns X and XIV, quantities from flow meters.
9. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
10. Column XVII, 80% of the daily values from Columns XII, XIV and XV.
11. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
12. Daily average calculated by dividing the total by the active days in the month.
13. Monthly average calculated by dividing the total by the number of days of the month.

TABLE 2. FIELD DATA ENTRY FORM
JULY 1998
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
							Landfill Flow		Leachate Hauled		Leachate			Leachate	Effluent	Effluent Hauled		Effluent
Day	Active Area (ac.)	Piezometer Phase IV (in.)	Phase IV LCRS Cleanout (in.)	Phase III LCR Cleanout (in.)	Pump Sta. No. 4 (in.)	Pump Sta No. 3 Reading (gal.)	Meter Pump Sta. No. 5 (gal.)	Depth in 575K Tank (ft.)	Contractor (gal.)	County (gal.)	Dust Cont./ Evaporation (gal.)	Rainfall (in.)	Depth in Effl. Pond (in.)	Treated at LTRF (gal.)	Irrigation Evaporation (gal.)	Contractor (gal.)	County (gal.)	Dust Cont./ Evaporation (gal)
1	5	31.0	NR	NR	NR	986,960	6,055,575	NR	66,000	0	2,000	0	0	0	0	0	0	0
2	5	31.0	NR	NR	NR	990,060	6,142,850	NR	60,000	0	4,000	0	0	0	0	0	0	0
3	5	30.5	NR	NR	NR	993,160	6,214,150	NR	90,000	0	4,000	0	0	0	0	0	0	0
4	5	NR	NR	NR	NR	996,260	*6,280,997*	NR	46,000	0	0	0.08	0	0	0	0	0	0
5	5	NR	NR	NR	NR	999,360	*6,345,489*	NR	0	0	0	0	0	0	0	0	0	0
6	5	32.0	NR	NR	NR	1,002,460	6,414,690	NR	78,000	0	4,000	0	0	0	0	0	0	0
7	5	31.5	NR	NR	NR	1,005,560	6,488,600	NR	72,000	0	2,000	1.05	0	0	0	0	0	0
8	5	31.0	NR	NR	NR	1,008,660	6,560,180	NR	84,000	0	0	0.00	0	0	0	0	0	0
9	5	31.0	NR	NR	NR	1,011,760	6,624,880	NR	78,000	0	0	1.45	0	0	0	0	0	0
10	5	30.0	NR	NR	NR	1,014,860	6,696,650	NR	78,000	0	0	0.87	0	0	0	0	0	0
11	5	29.0	NR	NR	NR	1,017,960	6,774,610	NR	48,000	0	0	0.13	0	0	0	0	0	0
12	5	NR	NR	NR	NR	1,021,060	*6,853,515*	NR	18,000	0	0	0.52	0	0	0	0	0	0
13	5	25.0	NR	NR	NR	1,024,160	6,932,420	NR	72,000	0	0	0.28	0	0	0	0	0	0
14	5	25.0	NR	NR	NR	1,027,260	7,011,810	NR	72,000	0	0	0.38	0	0	0	0	0	0
15	5	26.0	NR	NR	NR	1,030,360	7,092,220	NR	96,000	0	0	1.85	0	0	0	0	0	0
16	5	24.0	NR	NR	NR	1,033,460	7,191,260	NR	102,000	0	0	0	0	0	0	0	0	0
17	5	23.5	NR	NR	NR	1,036,560	7,312,045	NR	90,000	0	0	0	0	0	0	0	0	0
18	5	24.0	NR	NR	NR	1,039,660	7,426,460	NR	30,000	0	0	0.07	0	0	0	0	0	0
19	5	NR	NR	NR	NR	1,042,760	*7,496,030*	NR	84,000	0	0	0.45	0	0	0	0	0	0
20	5	24.0	NR	NR	NR	1,045,860	7,565,600	NR	78,000	0	0	0	0	0	0	0	0	0
21	5	23.5	NR	NR	NR	1,048,960	7,645,075	NR	90,000	0	0	0.80	0	0	0	0	0	0
22	5	24.5	NR	NR	NR	1,052,060	7,724,550	NR	120,000	0	7,500	0.02	0	0	0	0	0	0
23	5	24.0	NR	NR	NR	1,055,160	7,804,025	NR	72,000	0	6,000	0	0	0	0	0	0	0
24	5	25.0	NR	NR	NR	1,058,260	7,883,500	NR	114,000	0	9,000	0	0	0	0	0	0	0
25	5	24.5	NR	NR	NR	1,061,360	7,962,975	NR	0	0	14,000	0	0	0	0	0	0	0
26	5	NR	NR	NR	NR	1,064,460	8,042,450	NR	67,000	0	0	0	0	0	0	0	0	0
27	5	24.0	NR	NR	NR	1,067,560	8,121,925	NR	96,000	0	14,000	0	0	0	0	0	0	0
28	5	24.0	NR	NR	NR	1,070,660	8,201,400	NR	84,000	0	14,000	0	0	0	0	0	0	0
29	5	29.0	NR	NR	NR	1,073,760	8,280,875	NR	72,000	6,300	7,000	0	0	0	0	0	0	0
30	5	30.0	NR	NR	NR	1,076,860	8,360,350	NR	78,000	0	0	0.37	0	0	0	0	0	0
31	5	28.5	NR	NR	NR	1,079,960	8,439,825	NR	66,000	0	0	0.00	0	0	0	0	0	0

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Notes:
1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column XIII, Trace is less than 0.01 inches.
5. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
6. Column III, Phase IV piezometer began monitoring on 7/10/95.
7. Columns VII, XV and XVI, quantities from flow meters.

TABLE 3. 1998 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change in Storage For Month (gal.)
January	4.1	0	3,423,300	2,730,000	46,000	0	0	0	0	3,423,300	2,776,000	647,300
February	9.7	0	3,077,220	2,773,500	50,000	0	0	0	0	3,077,220	2,823,500	253,720
March	7.1	0	3,004,230	2,965,600	83,000	0	0	0	0	3,004,230	3,048,600	-44,370
April	0.4	0	2,757,220	2,858,600	98,000	0	0	0	0	2,757,220	2,956,600	-199,380
May	0.8	0	2,299,310	1,798,300	115,000	0	0	0	0	2,299,310	1,913,300	386,010
June	1.3	0	1,892,775	1,923,000	94,000	0	0	0	0	1,892,775	2,017,000	-124,225
July	7.9	0	2,463,725	2,201,300	90,000					2,463,725	2,291,300	172,425
August										0	0	0
September										0	0	0
October										0	0	0
November										0	0	0
December										0	0	0
YTD Total	31.3	0	18,917,780	17,250,300	576,000	0	0	0	0	18,917,780	17,826,300	

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Note:

1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

Figure 1.
Phase IV Piezometer

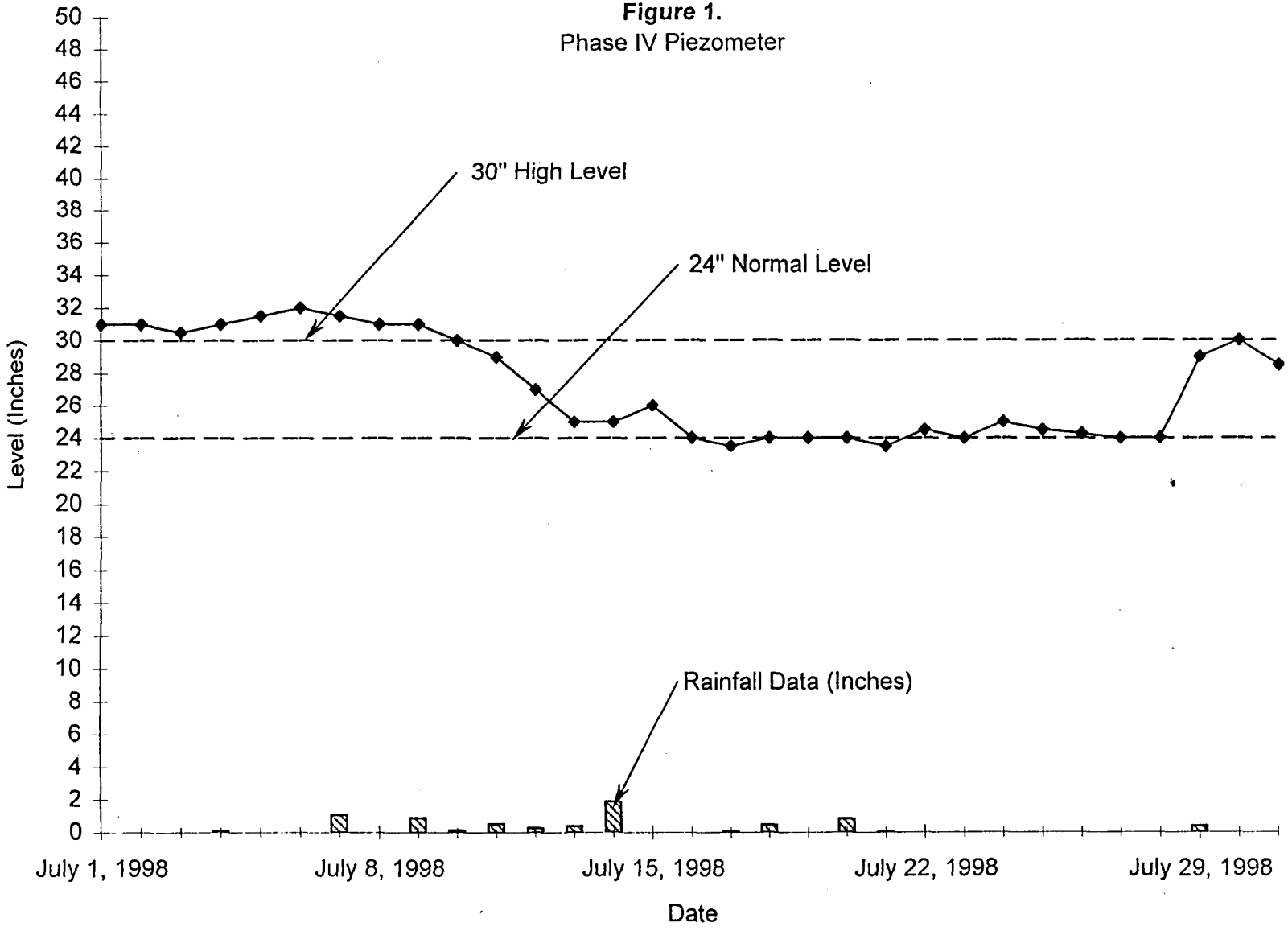

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Figure 2.
Pump Station No. 3 and 5

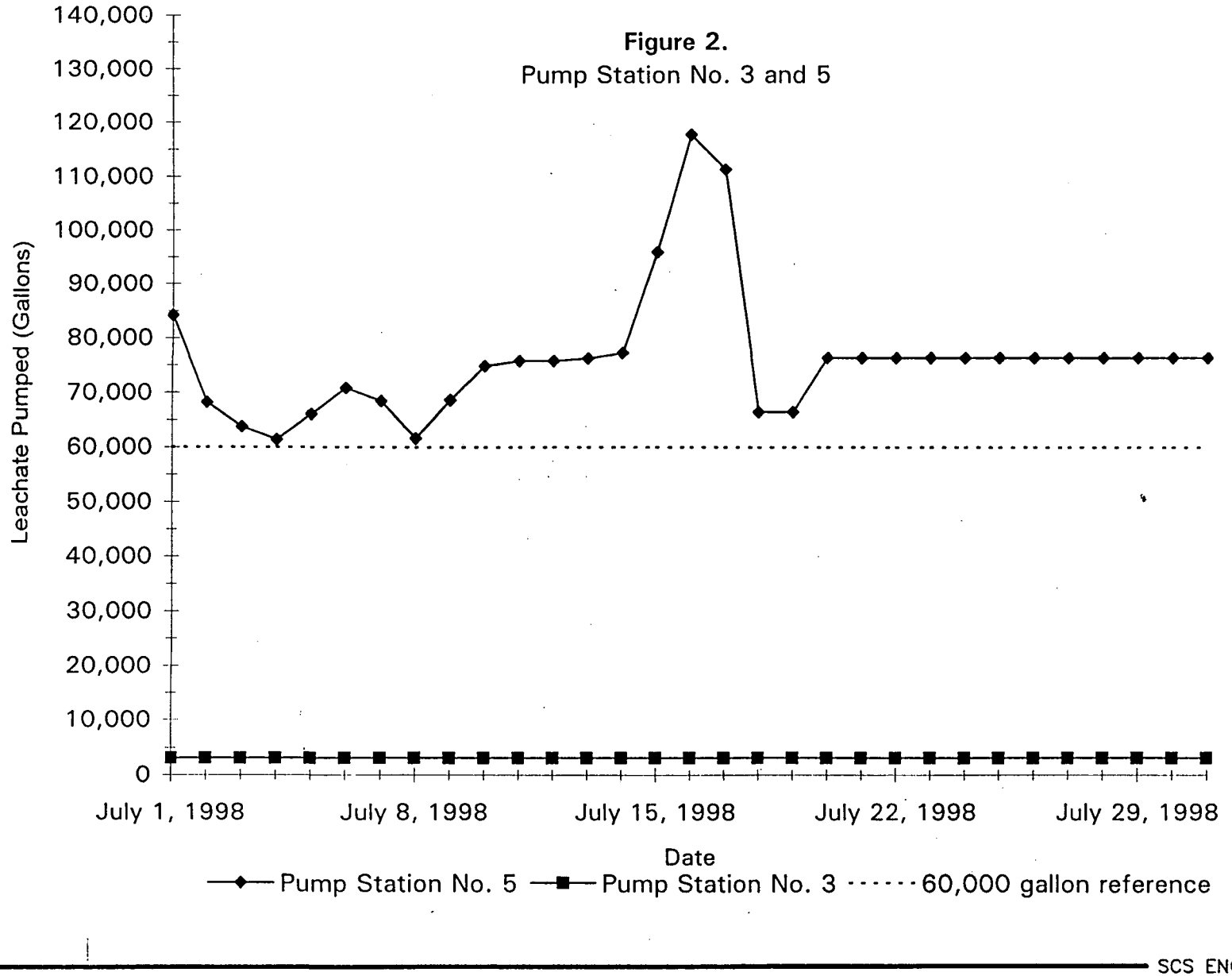

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TABLE 1. LEACHATE HAULING SUMMARY
SOUTHEAST COUNTY LANDFILL
YEAR-1998

Date	Leachate Hauled		Effluent Hauled	
	Contractor (gal.)	County (gal.)	Contractor (gal.)	County (gal.)
January	2,641,800	88,200	0	0
February	2,767,200	6,300	0	0
March	2,959,300	6,300	0	0
April	2,852,300	6,300	0	0
May	1,792,000	6,300	0	0
June	1,856,000	67,000	0	0
July	2,201,000	6,300	0	0
August			0	0
September			0	0
October			0	0
November			0	0
December			0	0
Total	17,069,600	186,700	0	0

Note: NR = No Record

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LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) July 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		31			NR	NR	6055575	NR	66,000	Ø	2,000	Ø
2		31			NR	NR	6142850	NR	60,000	Ø	4,000	Ø
3		30.5			NR	NR	6214150	NR	90,000	Ø	4,000	Ø
4		* NR			NR	NR	NR	NR	46,000	Ø	Ø	.08
5		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
6		32			NR	NR	6414690	NR	78,000	Ø	4,000	Ø
7		31.5			NR	NR	6488600	NR	72,000	Ø	2,000	1.05
8		31			NR	NR	6560180	NR	84,000	Ø	Ø	Ø
9		31			NR	NR	6624880	NR	78,000	Ø	Ø	1.45
10		30			NR	NR	6696650	NR	78,000	Ø	Ø	.87
11		29			NR	NR	6774610	NR	48,000	Ø	Ø	.13
12		NR			NR	NR	NR	NR	18,000	Ø	Ø	.52
13		25			NR	NR	6932420	NR	72,000	Ø	Ø	.28
14		25			NR	NR	7011810	NR	72,000	Ø	Ø	.38
15		26			NR	NR	7092220	NR	96,000	Ø	Ø	1.85
16		24			NR	NR	7191260	NR	102,000	Ø	Ø	Ø

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor Immediately. Complete Evaluation Report Form.

Comments: * 7-4-98 no readings Holiday

Prepared by: [signature]

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) July 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		23.5			NR	NR	7312045	NR	90,000	Ø	Ø	Ø
18		24			NR	NR	7426460	NR	30,000	Ø	Ø	.07
19		NR			NR	NR	NR	NR	84,000	Ø	Ø	.45
20		24			NR	NR	*7565600	NR	78,000	Ø	Ø	Ø
21		23.5			NR	NR	NR	NR	90,000	Ø	Ø	.80
22		24.5			NR	NR	NR	NR	120,000	Ø	7,500	.02
23		24			NR	NR	NR	NR	72,000	Ø	6,000	Ø
24		25			NR	NR	NR	NR	114,000	Ø	9,000	Ø
25		24.5			NR	NR	NR	NR	Ø	Ø	14,000	Ø
26		NR			NR	NR	NR	NR	67000	Ø	Ø	Ø
27		24			NR	NR	NR	NR	96,000	Ø	14,000	Ø
28		24			NR	NR	NR	NR	84,000	Ø	14,000	Ø
29		29			NR	NR	NR	NR	72,000	6,300	7,000	Ø
30		30			NR	NR	NR	NR	78,000	Ø	Ø	0.37
		28.5			NR	NR	NR	NR	66,000	Ø	Ø	Ø

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: * 7-20-98 - Landfill flow meter stopped working over the weekend

Leachate Hauled Month Total: _____

Prepared by: M. Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL
(Month/Year) July 98

Action	Date 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer-Phase IV																
Low Level Operation, depth less than or equal to 12 inches.																
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.				NR	NR							NR				✓
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓			✓	✓	✓	✓	✓	✓		✓	✓	✓	
Pump Station No. 4-Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.																
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTR.																
Normal Operation.																
If level is greater than 11 feet, increase treatment, hauling , or recirculation.																
If level is less than 6 feet, decrease or stop hauling, recirculation.																
Effluent Pond																
Normal Operation.																
l is 6 inches or less, stop irrigation, culation, hauling.																
If level is greater than 4 feet, increase irrigation, recirculation, hauling.																
Observed runoff of effluent to stormwater basins?																
No.																
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.																

Runoff Type	To Basin
1=Severe	A, B, C, D
2=Moderate	
3=Minor	

Comments/Remedial Action: 500,000 Gallon Tank Empty for repairs — Effluent Pond Empty, Treatment Plant not in operation

Prepared by M. Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) July 98

Action	Date														
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer-Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.	✓	✓	NR	✓	✓		✓			NR	✓	✓			
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.						✓		✓	✓				✓	✓	✓
Pump Station No. 4-Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.															
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.															
If level is greater than 11 feet, increase treatment, hauling , or recirculation.															
If level is less than 6 feet, decrease or stop hauling, recirculation.															
Effluent Pond															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.															
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.															
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken. Runoff Type: 1=Severe, 2=Moderate, 3=Minor. To Basin: A, B, C, D															

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Comments/Remedial Action: _____

Prepared by: _____

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) July 98

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									

(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: _____

Prepared by _____

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) July 98

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

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(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: _____

Prepared by: M. Matthews

HILLSBOROUGH COUNTY
FLORIDA

Office of the County Administrator
Daniel A. Kleman

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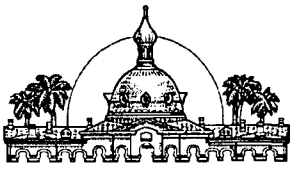
JUL 20 1998
D E P

BOARD OF COUNTY COMMISSIONERS
Dottie Berger
Joe Chillura
Chris Hart
Jim Norman
Jan Platt
Thomas Scott
Ed Turanchik



Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimmie Keel

July 17, 1998

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of June 1998. In addition, the SWMD is providing the June 1998 field data forms for the Landfill, the daily leachate and collection system evaluation reports, the top of clay survey, and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for June 1998 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from Temporary Pump Station No. 5 (TPS-5) and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of June 1998 was 31 inches. The depth over the liner exceeded 30 inches from June 1 through June 9 and June 18 through June 30 due to malfunctions in the dewatering system and TPS-5. The SWMD has contracted to have the dewatering system rehabilitated to improve its performance. Work is expected to commence around July 31, 1998.

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

Environmental Consultants

3012 U.S. Highway 301 No
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

July 16, 1998
File No. 0995029.23

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Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Department
P. O. Box 1110
Tampa, Florida 33601

Subject: June 1998, Leachate Water Balance Report Forms
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed the leachate management operational data from the Southeast County Landfill (SCLF) for June 1998. Attached is the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 1998 updated summary (Table 3). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD). SCS provides the following commentary on the monthly data, including recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations where appropriate.

Day (Column I)

This column presents the calendar day for the month of June 1998.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the average rainfall in inches as measured in the field from rainfall stations at the site. Total rainfall at the SCLF for June 1998 was 1.3 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. The effluent pond was drained for maintenance in March 1997, and any rainfall that accumulates in the pond is pumped to stormwater Basin C. The average depth for recorded days of effluent in the effluent

pond for June 1998 was 0 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (in inches) at the bottom of the SCLF and is based on the daily piezometer measurements taken in the field. This measurement represents worst case conditions since the piezometer is currently located within the sump area of the SCLF. The average depth of recorded days of leachate over the liner for June 1998 was 31 inches (see Figure 1).

The depth over the liner exceeded 30 inches from June 1 through June 9 and June 18 through June 30 due to malfunctions in the dewatering system and Temporary Pump Station No. 5 (TPS-5). SCS understands the HCSWMD currently plans to rehabilitate the dewatering system to improve its performance which will aid in lowering leachate depth over the liner.

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 3 (TPS-3) and pumped to the Main Leachate Pump Station for subsequent treatment. The leachate pumped from TPS-3 represents the leachate being removed by the dewatering system. The dewatering system was shut down for repairs from June 1 through June 3. An estimated value of 3,100 gallons per day (Figure 2) for the month of June was used for all other missing data because the flow meter has been down since March 23. SCS recommends the HCSWMD repair or replace the flow meter as soon as possible.

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at TPS-5 and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 currently is measured from the landfill flow meter minus the amount pumped from TPS-3. TPS-5 was down June 5 and 6 and again on June 8 for repairs. The average daily amount of leachate for days pumped from TPS-5 for June 1998 was approximately 59,993 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped from the main leachate pump station to the Leachate Treatment and Reclamation Facility (LTRF) for treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flow meter near TPS-3. The pumps at the main leachate pump station were shut down for part of June 15, 16, and 17 in order to drain the 575,000 gallon leachate storage tank. Leachate is currently being pumped to the

treatment tanks for storage until the 575,000 gallon raw leachate holding tank is cleaned and inspected. The average daily amount of leachate pumped from the landfill to the LTRF for June was 63,093 gallons (total of 1,892,775 gallons for the month).

Leachate in 575,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 575,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily gauge level reading. On June 17 the 575,000 gallon tank was taken out of service for cleaning and inspection. Leachate is currently being pumped to the treatment tanks for storage until the 575,000 gallon tank is back on-line. The average daily amount of leachate stored in the tank for June 1998, based on recorded days, was 98,733 gallons. Under normal operating conditions, the amount of leachate stored in the tank fluctuates based on the daily amount of leachate pumped to the LTRF, the daily amount of leachate treated, and the daily amount of leachate hauled from the tank.

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for June 1998 was 0 gallons. The daily amount of leachate treated at the LTRF may increase or decrease depending on the influent loading/concentrations.

The LTRF has not been operational since September 3, 1996 to allow for repairs to the treatment tanks. The repairs to the treatment tanks at the LTRF were completed on February 23, 1998. The LTRF is expected to be back on line after the 575,000 gallon tank is cleaned and inspected.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. Leachate is pumped from the 575,000 gallon raw leachate tank and into a tanker truck for transport. During June 1998, a total of 1,923,000 gallons of leachate was hauled off site compared to a total of 1,798,300 gallons during the previous month. The HCSWMD should continue increased off site hauling of untreated leachate until the treatment plant comes back on line.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF and is measured from the flow meter at the bypass loading arm. The average daily amount of leachate pumped from the leachate storage tank for use in dust control/evaporation, based on recorded days, was 4,100 gallons for June 1998 (total of 94,000 gallons for the month). Weather permitting, the HCSWMD will continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. The effluent pond was drained for maintenance in March 1997. The average daily amount of effluent stored in the effluent pond for June 1998 was 0 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF. Currently, any rainfall that accumulates in the Pond is pumped to stormwater Basin C.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flow meter at the irrigation pump station. Since the LTRF is shut down for repairs, and the effluent pond is empty for maintenance, effluent was not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in June 1998 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flow meter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During June 1998, the total amount of effluent used for dust control/evaporation was 0 gallons.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site measured from the flow meter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During June 1998, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site. The total estimated amount of leachate/effluent evaporation for June 1998 was 75,200 gallons.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Project Manager

Raymond J. Dever, P.E.
Solid Waste Division Director
SCS ENGINEERS

RJD/LER:blj
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
JUNE 1998
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in Effluent	Est. Depth Over	Pumped From	Pumped From	Leachate Pumped	Leachate in 575K	Leachate Treated	Total Leachate	Leachate Dust Cont./	Effluent Pond	Effluent Irrigation	Effluent Dust Cont./	Total Effluent	Landfill
Day	final	active	int.	Rainfall (in.)	Pond (in.)	Liner (in.)	Sta. No 3 (gal.)	Sta. No. 5 (gal.)	to LTRF (gal.)	Tank (gal.)	at LTRF (gal.)	Hauled (gal.)	Evaporation (gal.)	Storage (gal.)	Evaporation (gal.)	Evaporation (gal.)	Hauled (gal.)	Evaporation (gal.)
1	25.2	5	90.2	0.0	0	33.0	3,100	59,600	62,700	164,000	0	114,000	4,000	0	0	0	0	3,200
2	25.2	5	90.2	0.0	0	33.0	3,100	65,120	68,220	121,000	0	85,000	7,000	0	0	0	0	5,600
3	25.2	5	90.2	0.0	0	33.0	3,100	81,640	84,740	118,000	0	72,000	7,000	0	0	0	0	5,600
4	25.2	5	90.2	0.0	0	31.5	3,100	28,020	31,120	89,000	0	42,000	7,000	0	0	0	0	5,600
5	25.2	5	90.2	0.0	0	31.5	3,100	78,850	81,950	95,000	0	72,000	7,000	0	0	0	0	5,600
6	25.2	5	90.2	0.0	0	31.0	3,100	56,793	59,893	167,000	0	0	7,000	0	0	0	0	5,600
7	25.2	5	90.2	0.0	0	NR	*3,100*	*56,793*	59,893	NR	0	0	0	0	0	0	0	0
8	25.2	5	90.2	0.0	0	31.0	3,100	49,385	52,485	127,000	0	84,000	2,000	0	0	0	0	1,600
9	25.2	5	90.2	0.0	0	31.0	3,100	55,990	59,090	130,000	0	84,000	3,000	0	0	0	0	2,400
10	25.2	5	90.2	0.0	0	30.0	3,100	61,160	64,260	95,000	0	84,000	2,000	0	0	0	0	1,600
11	25.2	5	90.2	0.0	0	30.0	3,100	55,460	58,560	81,000	0	115,000	4,000	0	0	0	0	3,200
12	25.2	5	90.2	0.0	0	29.5	3,100	53,778	56,878	81,000	0	66,000	4,000	0	0	0	0	3,200
13	25.2	5	90.2	0.0	0	29.5	3,100	52,824	55,924	138,000	0	54,000	0	0	0	0	0	0
14	25.2	5	90.2	0.0	0	NR	*3,100*	*52,824*	55,924	NR	0	0	0	0	0	0	0	0
15	25.2	5	90.2	0.0	0	29.5	3,100	7,420	10,520	75,000	0	84,000	2,000	0	0	0	0	1,600
16	25.2	5	90.2	0.0	0	30.0	3,100	55,535	58,635	NR	0	42,000	0	0	0	0	0	0
17	25.2	5	90.2	0.0	0	29.5	3,100	108,720	111,820	NR	0	72,000	4,000	0	0	0	0	3,200
18	25.2	5	90.2	0.0	0	30.5	3,100	77,065	80,165	NR	0	66,000	4,000	0	0	0	0	3,200
19	25.2	5	90.2	0.0	0	31.0	3,100	68,855	71,955	NR	0	90,000	4,000	0	0	0	0	3,200
20	25.2	5	90.2	0.0	0	31.5	3,100	66,185	69,285	NR	0	66,000	4,000	0	0	0	0	3,200
21	25.2	5	90.2	0.0	0	NR	*3,100*	*66,185*	69,285	NR	0	30,000	0	0	0	0	0	0
22	25.2	5	90.2	0.0	0	31.0	3,100	65,310	68,410	NR	0	96,000	4,000	0	0	0	0	3,200
23	25.2	5	90.2	0.4	0	31.5	3,100	64,525	67,625	NR	0	151,000	2,000	0	0	0	0	1,600
24	25.2	5	90.2	0.0	0	31.0	3,100	65,015	68,115	NR	0	54,000	4,000	0	0	0	0	3,200
25	25.2	5	90.2	0.0	0	31.0	3,100	67,680	70,780	NR	0	30,000	4,000	0	0	0	0	3,200
26	25.2	5	90.2	0.0	0	31.0	3,100	71,610	74,710	NR	0	66,000	4,000	0	0	0	0	3,200
27	25.2	5	90.2	0.3	0	31.0	3,100	68,008	71,108	NR	0	30,000	0	0	0	0	0	0
28	25.2	5	90.2	0.0	0	NR	*3,100*	*68,008*	71,108	NR	0	36,000	0	0	0	0	0	0
29	25.2	5	90.2	0.3	0	31.5	3,100	16,240	19,340	NR	0	54,000	2,000	0	0	0	0	1,600
30	25.2	5	90.2	0.4	0	31.0	3,100	55,180	58,280	NR	0	84,000	2,000	0	0	0	0	1,600
Total				1.3			93,000	1,799,775	1,892,775		0	1,923,000	94,000	0	0	0	0	75,200
Daily Average					0	31.0	3,100	59,993	63,093	98,733	0	71,222	4,100	0	0	0	0	3,300
Monthly Average					0	26.8	3,100	59,993	63,093	49,367	0	64,100	3,100	0	0	0	0	3,000

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VII calculated by subtracting VI from flow meter reading.
6. Column VIII, quantity from flow meter.
7. Column IX, calculated from depth in 575,000 gal. leachate tank.
8. Columns X and XIV, quantities from flow meters.
9. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
10. Column XVII, 80% of the daily values from Columns XII, XIV and XV.
11. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
12. Daily average calculated by dividing the total by the active days in the month.
13. Monthly average calculated by dividing the total by the number of days of the month.

TABLE 2. FIELD DATA ENTRY FORM
JUNE 1998
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
	Active	Piezometer	Phase IV	Phase III	Pump Sta.	Pump Sta	Landfill Flow Meter Pump	Depth in	Leachate Hauled		Leachate Dust Cont./		Depth in	Leachate Treated	Effluent Irrigation	ffluent Hauled		Effluent Dust Cont./
Day	Area (ac.)	Phase IV (in.)	LCRS Cleanout (in.)	LCR Cleanout (in.)	No. 4 (in.)	No. 3 Reading (gal.)	Sta. No. 5 (gal.)	575K Tank (ft.)	Contractor (gal.)	County (gal.)	Evaporation (gal.)	Rainfall (in.)	Effl. Pond (in.)	at LTRF (gal.)	Evaporation (gal.)	Contractor (gal.)	County (gal.)	Evaporation (gal)
1	5	33	NR	NR	NR	**893,960**	4,162,800	**8.4**	114,000	0	4,000	0	0	0	0	0	0	0
2	5	33	NR	NR	NR	**897,060**	4,225,500	**5.7**	85,000	0	7,000	0	0	0	0	0	0	0
3	5	33	NR	NR	NR	**900,160**	4,293,720	**4.2**	72,000	0	7,000	0	0	0	0	0	0	0
4	5	32	NR	NR	NR	**903,260**	4,378,460	**4.1**	42,000	0	7,000	0	0	0	0	0	0	0
5	5	32	NR	NR	NR	**906,360**	4,409,580	**3.1**	72,000	0	7,000	0	0	0	0	0	0	0
6	5	31	NR	NR	NR	**909,460**	4,491,530	**3.3**	0	0	7,000	0	0	0	0	0	0	0
7	5	NR	NR	NR	NR	**912,560**	*4,551,423*	NR	0	0	0	0	0	0	0	0	0	0
8	5	31	NR	NR	NR	**915,660**	4,611,315	**5.8**	84,000	0	2,000	0	0	0	0	0	0	0
9	5	31	NR	NR	NR	**918,760**	4,663,800	**4.4**	84,000	0	3,000	0	0	0	0	0	0	0
10	5	30	NR	NR	NR	**921,860**	4,722,890	**4.5**	84,000	0	1,500	0	0	0	0	0	0	0
11	5	30	NR	NR	NR	**924,960**	4,787,150	**3.3**	115,000	0	4,000	0	0	0	0	0	0	0
12	5	30	NR	NR	NR	**928,060**	4,845,710	**2.8**	66,000	0	4,000	0	0	0	0	0	0	0
13	5	30	NR	NR	NR	**931,160**	4,902,588	**2.8**	54,000	0	0	0	0	0	0	0	0	0
14	5	NR	NR	NR	NR	**934,260**	*4,958,512*	NR	0	0	0	0	0	0	0	0	0	0
15	5	30	NR	NR	NR	**937,360**	5,014,435	**4.8**	84,000	0	2,000	0	0	0	0	0	0	0
16	5	30	NR	NR	NR	**940,460**	5,024,955	**2.6**	42,000	0	0	0	0	0	0	0	0	0
17	5	30	NR	NR	NR	**943,560**	5,083,590	NR	72,000	0	4,000	0	0	0	0	0	0	0
18	5	31	NR	NR	NR	**946,660**	5,195,410	NR	66,000	0	4,000	0	0	0	0	0	0	0
19	5	31	NR	NR	NR	**949,760**	5,275,575	NR	90,000	0	4,000	0	0	0	0	0	0	0
20	5	32	NR	NR	NR	**952,860**	5,347,530	NR	66,000	0	4,000	0	0	0	0	0	0	0
21	5	NR	NR	NR	NR	**955,960**	*5,416,815*	NR	30,000	0	0	0	0	0	0	0	0	0
22	5	31	NR	NR	NR	**959,060**	5,486,100	NR	96,000	0	4,000	0	0	0	0	0	0	0
23	5	32	NR	NR	NR	**962,160**	5,554,510	NR	84,000	67,000	2,000	0.35	0	0	0	0	0	0
24	5	31	NR	NR	NR	**965,260**	5,622,135	NR	54,000	0	4,000	0	0	0	0	0	0	0
25	5	31	NR	NR	NR	**968,360**	5,690,250	NR	30,000	0	4,000	0	0	0	0	0	0	0
26	5	31	NR	NR	NR	**971,460**	5,761,030	NR	66,000	0	4,000	0	0	0	0	0	0	0
27	5	31	NR	NR	NR	**974,560**	5,835,740	NR	30,000	0	0	0.28	0	0	0	0	0	0
28	5	NR	NR	NR	NR	**977,660**	*5,906,848*	NR	36,000	0	0	0	0	0	0	0	0	0
29	5	32	NR	NR	NR	**980,760**	5,977,955	NR	54,000	0	2,000	0.33	0	0	0	0	0	0
30	5	31	NR	NR	NR	**983,860**	5,997,295	NR	84,000	0	2,000	0.37	0	0	0	0	0	0
									1,856,000	67,000								

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Notes:
1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column XIII, Trace is less than 0.01 inches.
5. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
6. Column III, Phase IV piezometer began monitoring on 7/10/95.
7. Columns VII, XV and XVI, quantities from flow meters.

TABLE 3. 1998 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change in Storage For Month (gal.)
January	4.1	0	3,423,300	2,730,000	46,000	0	0	0	0	3,423,300	2,776,000	647,300
February	9.7	0	3,077,220	2,773,500	50,000	0	0	0	0	3,077,220	2,823,500	253,720
March	7.1	0	3,004,230	2,965,600	83,000	0	0	0	0	3,004,230	3,048,600	-44,370
April	0.4	0	2,757,220	2,858,600	98,000	0	0	0	0	2,757,220	2,956,600	-199,380
May	0.8	0	2,299,310	1,798,300	115,000	0	0	0	0	2,299,310	1,913,300	386,010
June	1.3	0	1,892,775	1,923,000	94,000	0	0	0	0	1,892,775	2,017,000	-124,225
July										0	0	0
August										0	0	0
September										0	0	
October										0	0	0
November										0	0	0
December										0	0	0
YTD Total	23.4	0	16,454,055	15,049,000	486,000	0	0	0	0	16,454,055	15,535,000	

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Note:

1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

Figure 1.
Phase IV Piezometer

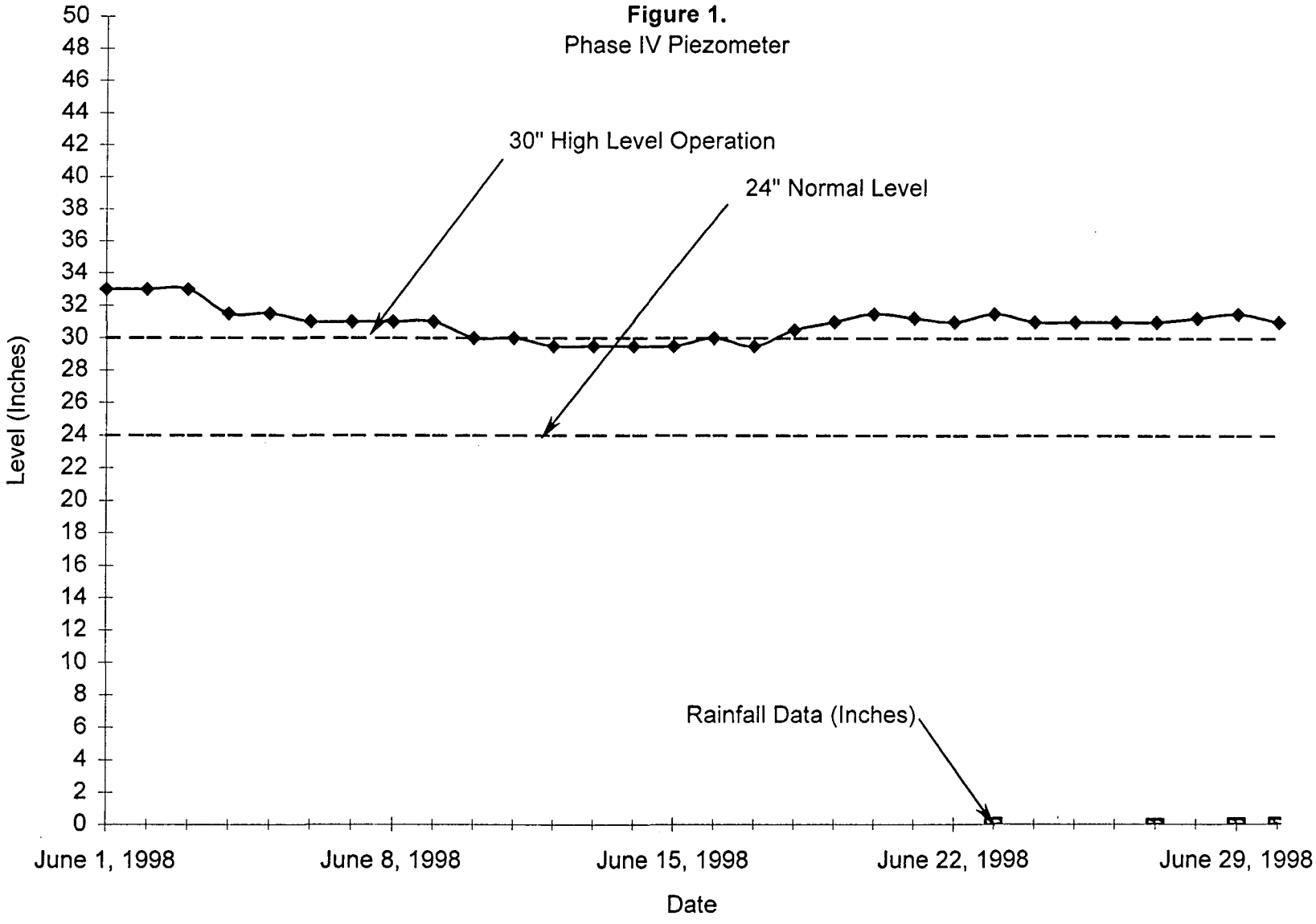

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Figure 2.
Pump Station No. 3 and 5

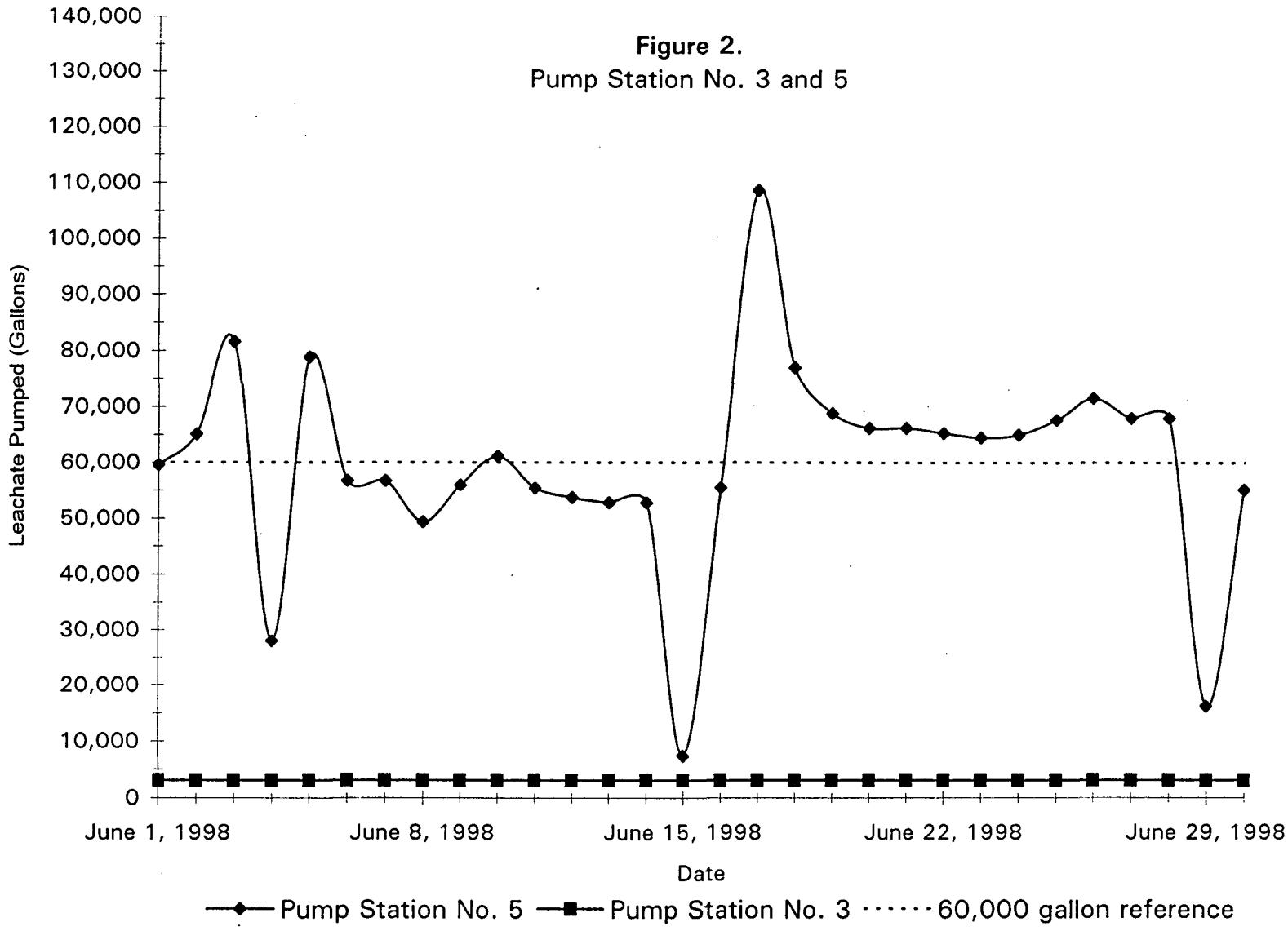

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TABLE 1. LEACHATE HAULING SUMMARY
SOUTHEAST COUNTY LANDFILL
YEAR-1998

Date	Leachate Hauled		Effluent Hauled	
	Contractor (gal.)	County (gal.)	Contractor (gal.)	County (gal.)
January	2,641,800	88,200	0	0
February	2,767,200	6,300	0	0
March	2,959,300	6,300	0	0
April	2,852,300	6,300	0	0
May	1,792,000	6,300	0	0
June	1,856,000	67,000	0	0
July			0	0
August			0	0
September			0	0
October			0	0
November			0	0
December			0	0
Total	14,868,600	180,400	0	0

Note: NR = No Record

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LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) June 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (~~feet~~)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		33			NR	NR	4162800	8.4	114,000	Ø	4,000	Ø
2		33			NR	NR	4225500	5.7	85,000	Ø	7,000	Ø
3		33			NR	NR	4293720	4.2	72,000	Ø	7,000	Ø
4		31.5			NR	NR	4378460	4.1	42,000	Ø	7,000	Ø
5		31.5			NR	NR	4409580	3.1	72,000	Ø	7,000	Ø
6		31.			NR	NR	4491530	3.3	Ø	Ø	7,000	Ø
7		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
8		31			NR	NR	4611315	5.8	84,000	Ø	2,000	Ø
9		31			NR	NR	4663800	4.4	84,000	Ø	3,000	Ø
10		30			NR	NR	4722890	4.5	84,000	Ø	1,500	Ø
11		30			NR	NR	4787150	3.3	115,000	Ø	4,000	Ø
12		29.5			NR	NR	4845710	2.8	66,000	Ø	4,000	Ø
13		29.5			NR	NR	4902588	2.8	54,000	Ø	Ø	Ø
14		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
15		29.5			NR	NR	5014435	4.8	84,000	Ø	2,000	Ø
16		30.			NR	NR	5024955	2.6	42,000	Ø	Ø	Ø

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Prepared by: M. Matthews

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) June 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (gallons)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		29.5			NR	NR	5083590	NR	72,000	Ø	4,000	Ø
18		30.5			NR	NR	5195410	NR	66,000	Ø	4,000	Ø
19		31			NR	NR	5275575	NR	90,000	Ø	4,000	Ø
20		31.5			NR	NR	5347530	NR	66,000	Ø	4,000	Ø
21		NR			NR	NR	NR	NR	30,000	Ø	Ø	Ø
22		31			NR	NR	5486100	NR	96,000	Ø	4,000	Ø
23		31.5			NR	NR	5554510	NR	84,000	6,700	2,000	0.35
24		31			NR	NR	5622135	NR	54,000	Ø	4,000	Ø
25		31			NR	NR	5690250	NR	30,000	Ø	4,000	Ø
26		31			NR	NR	5761030	NR	66,000	Ø	4,000	Ø
27		31			NR	NR	5835740	NR	30,000	Ø	Ø	0.28
28		NR			NR	NR	NR	NR	36,000	Ø	Ø	Ø
29		31.5			NR	NR	5977955	NR	54,000	Ø	2,000	0.33
30		31			NR	NR	5997295	NR	84,000	Ø	2,000	0.37
31												

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(1) If depth is greater than 2 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Leachate Hauled Month Total: _____

Prepared by: M. Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL
(Month/Year) June 98

Action	Date 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer-Phase IV																
Low Level Operation, depth less than or equal to 12 inches.																
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.							NR							NR		
h Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓
Pump Station No. 4-Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.																
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTRF																
Normal Operation.	✓						NR							NR		
If level is greater than 11 feet, increase treatment, hauling , or recirculation.																
If level is less than 6 feet, decrease or stop hauling, recirculation.		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓
* Effluent Pond																
Normal Operation.																
If level is 6 inches or less. stop irrigation, ulation, hauling.																
el is greater than 4 feet, increase irrigation, recirculation, hauling.																
Observed runoff of effluent to stormwater basins?																
No.																
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken. Runoff Type: 1=Severe, 2=Moderate, 3=Minor — To Basin: A, B, C, D																

Comments/Remedial Action: * Treatment Plant Not In Operation

Prepared by: [signature]

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) June 98

Action	Date 17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer-Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.					NR							NR			
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	
Pump Station No. 4-Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.															
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
If level is greater than 11 feet, increase treatment, hauling , or recirculation.															
If level is less than 6 feet, decrease or stop hauling, recirculation.															
Effluent Pond															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.															
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.															
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken. Runoff Type: 1=Severe, 2=Moderate, 3=Minor. To Basin: A, B, C, D															

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Comments/Remedial Action: _____

Prepared by: _____

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) June 98

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									

(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: Treatment Plant Not In Operation

Prepared by: M Matthews

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) June 98

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

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(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form. .

Comments: _____

Prepared by: W. Watkins

HILLSBOROUGH COUNTY
FLORIDA

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS
Dottie Berger
Joe Chillura
Chris Hart
Jim Norman
Jan Platt
Thomas Scott
Ed Turanchik

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Patricia Bean

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RECEIVED
JUN 17 1998
Department of Environmental Protection
SOUTHWEST DISTRICT
BY

June 15, 1998

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of May 1998. In addition, the SWMD is providing the May 1998 field data forms for the Landfill, the daily leachate and collection system evaluation reports, the top of clay survey, and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for May 1998 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from TPS-5 and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of May 1998 was 23.4 inches. The depth over the liner exceeded 30 inches from May 28 through June 10 due to malfunction of the pump in Pump Station No. 3. In order to repair the pump, the dewatering system was shut down. On June 3, 1998, a new pump was installed and the dewatering system was reactivated.

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

Environmental Consultants

3012 U.S. Highway 301 North
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

June 12, 1998
File No. 0995029.23

Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Department
P. O. Box 1110
Tampa, Florida 33601

Subject: May 1998, Leachate Water Balance Report Forms
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed the leachate management operational data from the Southeast County Landfill (SCLF) for May 1998. Attached is the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 1998 updated summary (Table 3). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD). SCS provides the following commentary on the monthly data, including recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations where appropriate.

Day (Column I)

This column presents the calendar day for the month of May 1998.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the average rainfall in inches as measured in the field from rainfall stations at the site. Total rainfall at the SCLF for May 1998 was 0.8 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. The effluent pond was drained for maintenance in March 1997, and any rainfall that accumulates in the pond is pumped to stormwater Basin C. The average depth for recorded days of effluent in the effluent pond for May 1998 was 0 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (in inches) at the bottom of the SCLF and is based on the daily piezometer measurements taken in the field. This measurement represents worst case conditions since the piezometer is currently located within the sump area of the SCLF. The average depth of recorded days of leachate over the liner for May 1998 was 23.4 inches (see Figure 1).

The depth over the liner exceeded 30 inches from May 28 through June 10 due to malfunction of the pump in TPS-3. In order to repair the pump in TPS-3, the dewatering system pump was shut down. A new pump was installed in TPS-3 on June 3, 1998.

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 3 (TPS-3) and pumped to the Main Leachate Pump Station for subsequent treatment. The leachate pumped from TPS-3 represents the leachate being removed by the dewatering system. On May 20 the HCSWMD removed the plug from the piping that allows leachate to flow from the landfill into TPS-3. The plug was removed to confirm the TPS-3 elevation, the plug was reinstalled on May 23. During this period the dewatering system and Temporary Pump Station No. 5 (TPS-5) were shut down to evaluate the performance of TPS-3. In addition, the dewatering system was shut down for repairs from May 27 through the end of the month. An estimated value of 3,100 gallons per day (Figure 2) for the month of May was used for all other missing data because the flow meter has been down since March 23.

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at TPS-5 and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 currently is measured from the landfill flow meter minus the amount pumped from TPS-3. TPS-5 was down from May 20 to 23 to evaluate the performance of TPS-3. The average daily amount of leachate for days pumped from TPS-5 for May 1998 was approximately 74,800 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped to the Leachate Treatment and Reclamation Facility (LTRF) for treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flow meter near TPS-3. The average daily amount of leachate pumped from the landfill to the LTRF for May was 74,200 gallons (total of 2,299,310 gallons for the month).

Leachate in 575,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 575,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily gauge level reading. The average daily amount of leachate stored in the tank for May 1998, based on recorded days, was 169,000 gallons. Under normal operating conditions, the amount of leachate stored in the tank fluctuates based on the daily amount of leachate pumped to the LTRF, the daily amount of leachate treated, and the daily amount of leachate hauled from the tank.

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for May 1998 was 0 gallons. The daily amount of leachate treated at the LTRF may increase or decrease depending on the influent loading/concentrations.

The LTRF has not been operational since September 3, 1996 to allow for repairs to the treatment tanks. The repairs to the treatment tanks at the LTRF were completed on February 23, 1998. The LTRF is expected to be back on line in July 1998 after the 575,000 gallon tank is cleaned and inspected.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. Leachate is pumped from the 575,000 gallon raw leachate tank and into a tanker truck for transport. During May 1998, a total of 1,798,300 gallons of leachate was hauled off site compared to a total of 2,858,600 gallons during the previous month. The HCSWMD should continue increased off site hauling of untreated leachate until the treatment plant comes back on line.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF and is measured from the flow meter at the bypass loading arm. The average daily amount of leachate pumped from the 575,000 gallon leachate tank for use in dust control/evaporation, based on recorded days, was 4,600 gallons for May 1998 (total of 115,000 gallons for the month). Weather permitting, the HCSWMD will continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. The effluent pond was drained for maintenance in March 1997. The average daily amount of effluent stored in the effluent pond for May 1998 was 0 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF. Currently, any rainfall that accumulates in the Pond is pumped to stormwater Basin C.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flow meter at the irrigation pump station. Since the LTRF is shut down for repairs, and the effluent pond is empty for maintenance, effluent was not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in May 1998 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flow meter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During May 1998, the total amount of effluent used for dust control/evaporation was 0 gallons.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site measured from the flow meter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During May 1998, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site. The total estimated amount of leachate/effluent evaporation for May 1998 was 92,000 gallons.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Senior Project Engineer

Raymond J. Dever, P.E.
Solid Waste Division Director
SCS ENGINEERS

RJD/LER:blj
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
MAY 1998
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in Effluent	Est. Depth Over	Pumped From	Pumped From	Leachate Pumped	Leachate in 575K	Leachate Treated	Total Leachate	Leachate Dust Cont./	Effluent Pond	Effluent Irrigation	Effluent Dust Cont./	Total Effluent	Landfill
Day	final	active	int.	Rainfall (in.)	Pond (in.)	Liner (in.)	Sta. No 3 (gal.)	Sta. No. 5 (gal.)	to LTRF (gal.)	Tank (gal.)	at LTRF (gal.)	Hauled (gal.)	Evaporation (gal.)	Storage (gal.)	Evaporation (gal.)	Evaporation (gal.)	Hauled (gal.)	Evaporation (gal.)
1	25.2	5	90.2	0.0	0	19	3,100	78,735	81,835	121,000	0	54,000	4,000	0	0	0	0	3,200
2	25.2	5	90.2	0.0	0	19	3,100	74,858	77,958	202,000	0	42,000	4,000	0	0	0	0	3,200
3	25.2	5	90.2	0.0	0	NR	3,100	74,858	77,958	NR	0	0	0	0	0	0	0	0
4	25.2	5	90.2	0.0	0	19	3,100	76,770	79,870	245,000	0	102,000	4,000	0	0	0	0	3,200
5	25.2	5	90.2	0.0	0	19	3,100	74,930	78,030	176,000	0	126,000	4,000	0	0	0	0	3,200
6	25.2	5	90.2	0.0	0	18	3,100	73,090	76,190	135,000	0	102,000	4,000	0	0	0	0	3,200
7	25.2	5	90.2	0.0	0	18	3,100	75,030	78,130	118,000	0	84,000	4,000	0	0	0	0	3,200
8	25.2	5	90.2	0.0	0	18	3,100	64,690	67,790	90,000	0	108,000	4,000	0	0	0	0	3,200
9	25.2	5	90.2	0.0	0	18	3,100	82,335	85,435	210,000	0	0	4,000	0	0	0	0	3,200
10	25.2	5	90.2	0.0	0	NR	3,100	82,335	85,435	NR	0	0	0	0	0	0	0	0
11	25.2	5	90.2	0.0	0	18	3,100	76,480	79,580	130,000	0	168,000	4,000	0	0	0	0	3,200
12	25.2	5	90.2	0.0	0	17.5	3,100	75,690	78,790	115,000	0	60,000	4,000	0	0	0	0	3,200
13	25.2	5	90.2	0.0	0	19	3,100	70,540	73,640	138,000	0	42,000	4,000	0	0	0	0	3,200
14	25.2	5	90.2	0.0	0	22	3,100	72,360	75,460	141,000	0	61,000	4,000	0	0	0	0	3,200
15	25.2	5	90.2	0.0	0	22.5	3,100	61,910	65,010	138,000	0	42,000	4,000	0	0	0	0	3,200
16	25.2	5	90.2	0.0	0	24	3,100	47,505	50,605	196,000	0	30,000	4,000	0	0	0	0	3,200
17	25.2	5	90.2	0.0	0	NR	3,100	47,505	50,605	NR	0	0	0	0	0	0	0	0
18	25.2	5	90.2	0.0	0	24	3,100	87,790	90,890	193,000	0	85,000	4,000	0	0	0	0	3,200
19	25.2	5	90.2	0.0	0	25	3,100	80,030	83,130	167,000	0	78,000	4,000	0	0	0	0	3,200
20	25.2	5	90.2	0.0	0	24	3,100	15,895	18,995	109,000	0	84,000	4,000	0	0	0	0	3,200
21	25.2	5	90.2	0.0	0	27.5	37,885	0	37,885	104,000	0	60,000	7,000	0	0	0	0	5,600
22	25.2	5	90.2	0.0	0	29	16,490	0	16,490	101,000	0	60,000	7,000	0	0	0	0	5,600
23	25.2	5	90.2	0.0	0	29.5	3,100	101,400	104,500	204,000	0	0	0	0	0	0	0	0
24	25.2	5	90.2	0.0	0	NR	3,100	101,400	104,500	NR	0	0	0	0	0	0	0	0
25	25.2	5	90.2	0.0	0	28.5	3,100	103,500	106,600	230,000	0	54,000	6,000	0	0	0	0	4,800
26	25.2	5	90.2	0.0	0	28.5	3,100	86,600	89,700	245,000	0	60,000	7,000	0	0	0	0	5,600
27	25.2	5	90.2	0.0	0	28.5	0	87,500	87,500	216,000	0	78,000	7,000	0	0	0	0	5,600
28	25.2	5	90.2	0.6	0	30.5	0	86,700	86,700	227,000	0	84,300	3,000	0	0	0	0	2,400
29	25.2	5	90.2	0.0	0	31	0	79,560	79,560	190,000	0	85,000	7,000	0	0	0	0	5,600
30	25.2	5	90.2	0.2	0	32	0	65,270	65,270	242,000	0	49,000	3,000	0	0	0	0	2,400
31	25.2	5	90.2	0.0	0	NR	0	65,270	65,270	NR	0	0	0	0	0	0	0	0
Total				0.79			128,775	2,170,535	2,299,310		0	1,798,300	115,000	0	0	0	0	92,000
Daily Average					0	23.4	5,000	74,800	74,200	169,000	0	74,900	4,600	0	0	0	0	3,700
Monthly Average					0	19.6	4,200	70,000	74,200	141,000	0	58,000	3,700	0	0	0	0	3,000

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VII calculated by subtracting VI from flow meter reading.
6. Column VIII, quantity from flow meter.
7. Column IX, calculated from depth in 575,000 gal. leachate tank.
8. Columns X and XIV, quantities from flow meters.
9. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
10. Column XVII, 80% of the daily values from Columns XII, XIV and XV.
11. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
12. Daily average calculated by dividing the total by the active days in the month.
13. Monthly average calculated by dividing the total by the number of days of the month.

TABLE 2. FIELD DATA ENTRY FORM
MAY 1998
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
									Leachate Hauled							Effluent Hauled		
Day	Active Area (ac.)	Piezometer Phase IV (in.)	Phase IV LCRS Cleanout (in.)	Phase III LCR Cleanout (in.)	Pump Sta. No. 4 (in.)	Pump Sta No. 3 Reading (gal.)	Landfill Flow Meter Pump Sta. No. 5 (gal.)	Depth in 575K Tank (ft.)	Contractor (gal.)	County (gal.)	Leachate Dust Cont./ Evaporation (gal.)	Rainfall (in.)	Depth in Effl. Pond (in.)	Leachate Treated at LTRF (gal.)	Effluent Irrigation Evaporation (gal.)	Contractor (gal.)	County (gal.)	Effluent Dust Cont./ Evaporation (gal)
1	5	19	NR	NR	NR	**797,860**	1,863,490	3.3	54,000	0	4,000	0.00	0	0	0	0	0	0
2	5	19	NR	NR	NR	**800,960**	1,945,325	4.2	42,000	0	4,000	0.00	0	0	0	0	0	0
3	5	NR	NR	NR	NR	**804,060**	*2,023,283*	NR	0	0	0	0.00	0	0	0	0	0	0
4	5	19	NR	NR	NR	**807,160**	2,101,240	7	102,000	0	4,000	0.00	0	0	0	0	0	0
5	5	19	NR	NR	NR	**810,260**	2,181,110	8.5	126,000	0	4,000	0.00	0	0	0	0	0	0
6	5	18	NR	NR	NR	**813,360**	2,259,140	6.1	102,000	0	4,000	0.00	0	0	0	0	0	0
7	5	18	NR	NR	NR	**816,460**	2,335,330	4.7	84,000	0	4,000	0.00	0	0	0	0	0	0
8	5	18	NR	NR	NR	**819,560**	2,413,460	4.1	108,000	0	4,000	0.00	0	0	0	0	0	0
9	5	18	NR	NR	NR	**822,660**	2,481,250	3.11	0	0	4,000	0.00	0	0	0	0	0	0
10	5	NR	NR	NR	NR	**825,760**	*2,566,685*	NR	0	0	0	0.00	0	0	0	0	0	0
11	5	18	NR	NR	NR	**828,860**	2,652,120	7.3	168,000	0	4,000	0.00	0	0	0	0	0	0
12	5	17.5	NR	NR	NR	**831,960**	2,731,700	4.5	60,000	0	4,000	0.00	0	0	0	0	0	0
13	5	19	NR	NR	NR	**835,060**	2,810,490	4	42,000	0	4,000	0.00	0	0	0	0	0	0
14	5	22	NR	NR	NR	**838,160**	2,884,130	4.8	61,000	0	4,000	0.00	0	0	0	0	0	0
15	5	22.5	NR	NR	NR	**841,260**	2,959,590	4.9	42,000	0	4,000	0.00	0	0	0	0	0	0
16	5	24	NR	NR	NR	**844,360**	3,024,600	4.8	30,000	0	4,000	0.00	0	0	0	0	0	0
17	5	NR	NR	NR	NR	**847,460**	*3,075,205*	NR	0	0	0	0.00	0	0	0	0	0	0
18	5	24	NR	NR	NR	**850,560**	3,125,810	6.8	85,000	0	4,000	0.00	0	0	0	0	0	0
19	5	25	NR	NR	NR	**853,660**	3,216,700	6.7	78,000	0	4,000	0.00	0	0	0	0	0	0
20	5	24	NR	NR	NR	**856,760**	3,299,830	5.8	84,000	0	4,000	0.00	0	0	0	0	0	0
21	5	27.5	NR	NR	NR	**859,860**	3,318,825	3.8	60,000	0	7,000	0.00	0	0	0	0	0	0
22	5	29	NR	NR	NR	**862,960**	3,356,710	3.6	60,000	0	7,000	0.00	0	0	0	0	0	0
23	5	29.5	NR	NR	NR	**866,060**	3,373,200	3.5	0	0	0	0.00	0	0	0	0	0	0
24	5	NR	NR	NR	NR	**869,160**	*3,477,700*	NR	0	0	0	0.00	0	0	0	0	0	0
25	5	28.5	NR	NR	NR	**872,260**	3,582,200	7.1	54,000	0	6,000	0.00	0	0	0	0	0	0
26	5	28.5	NR	NR	NR	**875,360**	3,688,800	8	60,000	0	7,000	0.00	0	0	0	0	0	0
27	5	28.5	NR	NR	NR	**878,460**	3,778,500	8.5	78,000	0	7,000	0.00	0	0	0	0	0	0
28	5	30.5	NR	NR	NR	**881,560**	3,866,000	7.5	78,000	6,300	3,000	0.57	0	0	0	0	0	0
29	5	31	NR		NR	**884,660**	3,952,700	7.9	85,000	0	7,000	0.00	0	0	0	0	0	0
30	5	32	NR		NR	**887,760**	4,032,260	6.6	49,000	0	3,000	0.22	0	0	0	0	0	0
31	5	NR	NR	NR	NR	**890,860**	*4,097,530*	NR	0	0	0	0.00	0	0	0	0	0	0

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Notes:
1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column XIII, Trace is less than 0.01 inches.
5. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
6. Column III, Phase IV piezometer began monitoring on 7/10/95.
7. Columns VII, XV and XVI, quantities from flow meters.

TABLE 3. 1998 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change in Storage For Month (gal.)
January	4.1	0	3,423,300	2,730,000	46,000	0	0	0	0	3,423,300	2,776,000	647,300
February	9.7	0	3,077,220	2,773,500	50,000	0	0	0	0	3,077,220	2,823,500	253,720
March	7.1	0	3,004,230	2,965,600	83,000	0	0	0	0	3,004,230	3,048,600	-44,370
April	0.4	0	2,757,220	2,858,600	98,000	0	0	0	0	2,757,220	2,956,600	-199,380
May	0.8	0	2,299,310	1,798,300	115,000	0	0	0	0	2,299,310	1,913,300	386,010
June										0	0	0
July										0	0	0
August										0	0	0
September										0	0	0
October										0	0	0
November										0	0	0
December										0	0	0
YTD Total	22.1	0	14,561,280	13,126,000	392,000	0	0	0	0	14,561,280	13,518,000	

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Note:

1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

Figure 1.
Phase IV Piezometer

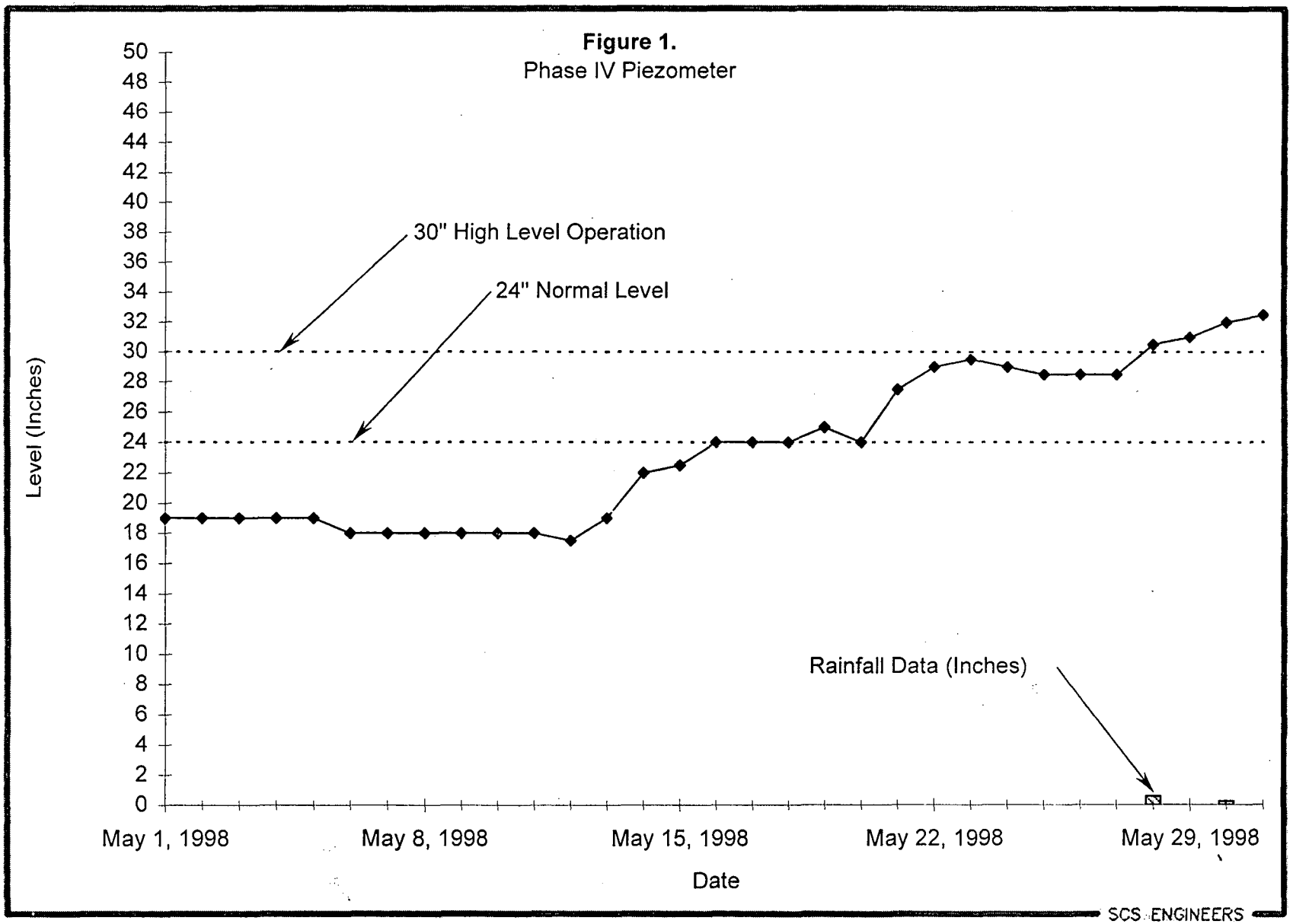
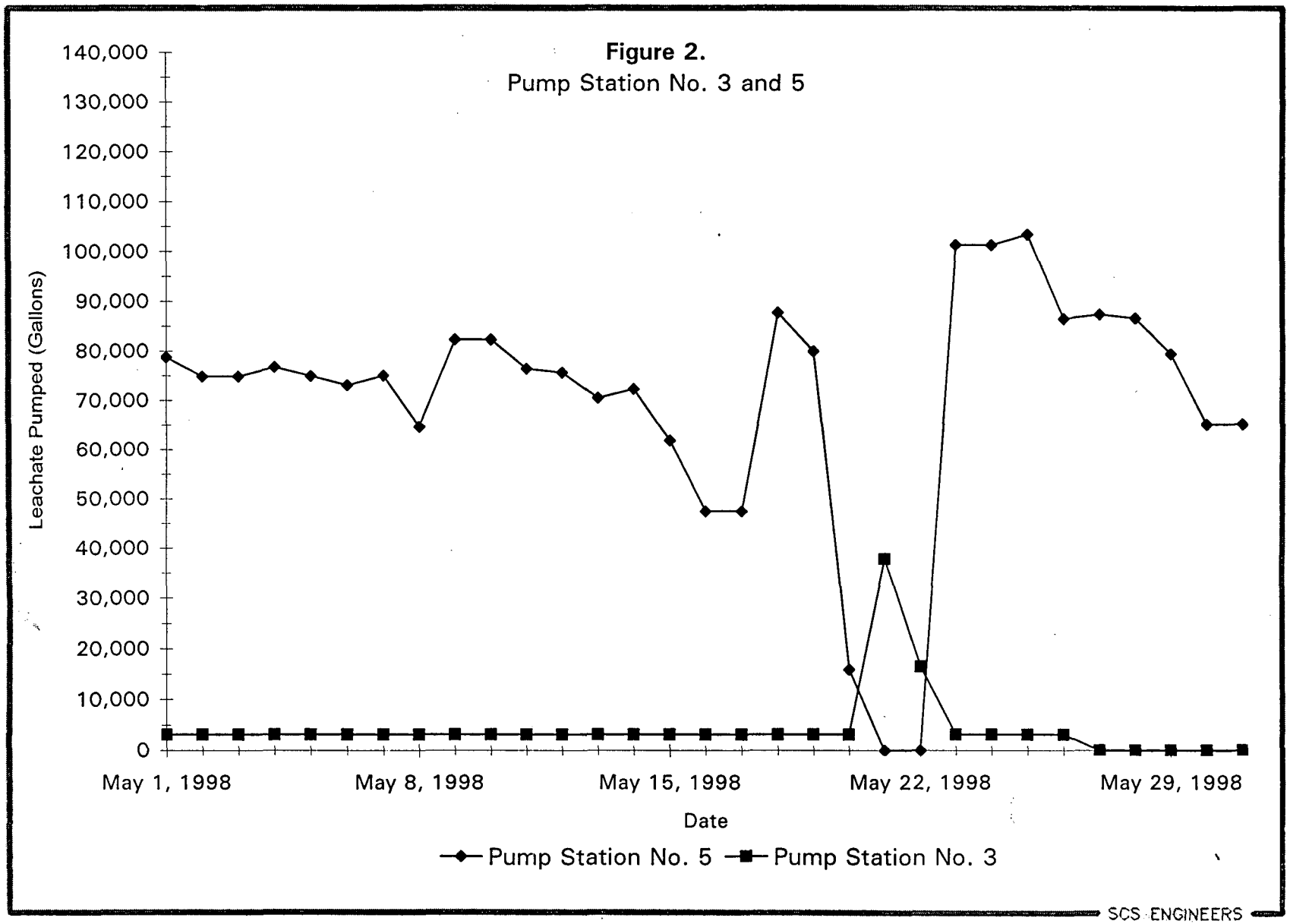


Figure 2.
Pump Station No. 3 and 5



LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) May 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		19			NR	NR	1863490	3.3	54000	Ø	4,000	Ø
2		19			NR	NR	1945325	4.2	42,000	Ø	4,000	Ø
3		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
4		19			NR	NR	2101240	7.	102,000	Ø	4,000	Ø
5		19			NR	NR	2181110	8.5	126,000	Ø	4,000	Ø
6		18			NR	NR	2259140	6.1	102,000	Ø	4,000	Ø
7		18			NR	NR	2335330	4.7	84,000	Ø	4,000	Ø
8		18			NR	NR	2413460	4.10	108,000	Ø	4,000	Ø
9		18			NR	NR	2481250	3.11	Ø	Ø	4,000	Ø
10		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
11		18			NR	NR	2652120	7.3	168,000	Ø	4,000	Ø
12		17.5			NR	NR	2731700	4.5	60,000	Ø	4,000	Ø
13		19			NR	NR	2810490	4	42,000	Ø	4,000	Ø
14		22			NR	NR	2884130	4.8	61,000	Ø	4,000	Ø
15		22.5			NR	NR	2959590	4.9	42,000	Ø	4,000	Ø
16		24			NR	NR	3024600	4.8	30,000	Ø	4,000	Ø

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor Immediately. Complete Evaluation Report Form.

Comments: NR = No reading

Prepared by: W. Markham

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) May 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (gallons)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
18		24			NR	NR	3125810	6.8	85,000	Ø	4,000	Ø
19		25			NR	NR	3216700	6.7	78,000	Ø	4,000	Ø
20		24			NR	NR	3299830	5.8	84,000	Ø	4,000	Ø
21		27.5			NR	NR	3318825	3.8	60,000	Ø	7,000	Ø
22		29			NR	NR	3356710	3.6	60,000	Ø	7,000	Ø
23		29.5			NR	NR	3373200	3.5	Ø	Ø	Ø	Ø
24		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
25		28.5			NR	NR	3582200	7.10	54,000	Ø	6,000	Ø
26		28.5			NR	NR	3688800	8	60,000	Ø	7,000	Ø
27		28.5			NR	NR	3778500	8.5	78,000	Ø	7,000	Ø
28		30.5			NR	NR	3866000	7.5	78,000	6,300	3,000	0.57
29		31			NR	NR	3952700	7.9	85,000	Ø	7,000	Ø
30		32			NR	NR	4032260	6.6	49,000	Ø	3,000	0.22
31												

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor Immediately. Complete Evaluation Report Form.

Comments: _____

Leachate Hauled Month Total: _____

Prepared by: T. Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL
(Month/Year) May 98

Action	Date 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer-Phase IV																
Low Level Operation, depth less than or equal to 12 inches.																
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.																
* Pump Station No. 4-Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.																
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTRF																
Normal Operation.			NR	✓	✓	✓				NR	✓					
If level is greater than 11 feet, increase treatment, hauling , or recirculation.																
* If level is less than 6 feet, decrease or stop hauling, recirculation.	✓	✓					✓	✓	✓			✓	✓	✓	✓	✓
Effluent Pond																
Normal Operation.																
If level is 6 inches or less, stop irrigation, recirculation, hauling.																
If level is greater than 4 feet, increase irrigation, recirculation, hauling.																
Observed runoff of effluent to stormwater basins?																
No.																
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.																

Runoff Type	To Basin
1=Severe	A, B, C, D
2=Moderate	
3=Minor	

Comments/Remedial Action: * Pump Station No. 4-Phase VI no readings. - ** Treatment Plant not in operation

Prepared by: M Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) May 98

Action	Date														
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer-Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.	NR	✓		✓				NR							
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.			✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	
Pump Station No. 4-Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.															
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.	NR	✓	✓					NR	✓	✓	✓	✓	✓	✓	
If level is greater than 11 feet, increase treatment, hauling , or recirculation.															
If level is less than 6 feet, decrease or stop hauling, recirculation.				✓	✓	✓	✓								
Effluent Pond															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.															
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.															
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken. Runoff Type: 1=Severe, 2=Moderate, 3=Minor. To Basin: A, B, C, D															

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Comments/Remedial Action: _____

Prepared by _____

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) May 98

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									

(1) If yes: Contact Supervisor Immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: Treatment plant not in operation

Prepared by: [signature]

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) May 98

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

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(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: _____

Prepared by: M. Matthews

HILLSBOROUGH COUNTY

FLORIDA

BOARD OF COUNTY COMMISSIONERS
Dottie Berger
Joe Chillura
Chris Hart
Jim Norman
Jan Platt
Thomas Scott
Ed Turanchik

RECEIVED
MAY 20 1998
Department of Environmental Protection
SOUTHWEST DISTRICT
BY

Office of the County Administrator
Daniel A. Kleman

Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimmie Keel

May 18, 1998

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of April 1998. In addition, the SWMD is providing the April 1998 field data forms for the Landfill, the daily leachate and collection system evaluation reports, the top of clay survey, and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for April 1998 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from TPS-5 and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of April 1998 was 21 inches. Therefore, even with the extreme rain conditions during the first quarter of the year, the Landfill leachate depth was below the April LMP target depth of 24 inches over the liner.

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

Environmental Consultants

3012 U.S. Highway 301 Nort
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

May 18, 1998
File No. 0995029.23

Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Department
P. O. Box 1110
Tampa, Florida 33601

Subject: April 1998, Leachate Water Balance Report Forms
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed the leachate management operational data from the Southeast County Landfill (SCLF) for April 1998. Attached is the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), the 1998 updated summary (Table 3), and the Approximate Top of Clay Elevations (Table 4). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD). SCS provides the following commentary on the monthly data, including recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations where appropriate.

Day (Column I)

This column presents the calendar day for the month of April 1998.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the average rainfall in inches as measured in the field from rainfall stations at the site. Total rainfall at the SCLF for April 1998 was 0.4 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. The effluent pond was drained for maintenance in March 1997, and any rainfall that accumulates in the pond is pumped to stormwater Basin C. The average depth for recorded days of effluent in the effluent pond for April 1998 was 0 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (in inches) at the bottom of the SCLF and is based on the daily piezometer measurements taken in the field. This measurement represents worst case conditions since the piezometer is currently located within the sump area of the SCLF. The average depth of recorded days of leachate over the liner for April 1998 was 21 inches (see Figure 1).

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 3 (TPS-3) and pumped to the Main Leachate Pump Station for subsequent treatment. The leachate pumped from TPS-3 represents the leachate being removed by the dewatering system. The flow meter has been down since March 23 and an estimated value of 3,100 gallons per day (Figure 2) for the month of April was used in place of missing data.

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 5 (TPS-5) and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 currently is measured from the landfill flow meter minus the amount pumped from TPS-3. TPS-5 was down for part of the day on April 9 and the landfill flow meter was replaced on April 17. The average daily amount of leachate collected and pumped from TPS-5 for April 1998 was approximately 88,800 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped to the Leachate Treatment and Reclamation Facility (LTRF) for treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flow meter near TPS-3. The average daily amount of leachate pumped from the landfill to the LTRF for April was 91,900 gallons (total of 2,757,220 gallons for the month).

Leachate in 575,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 575,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily gauge level reading. The average daily amount of leachate stored in the tank for April 1998, based on recorded days, was 256,000 gallons. Under normal operating conditions, the amount of leachate stored in the tank fluctuates based on the daily amount of leachate pumped to the LTRF, the daily amount of leachate treated, and the daily amount of leachate hauled from the tank.

There is a difference of 199,380 gallons between the in-line flow meter readings and the change in storage observed in the leachate storage tank. This difference is within the expected margin of error for the month of April.

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for April 1998 was 0 gallons. The daily amount of leachate treated at the LTRF may increase or decrease depending on the influent loading/concentrations.

The LTRF has not been operational since September 3, 1996 to allow for repairs to the treatment tanks. The repairs to the treatment tanks at the LTRF were completed on February 23, 1998. The LTRF is expected to be back on line in June 1998.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. Leachate is pumped from the 575,000 gallon raw leachate tank and into a tanker truck for transport. During April 1998, a total of 2,858,600 gallons of leachate was hauled off site compared to a total of 2,965,600 gallons during the previous month. The HCSWMD should continue increased off site hauling of untreated leachate until the treatment plant comes back on line in June 1998.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF and is measured from the flow meter at the bypass loading arm. The average daily amount of leachate pumped from the 575,000 gallon leachate tank for use in dust control/evaporation, based on recorded days, was 3,800 gallons for April 1998 (total of 98,000 gallons for the month). Weather permitting, the HCSWMD will continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. The effluent pond was drained for maintenance in March 1997. The average daily amount of effluent stored in the effluent pond for April 1998 was 0 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF. Currently, any rainfall that accumulates in the Pond is pumped to stormwater Basin C.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flow meter at the irrigation pump station. Since the LTRF is shut down for repairs, and the effluent pond is empty for maintenance, effluent was not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in April 1998 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flow meter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During April 1998, the total amount of effluent used for dust control/evaporation was 0 gallons.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site measured from the flow meter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During April 1998, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site. The total estimated amount of leachate/effluent evaporation for April 1998 was 78,400 gallons.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Senior Project Engineer

Robert B. Gardner
Vice President
SCS ENGINEERS

RBG/LER:blj
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
APRIL 1998
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in	Est. Depth	Pumped	Pumped	Leachate	Leachate	Leachate	Total	Leachate	Effluent	Effluent	Effluent	Total	
				Rainfall	Effluent	Over	From	From	Pumped	in 575K	Treated	Leachate	Dust Cont./	Pond	Irrigation	Dust Cont./	Effluent	Landfill
Day	final	active	int.	(in.)	Pond (in.)	Liner (in.)	Sta. No 3 (gal.)	Sta. No. 5 (gal.)	to LTRF (gal.)	Tank (gal.)	at LTRF (gal.)	Hauled (gal.)	Evaporation (gal.)	Storage (gal.)	Evaporation (gal.)	Evaporation (gal.)	Hauled (gal.)	Evaporation (gal.)
1	25.2	5	90.2	0.0	0	26.5	**3,100**	104,880	107,980	337,000	0	156,000	4,000	0	0	0	0	3,200
2	25.2	5	90.2	0.0	0	26	**3,100**	108,020	111,120	271,000	0	167,000	4,000	0	0	0	0	3,200
3	25.2	5	90.2	0.0	0	24	**3,100**	104,200	107,300	259,000	0	114,000	4,000	0	0	0	0	3,200
4	25.2	5	90.2	0.0	0	23	**3,100**	102,250	105,350	363,000	0	74,000	2,000	0	0	0	0	1,600
5	25.2	5	90.2	0.0	0	NR	**3,100**	*102,250*	*105,350*	NR	0	0	0	0	0	0	0	0
6	25.2	5	90.2	0.0	0	22	**3,100**	101,800	104,900	348,000	0	127,000	4,000	0	0	0	0	3,200
7	25.2	5	90.2	0.0	0	22	**3,100**	92,100	95,200	340,000	0	84,000	4,000	0	0	0	0	3,200
8	25.2	5	90.2	0.0	0	21	**3,100**	26,800	29,900	199,000	0	180,000	4,000	0	0	0	0	3,200
9	25.2	5	90.2	0.0	0	20.5	**3,100**	125,900	129,000	216,000	0	102,000	4,000	0	0	0	0	3,200
10	25.2	5	90.2	0.0	0	27	**3,100**	106,500	109,600	250,000	0	84,000	4,000	0	0	0	0	3,200
11	25.2	5	90.2	0.0	0	20.5	**3,100**	91,550	94,650	374,000	0	30,000	4,000	0	0	0	0	3,200
12	25.2	5	90.2	0.0	0	NR	**3,100**	*91,550*	*94,650*	NR	0	0	0	0	0	0	0	0
13	25.2	5	90.2	0.0	0	21.5	**3,100**	89,900	93,000	322,000	0	114,000	4,000	0	0	0	0	3,200
14	25.2	5	90.2	0.0	0	22.5	**3,100**	90,800	93,900	285,000	0	174,000	4,000	0	0	0	0	3,200
15	25.2	5	90.2	0.0	0	20	**3,100**	92,300	95,400	299,000	0	78,200	4,000	0	0	0	0	3,200
16	25.2	5	90.2	0.0	0	20	**3,100**	90,415	93,515	299,000	0	42,000	4,000	0	0	0	0	3,200
17	25.2	5	90.2	0.0	0	20	**3,100**	87,145	90,245	363,000	0	90,000	4,000	0	0	0	0	3,200
18	25.2	5	90.2	0.0	0	19.5	**3,100**	86,848	89,948	397,000	0	108,000	4,000	0	0	0	0	3,200
19	25.2	5	90.2	0.0	0	NR	**3,100**	*86,848*	*89,948*	NR	0	0	0	0	0	0	0	0
20	25.2	5	90.2	0.3	0	20	**3,100**	88,210	91,310	305,000	0	162,100	4,000	0	0	0	0	3,200
21	25.2	5	90.2	0.0	0	21	**3,100**	84,475	87,575	250,000	0	126,000	4,000	0	0	0	0	3,200
22	25.2	5	90.2	0.0	0	19	**3,100**	83,000	86,100	193,000	0	120,000	4,000	0	0	0	0	3,200
23	25.2	5	90.2	0.0	0	19	**3,100**	80,040	83,140	121,000	0	216,000	4,000	0	0	0	0	3,200
24	25.2	5	90.2	0.0	0	19	**3,100**	78,870	81,970	118,000	0	72,000	2,000	0	0	0	0	1,600
25	25.2	5	90.2	0.0	0	18.5	**3,100**	77,590	80,690	230,000	0	0	4,000	0	0	0	0	3,200
26	25.2	5	90.2	0.0	0	NR	**3,100**	*77,590*	*80,690*	NR	0	0	0	0	0	0	0	0
27	25.2	5	90.2	0.0	0	18.5	**3,100**	78,000	81,100	202,000	0	108,000	2,000	0	0	0	0	1,600
28	25.2	5	90.2	0.0	0	18.5	**3,100**	76,100	79,200	115,000	0	162,000	4,000	0	0	0	0	3,200
29	25.2	5	90.2	0.1	0	18	**3,100**	77,615	80,715	115,000	0	102,300	4,000	0	0	0	0	3,200
30	25.2	5	90.2	0.1	0	18.5	**3,100**	80,675	83,775	94,000	0	66,000	4,000	0	0	0	0	3,200
Total				0.4			93,000	2,664,220	2,757,220		0	2,858,600	98,000	0	0	0	0	78,400
Daily Average					0	21.0	3,100	88,800	91,900	256,000	0	114,300	3,800	0	0	0	0	3,000
Monthly Average					0	18.2	3,100	88,800	91,900	222,000	0	95,300	3,300	0	0	0	0	3,000

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VII calculated by subtracting VI from flow meter reading.
6. Column VIII, quantity from flow meter.
7. Column IX, calculated from depth in 575,000 gal. leachate tank.
8. Columns X and XIV, quantities from flow meters.
9. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
10. Column XVII, 80% of the daily values from Columns XII, XIV and XV.
11. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
12. Daily average calculated by dividing the total by the active days in the month.
13. Monthly average calculated by dividing the total by the number of days of the month.

TABLE 2. FIELD DATA ENTRY FORM
APRIL 1998
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
									Leachate Hauled							ffluent Hauled		
Day	Active Area (ac.)	Piezometer Phase IV (in.)	Phase IV LCRS Cleanout (in.)	Phase III LCR Cleanout (in.)	Pump Sta. No. 4 (in.)	Pump Sta No. 3 Reading (gal.)	Landfill Flow Meter Pump Sta. No. 5 (gal.)	Depth in 575K Tank (ft.)	Contractor (gal.)	County (gal.)	Leachate Dust Cont./ Evaporation (gal.)	Rainfall (in.)	Depth in Effl. Pond (in.)	Leachate Treated at LTRF (gal.)	Effluent Irrigation Evaporation (gal.)	Contractor (gal.)	County (gal.)	Effluent Dust Cont./ Evaporation (gal)
1	5	26.5	NR	NR	NR	**704,860**	3,516,100	13.6	156,000	0	4,000	0.00	0	0	0	0	0	0
2	5	26	NR	NR	NR	**707,960**	3,624,080	11.7	167,000	0	4,000	0.00	0	0	0	0	0	0
3	5	24	NR	NR	NR	**711,060**	3,735,200	9.4	114,000	0	4,000	0.00	0	0	0	0	0	0
4	5	23	NR	NR	NR	**714,160**	3,842,500	9	74,000	0	2,000	0.00	0	0	0	0	0	0
5	5	NR	NR	NR	NR	**717,260**	*3,947,850*	NR	0	0	0	0.00	0	0	0	0	0	0
6	5	22	NR	NR	NR	**720,360**	4,053,200	12.6	127,000	0	4,000	0.00	0	0	0	0	0	0
7	5	22	NR	NR	NR	**723,460**	4,158,100	12.1	84,000	0	4,000	0.00	0	0	0	0	0	0
8	5	21	NR	NR	NR	**726,560**	4,253,300	11.8	180,000	0	4,000	0.00	0	0	0	0	0	0
9	5	20.5	NR	NR	NR	**729,660**	4,283,200	6.9	102,000	0	4,000	0.00	0	0	0	0	0	0
10	5	27	NR	NR	NR	**732,760**	4,412,200	7.5	84,000	0	4,000	0.00	0	0	0	0	0	0
11	5	20.5	NR	NR	NR	**735,860**	4,521,800	8.7	30,000	0	4,000	0.00	0	0	0	0	0	0
12	5	NR	NR	NR	NR	**738,960**	*4,616,450*	NR	0	0	0	0.00	0	0	0	0	0	0
13	5	21.5	NR	NR	NR	**742,060**	4,711,100	13	114,000	0	4,000	0.00	0	0	0	0	0	0
14	5	22.5	NR	NR	NR	**745,160**	4,804,100	11.2	174,000	0	4,000	0.00	0	0	0	0	0	0
15	5	20	NR	NR	NR	**748,260**	4,898,000	9.9	78,200	0	4,000	0.00	0	0	0	0	0	0
16	5	20	NR	NR	NR	**751,360**	4,993,400	10.4	42,000	0	4,000	0.00	0	0	0	0	0	0
17	5	20	NR	NR	NR	**754,460**	5,086,915	10.4	90,000	0	4,000	0.00	0	0	0	0	0	0
18	5	19.5	NR	NR	NR	**757,560**	767,330	12.6	108,000	0	4,000	0.00	0	0	0	0	0	0
19	5	NR	NR	NR	NR	**760,660**	*857,278*	NR	0	0	0	0.00	0	0	0	0	0	0
20	5	20	NR	NR	NR	**763,760**	947,225	13.8	162,100	0	4,000	0.25	0	0	0	0	0	0
21	5	21	NR	NR	NR	**766,860**	1,038,535	10.6	126,000	0	4,000	0.00	0	0	0	0	0	0
22	5	19	NR	NR	NR	**769,960**	1,126,110	8.7	120,000	0	4,000	0.00	0	0	0	0	0	0
23	5	19	NR	NR	NR	**773,060**	1,212,210	6.7	216,000	0	4,000	0.00	0	0	0	0	0	0
24	5	19	NR	NR	NR	**776,160**	1,295,350	4.2	72,000	0	2,000	0.00	0	0	0	0	0	0
25	5	18.5	NR	NR	NR	**779,260**	1,377,320	4.1	0	0	4,000	0.00	0	0	0	0	0	0
26	5	NR	NR	NR	NR	**782,360**	*1,458,010*	NR	0	0	0	0.00	0	0	0	0	0	0
27	5	18.5	NR	NR	NR	**785,460**	1,538,700	8	108,000	0	2,000	0.00	0	0	0	0	0	0
28	5	18.5	NR	NR	NR	**788,560**	1,619,800	7	162,000	0	4,000	0.00	0	0	0	0	0	0
29	5	18	NR	NR	NR	**791,660**	1,699,000	4	96,000	6,300	4,000	0.08	0	0	0	0	0	0
30	5	18.5	NR	NR	NR	**794,760**	1,779,715	4	66,000	0	4,000	0.10	0	0	0	0	0	0

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Notes:
1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column XIII, Trace is less than 0.01 inches.
5. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
6. Column III, Phase IV piezometer began monitoring on 7/10/95.
7. Columns VII, XV and XVI, quantities from flow meters.

TABLE 3. 1998 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change in Storage For Month (gal.)
January	4.1	0	3,423,300	2,730,000	46,000	0	0	0	0	3,423,300	2,776,000	647,300
February	9.7	0	3,077,220	2,773,500	50,000	0	0	0	0	3,077,220	2,823,500	253,720
March	7.1	0	3,004,230	2,965,600	83,000	0	0	0	0	3,004,230	3,048,600	-44,370
April	0.4	0	2,757,220	2,858,600	98,000	0	0	0	0	2,757,220	2,956,600	-199,380
May										0	0	0
June										0	0	0
July										0	0	0
August										0	0	0
September										0	0	0
October										0	0	0
November										0	0	0
December										0	0	0
YTD Total	21.3	0	12,261,970	11,327,700	277,000	0	0	0	0	12,261,970	11,604,700	

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Note:

1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

TABLE 4. APPROXIMATE TOP OF CLAY ELEVATIONS
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FL

	PHASE III	PHASE IV			PHASE VI		
DATE	LCRS Cleanout	LCRS Cleanout	Piezometer	Pump Control Well	Pump Station No. 3	Pump Station No. 4	Settling Plate
December 28, 1993	NR	NR	NR	NR	118.97	NR	NR
December 5, 1994	NR	NR	NR	NR	118.76	NR	NR
January 26, 1995	NR	NR	NR	NR	118.59	122.01	NR
February 22, 1995	119.89	118.09	NR	NR	118.59	122.00	NR
July 13, 1995	NR	NR	NR	NR	118.50	121.98	NR
November 21, 1995	119.81	117.80	116.45	116.55	118.45	121.93	NR
December 7, 1995	NR	NR	NR	NR	NR	NR	117.35
June 6, 1996	119.75	117.69	116.20	116.26	118.35	121.87	116.96
October 2, 1996	119.80	117.66	116.14	116.21	118.15	121.97	116.95
January 20, 1997	119.70	117.54	115.97	116.00	118.04	121.88	116.85
May 2, 1997	119.68	117.43	115.92	115.94	118.04	121.88	116.79
August 1, 1997	119.70	117.50	115.88	115.89	118.04	121.88	116.81
January 13, 1998	119.68	117.48	115.83	115.83	118.05	121.88	116.81
April 6, 1998	119.66	117.40	115.75	115.71	118.05	121.88	116.71

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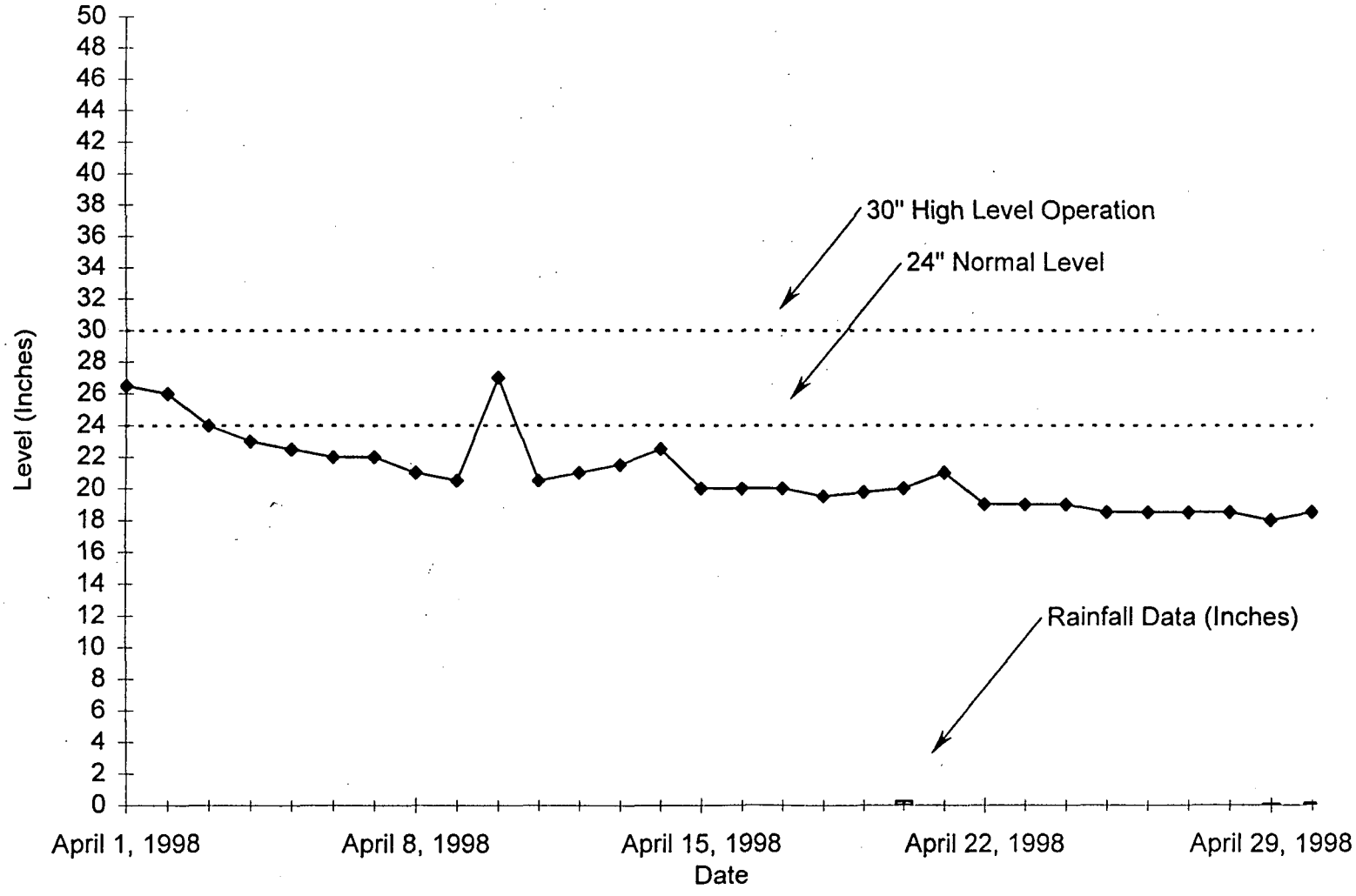
PROJECT NAME DATE

Figure 1.
Phase IV Piezometer



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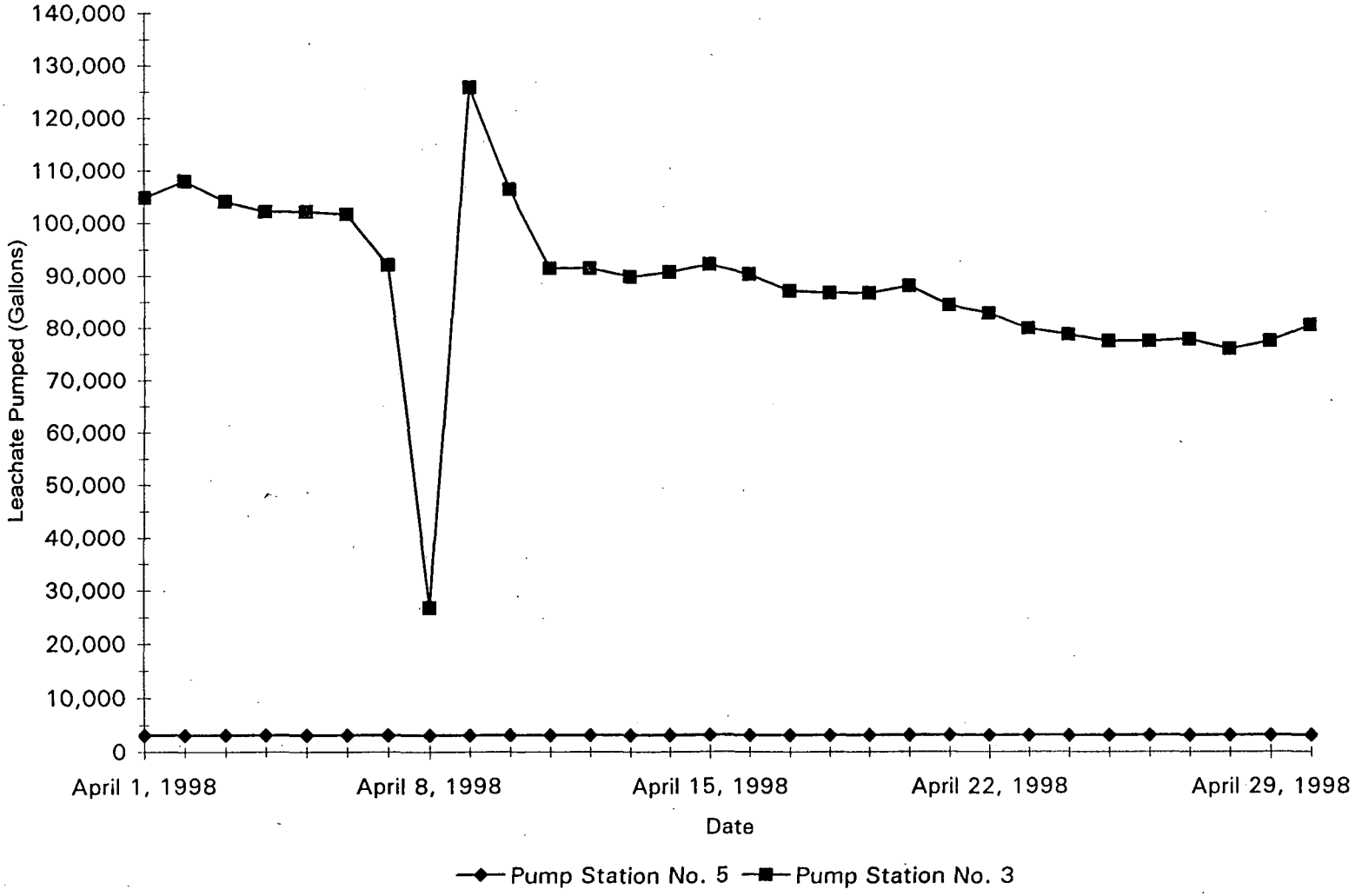
PROJECT NAME DATE

Figure 2.
Pump Station No. 3 and 5



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LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) April 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		26.5			NR	NR	3516100	13.6	156,000		4,000	Ø
2		26			NR	NR	3624080	11.7	167,000		4,000	Ø
3		24			NR	NR	3735200	9.4	114,000		4,000	Ø
4		23			NR	NR	3842500	9.0	74,000		2,000	Ø
5		NR			NR	NR	NR	NR	Ø		Ø	Ø
6		22			NR	NR	4053200	12.6	127,000		4,000	Ø
7		22			NR	NR	4158100	12.1	84,000		4,000	Ø
8		21			NR	NR	4253300	11.8	180,000		4,000	Ø
9		20.5			NR	NR	4283200	6.9	102,000		4,000	Ø
10		27			NR	NR	4412200	7.5	84,000		4,000	Ø
11		20.5			NR	NR	4521800	8.7	30,000		4,000	Ø
12		NR			NR	NR	NR	NR	Ø		Ø	Ø
13		21.5			NR	NR	4711100	13	114,000		4,000	Ø
14		22.5			NR	NR	4804100	11.2	174,000		4,000	Ø
15		20			NR	NR	4898000	9.9	78,200		4,000	Ø
16		20			NR	NR	4993400	10.4	42,000		4,000	Ø

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Prepared by: _____

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) April 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		20			NR	NR	5086915	10.4	90,000		4,000	Ø
18		19.5			NR	NR	* 767330	12.6	108,000		4,000	Ø
19		NR			NR	NR	NR	NR	Ø		Ø	Ø
20		20			NR	NR	947225	13.8	162,100		4,000	0.25
21		21			NR	NR	1038535	10.6	126,000		4,000	Ø
22		19			NR	NR	1126110	8.7	120,000		4,000	Ø
23		19			NR	NR	1212210	6.7	216,000		4,000	Ø
24		19			NR	NR	1295350	4.2	72,000		2,000	Ø
25		18.5			NR	NR	1377320	4.1	Ø		4,000	Ø
26		NR			NR	NR	NR	NR	Ø		Ø	Ø
27		18.5			NR	NR	1538700	8	108,000		2,000	Ø
28		18.5			NR	NR	1619800	7	162,000		4,000	Ø
29		18			NR	NR	1699000	4	96,000	6,300	4,000	0.08
30		18.5			NR	NR	1779715	4	66,000		4,000	0.10
31												

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: * 4-18-98 - Changed flow meter, new starting reading 00677085

Leachate Hauled Month Total: _____

Prepared by: M. Watkins

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) April 98

Action	Date 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer-Phase IV																
Low Level Operation, depth less than or equal to 12 inches.																
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.			✓	✓	NR	✓	✓	✓	✓		✓	NR	✓	✓	✓	✓
h Level Operation, depth greater than 24 inches d less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓								✓						
Pump Station No. 4-Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTRF																
Normal Operation.			✓	✓	NR				✓	✓	✓	NR			✓	✓
If level is greater than 11 feet, increase treatment, hauling , or recirculation.	✓	✓				✓	✓	✓					✓	✓		
If level is less than 6 feet, decrease or stop hauling, recirculation.																
* Effluent Pond																
Normal Operation.																
If level is 6 inches or less, stop irrigation, circulation, hauling.																
evel is greater than 4 feet, increase irrigation, recirculation, hauling.																
* Observed runoff of effluent to stormwater basins?																
No.																
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.																
Runoff Type / To Basin																
1=Severe / A, B, C, D																
2=Moderate																
3=Minor																

Comments/Remedial Action: * No effluent - Treatment Plant not in operation

Prepared by: [signature]

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL
(Month/Year) April 98

Action	Date 17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer-Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.															
Pump Station No. 4-Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.	✓		NR		✓	✓	✓			NR	✓	✓			
If level is greater than 11 feet, increase treatment, hauling , or recirculation.		✓		✓											
If level is less than 6 feet, decrease or stop hauling, recirculation.								✓	✓				✓	✓	
Effluent Pond															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.															
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.															
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.															

Runoff Type — To Basin
1=Severe — A, B, C, D
2=Moderate
3=Minor

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Comments/Remedial Action: _____

Prepared by: _____

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Apr. 198

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									

(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: Treatment plant not in operation

Prepared by: M. Wallace

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) April 98

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

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(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: _____

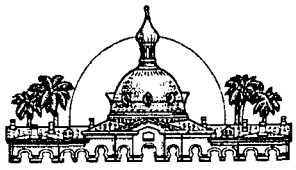
Prepared by: _____

HILLSBOROUGH COUNTY

FLORIDA

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS
Dottie Berger
Joe Chillura
Chris Hart
Jim Norman
Jan Platt
Thomas Scott
Ed Turanchik



Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimmie Keel

April 14, 1998

RECEIVED
APR 16 1998
Department of Environmental Protection
SOUTHWEST DISTRICT
BY

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of March 1998. In addition, the SWMD is providing the March 1998 field data forms for the Landfill, the daily leachate and collection system evaluation reports, the top of clay survey, and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for March 1998 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from TPS-5 and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of March 1998 was 26.2 inches.

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

Sincerely,

for Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

Environmental Consultants

3012 U.S. Highway 301 North
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

RECEIVED
APR 16 1998
Department of Environmental Protection
SOUTHWEST DISTRICT
BY

April 13, 1998
File No. 0995029.23

Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Department
P. O. Box 1110
Tampa, Florida 33601

Subject: March 1998, Leachate Water Balance Report Forms
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed the leachate management operational data from the Southeast County Landfill (SCLF) for March 1998. Attached is the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 1998 updated summary (Table 3). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD). SCS provides the following commentary on the monthly data, including recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations where appropriate.

Day (Column I)

This column presents the calendar day for the month of March 1998.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the average rainfall in inches as measured in the field from rainfall stations at the site. Total rainfall at the SCLF for March 1998 was 7.1 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. The effluent pond was drained for maintenance in March 1997, and any rainfall that accumulates in the pond is pumped to stormwater Basin C. The average depth for recorded days of effluent in the effluent pond for March 1998 was 0 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (in inches) at the bottom of the SCLF. This measurement is based on the daily piezometer measurements taken in the field and represents worst case conditions since the piezometer is currently located within the sump area of the SCLF. From March 20 through March 23, the system was shut down due to an overflow from the 575,000 gallon leachate tank. As a result, the depth of leachate over the liner exceeded the 30 inch limit of the LMP during this period. The average depth of recorded days of leachate over the liner for March 1998 was 26.2 inches (see Figure 1).

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 3 (TPS-3) and pumped to the Main Leachate Pump Station for subsequent treatment. The leachate pumped from TPS-3 represents the leachate being removed by the dewatering system. The vacuum pump on TPS-3 was removed and replaced on March 14. The flow meter was removed and cleaned on March 16 and presently the flow meter has been down since March 23. As a result, an estimated value of 3,100 gallons per day was used in place of missing data. Additionally, TPS-3 was manually shut down on Friday afternoon March 20 and restarted on Monday, March 23 due to an overflow from the 575,000 gallon leachate holding tank. An incident report dated March 24, 1998 was filed with the Florida Department of Environmental Protection (FDEP) by the HCSWMD. All leachate overflows from the 575,000 gallon tank were collected in the concrete secondary containment area and pumped directly to tanker trucks for off-site disposal. The average daily amount of leachate collected and pumped from TPS-3 for March 1998 was approximately 2,800 gallons (Figure 2).

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 5 (TPS-5) and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 currently is measured from the landfill flow meter minus the amount pumped from TPS-3. TPS-5 was manually shut down on Friday afternoon March 20 and restarted on Monday, March 23 due to an overflow from the 575,000 gallon holding tank. An incident report dated March 24, 1998 was filed with FDEP by the HCSWMD. The average daily amount of leachate collected and pumped from TPS-5 for March 1998 was approximately 94,300 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped to the Leachate Treatment and Reclamation Facility (LTRF) for treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flow meter near TPS-3. The average daily amount of leachate pumped from the landfill to the LTRF for March was 96,900 gallons (total of 3,004,230 gallons for the month).

Leachate in 575,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 575,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily gauge level reading. There was an overflow from the 575,000 gallon leachate holding tank on March 20. An incident report dated March 24, 1998 was filed with FDEP by the HCSWMD. The average daily amount of leachate stored in the tank for March 1998, based on recorded days, was 412,000 gallons. Under normal operating conditions, the amount of leachate stored in the tank fluctuates based on the daily amount of leachate pumped to the LTRF, the daily amount of leachate treated, and the daily amount of leachate hauled from the tank.

There is a difference of 44,370 gallons between the in-line flow meter readings and the change in storage observed in the leachate storage tank. This difference is within the expected margin of error for the month of March.

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for March 1998 was 0 gallons. The daily amount of leachate treated at the LTRF may increase or decrease depending on the influent loading/concentrations.

Note: The LTRF has not been operational since September 3, 1996 to allow for repairs to the treatment tanks. The repairs to the tank are completed. Start-up of the treatment plant should occur in May or June 1998.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. Leachate is pumped from the 575,000 gallon raw leachate tank and into a tanker truck for transport. During March1998, a total of 2,965,600 gallons of leachate was hauled off site compared to a total of 2,773,500 gallons during the previous month. The HCSWMD should continue increased off site hauling of untreated leachate until the repairs to the LTRF are completed.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF and is measured from the flow meter at the bypass loading arm. The average daily amount of leachate pumped from the 575,000 gallon leachate tank for use in dust control/evaporation, based on recorded days, was 3,600 gallons for March 1998 (total of 83,000 gallons for the month). Weather permitting, the HCSWMD will continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. The effluent pond was drained for maintenance in March 1997. The average daily amount of effluent stored in the effluent pond for March 1998 was 0 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF. Currently, any rainfall that accumulates in the Pond is pumped to stormwater Basin C.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flow meter at the irrigation pump station. Since the LTRF is shut down for repairs, and the effluent pond is empty for maintenance, effluent was not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in March 1998 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flow meter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During March 1998, the total amount of effluent used for dust control/evaporation was 0 gallons.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site measured from the flow meter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During March 1998, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site. The total estimated amount of leachate/effluent evaporation for March 1998 was 66,400 gallons.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Senior Project Engineer

Robert B. Gardner, P.E.
Vice President
SCS ENGINEERS

RBG/LER:blj
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
MARCH 1998
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in	Est. Depth	Pumped	Pumped	Leachate	Leachate	Leachate	Total	Leachate	Effluent	Effluent	Effluent	Total	
					Effluent	Over	From	From	Pumped	in 575K	Treated	Leachate	Dust Cont./	Pond	Irrigation	Dust Cont./	Effluent	Landfill
Day	final	active	int.	Rainfall (in.)	Pond (in.)	Liner (in.)	Sta. No 3 (gal.)	Sta. No. 5 (gal.)	to LTRF (gal.)	Tank (gal.)	at LTRF (gal.)	Hauled (gal.)	Evaporation (gal.)	Storage (gal.)	Evaporation (gal.)	Evaporation (gal.)	Hauled (gal.)	Evaporation (gal.)
1	25.2	5	90.2	0.8	0	NR	*3,325*	*97,255*	100,580	NR	0	0	0	0	0	0	0	0
2	25.2	5	90.2	0.0	0	26	3,160	96,865	100,025	510,000	0	138,100	4,000	0	0	0	0	3,200
3	25.2	5	90.2	0.0	0	25	2,960	94,145	97,105	498,000	0	102,300	4,000	0	0	0	0	3,200
4	25.2	5	90.2	0.0	0	24	2,885	92,435	95,320	406,000	0	168,000	4,000	0	0	0	0	3,200
5	25.2	5	90.2	0.0	0	24.5	2,732	93,418	96,150	389,000	0	150,000	4,000	0	0	0	0	3,200
6	25.2	5	90.2	0.0	0	25	2,923	94,179	97,102	366,000	0	125,900	4,000	0	0	0	0	3,200
7	25.2	5	90.2	0.0	0	25	2,850	96,629	99,479	481,000	0	90,000	4,000	0	0	0	0	3,200
8	25.2	5	90.2	0.0	0	NR	*2,850*	*96,629*	99,479	NR	0	0	0	0	0	0	0	0
9	25.2	5	90.2	0.0	0	25	4,512	89,628	94,140	417,000	0	120,000	4,000	0	0	0	0	3,200
10	25.2	5	90.2	0.0	0	24	3,698	82,327	86,025	383,000	0	132,000	4,000	0	0	0	0	3,200
11	25.2	5	90.2	0.0	0	24.5	3,780	83,205	86,985	334,000	0	132,000	4,000	0	0	0	0	3,200
12	25.2	5	90.2	0.0	0	25	2,613	85,347	87,960	348,000	0	60,000	4,000	0	0	0	0	3,200
13	25.2	5	90.2	0.0	0	25	391	78,649	79,040	397,000	0	54,000	4,000	0	0	0	0	3,200
14	25.2	5	90.2	0.0	0	25	1	95,147	95,148	550,000	0	18,000	3,000	0	0	0	0	2,40
15	25.2	5	90.2	0.0	0	NR	*1*	*95,147*	95,148	NR	0	0	0	0	0	0	0	
16	25.2	5	90.2	0.0	0	26	1,715	91,210	92,925	498,000	0	126,000	4,000	0	0	0	0	3,20
17	25.2	5	90.2	0.0	0	27	3,960	90,530	94,490	512,000	0	78,000	4,000	0	0	0	0	3,200
18	25.2	5	90.2	1.3	0	28	3,940	91,845	95,785	530,000	0	84,000	4,000	0	0	0	0	3,200
19	25.2	5	90.2	3.9	0	30.5	4,180	88,405	92,585	553,000	0	84,000	0	0	0	0	0	0
20	25.2	5	90.2	1.0	0	31	1,400	42,815	44,215	495,000	0	132,000	0	0	0	0	0	0
21	25.2	5	90.2	0.0	0	33	0	0	0	274,000	0	144,000	0	0	0	0	0	0
22	25.2	5	90.2	0.0	0	NR	*0*	*0*	0	NR	0	115,000	0	0	0	0	0	0
23	25.2	5	90.2	0.0	0	43	3,100	174,245	177,345	354,000	0	90,000	0	0	0	0	0	0
24	25.2	5	90.2	0.0	0	29	3,100	152,050	155,150	331,000	0	132,000	4,000	0	0	0	0	3,200
25	25.2	5	90.2	0.0	0	27.5	3,100	128,895	131,995	366,000	0	114,300	4,000	0	0	0	0	3,200
26	25.2	5	90.2	0.0	0	27	3,100	125,910	129,010	392,000	0	78,000	4,000	0	0	0	0	3,200
27	25.2	5	90.2	0.0	0	27	3,100	122,035	125,135	420,000	0	66,000	4,000	0	0	0	0	3,200
28	25.2	5	90.2	0.0	0	27	3,100	111,230	114,330	487,000	0	156,000	2,000	0	0	0	0	1,600
29	25.2	5	90.2	0.0	0	NR	3,100	111,230	114,330	NR	0	0	0	0	0	0	0	0
30	25.2	5	90.2	0.0	0	27	3,100	115,200	118,300	432,000	0	156,000	4,000	0	0	0	0	3,200
31	25.2	5	90.2	0.1	0	26.5	3,100	105,850	108,950	389,000	0	120,000	2,000	0	0	0	0	1,600
Total				7.1			81,775	2,922,455	3,004,230		0	2,965,600	83,000	0	0	0	0	66,400
Daily Average					0	26.2	2,800	94,300	96,900	412,000	0	105,900	3,600	0	0	0	0	2,900
Monthly Average					0	22.8	2,600	94,300	96,900	358,000	0	95,700	2,700	0	0	0	0	2,000

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VII calculated by subtracting VI from flow meter reading.
6. Column VIII, quantity from flow meter.
7. Column IX, calculated from depth in 575,000 gal. leachate tank.
8. Columns X and XIV, quantities from flow meters.
9. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
10. Column XVII, 80% of the daily values from Columns XII, XIV and XV.
11. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
12. Daily average calculated by dividing the total by the active days in the month.
13. Monthly average calculated by dividing the total by the number of days of the month.

TABLE 2. FIELD DATA ENTRY FORM
MARCH 1998
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
	Active	Piezometer	Phase IV	Phase III	Pump Sta.	Pump Sta	Landfill Flow Meter Pump	Depth in	Leachate Hauled		Leachate Dust Cont./		Depth in	Leachate Treated	Effluent Irrigation	Effluent Hauled		Effluent Dust Cont./
Day	Area (ac.)	Phase IV (in.)	LCRS Cleanout (in.)	LCR Cleanout (in.)	No. 4 (in.)	No. 3 Reading (gal.)	Sta. No. 5 (gal.)	575K Tank (ft.)	Contractor (gal.)	County (gal.)	Evaporation (gal.)	Rainfall (in.)	Effl. Pond (in.)	at LTRF (gal.)	Evaporation (gal.)	Contractor (gal.)	County (gal.)	Evaporation (gal)
1	5	NR			NR	*623,085*	*511,870*	NR	0	0	0	0.82	0	0	0	0	0	0
2	5	26			NR	626,410	612,450	18.1	138,100	0	4,000	0	0	0	0	0	0	0
3	5	25			NR	629,570	712,475	17.7	102,300	0	4,000	0	0	0	0	0	0	0
4	5	24			NR	632,530	809,580	17.3	168,000	0	4,000	0	0	0	0	0	0	0
5	5	24.5			NR	635,415	904,900	14.1	150,000	0	4,000	0	0	0	0	0	0	0
6	5	25			NR	638,147	1,001,050	13.5	125,900	0	4,000	0	0	0	0	0	0	0
7	5	25			NR	641,070	1,098,152	12.7	90,000	0	4,000	0	0	0	0	0	0	0
8	5	NR			NR	*643,920*	*1,197,631*	NR	0	0	0	0	0	0	0	0	0	0
9	5	25			NR	646,770	1,297,110	16.7	120,000	0	4,000	0	0	0	0	0	0	0
10	5	24			NR	651,282	1,391,250	14.5	132,000	0	4,000	0	0	0	0	0	0	0
11	5	24.5			NR	654,980	1,477,275	13.3	132,000	0	4,000	0	0	0	0	0	0	0
12	5	25			NR	658,760	1,564,260	11.6	60,000	0	4,000	0	0	0	0	0	0	0
13	5	25			NR	661,373	1,652,220	12.1	54,000	0	4,000	0	0	0	0	0	0	0
14	5	25			NR	661,764	1,731,260	13.8	18,000	0	3,000	0	0	0	0	0	0	0
15	5	NR			NR	*661,765*	*1,826,408*	NR	0	0	0	0	0	0	0	0	0	0
16	5	26			NR	661,765	1,921,555	19.1	126,000	0	4,000	0	0	0	0	0	0	0
17	5	27			NR	663,480	2,014,480	17.3	78,000	0	4,000	0	0	0	0	0	0	0
18	5	28			NR	667,440	2,108,970	17.8	84,000	0	4,000	1.33	0	0	0	0	0	0
19	5	30.5			NR	671,380	2,204,755	18.4	84,000	0	0	3.85	0	0	0	0	0	0
20	5	31			NR	675,560	2,297,340	19.2	132,000	0	0	0.98	0	0	0	0	0	0
21	5	33			NR	676,960	2,341,555	17.2	144,000	0	0	0	0	0	0	0	0	0
22	5	NR			NR	*676,960*	*2,341,555*	NR	115,000	0	0	0	0	0	0	0	0	0
23	5	43			NR	676,960	2,341,555	9.5	90,000	0	0	0	0	0	0	0	0	0
24	5	29			NR	680,060	2,518,900	12.3	132,000	0	4,000	0	0	0	0	0	0	0
25	5	27.5			NR	683,160	2,674,050	11.5	108,000	6,300	4,000	0	0	0	0	0	0	0
26	5	27			NR	686,260	2,806,045	12.7	78,000	0	4,000	0	0	0	0	0	0	0
27	5	27			NR	689,360	2,935,055	13.6	66,000	0	4,000	0	0	0	0	0	0	0
28	5	27			NR	692,460	3,060,190	14.6	156,000	0	2,000	0	0	0	0	0	0	0
29	5	NR			NR	695,560	*3,174,520*	NR	0	0	0	0	0	0	0	0	0	0
30	5	27			NR	698,660	3,288,850	16.9	156,000	0	4,000	0	0	0	0	0	0	0
31	5	26.5			NR	701,760	3,407,150	15	120,000	0	2,000	0.08	0	0	0	0	0	0

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Notes:

1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column XIII, Trace is less than 0.01 inches.
5. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
6. Column III, Phase IV piezometer began monitoring on 7/10/95.
7. Columns VII, XV and XVI, quantities from flow meters.

TABLE 3. 1998 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change in Storage For Month (gal.)
January	4.10	0	3,423,300	2,730,000	46,000	0	0	0	0	3,423,300	2,776,000	647,300
February	9.66	0	3,077,220	2,773,500	50,000	0	0	0	0	3,077,220	2,823,500	253,720
March	7.10	0	3,004,230	2,965,600	83,000	0	0	0	0	3,004,230	3,048,600	(44,370)
April										0	0	0
May										0	0	0
June										0	0	0
July										0	0	0
August										0	0	0
September										0	0	0
October										0	0	0
November										0	0	0
December										0	0	0
YTD Total	20.86	0	9,504,750	8,469,100	179,000	0	0	0	0	9,504,750	8,648,100	

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Note:

1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

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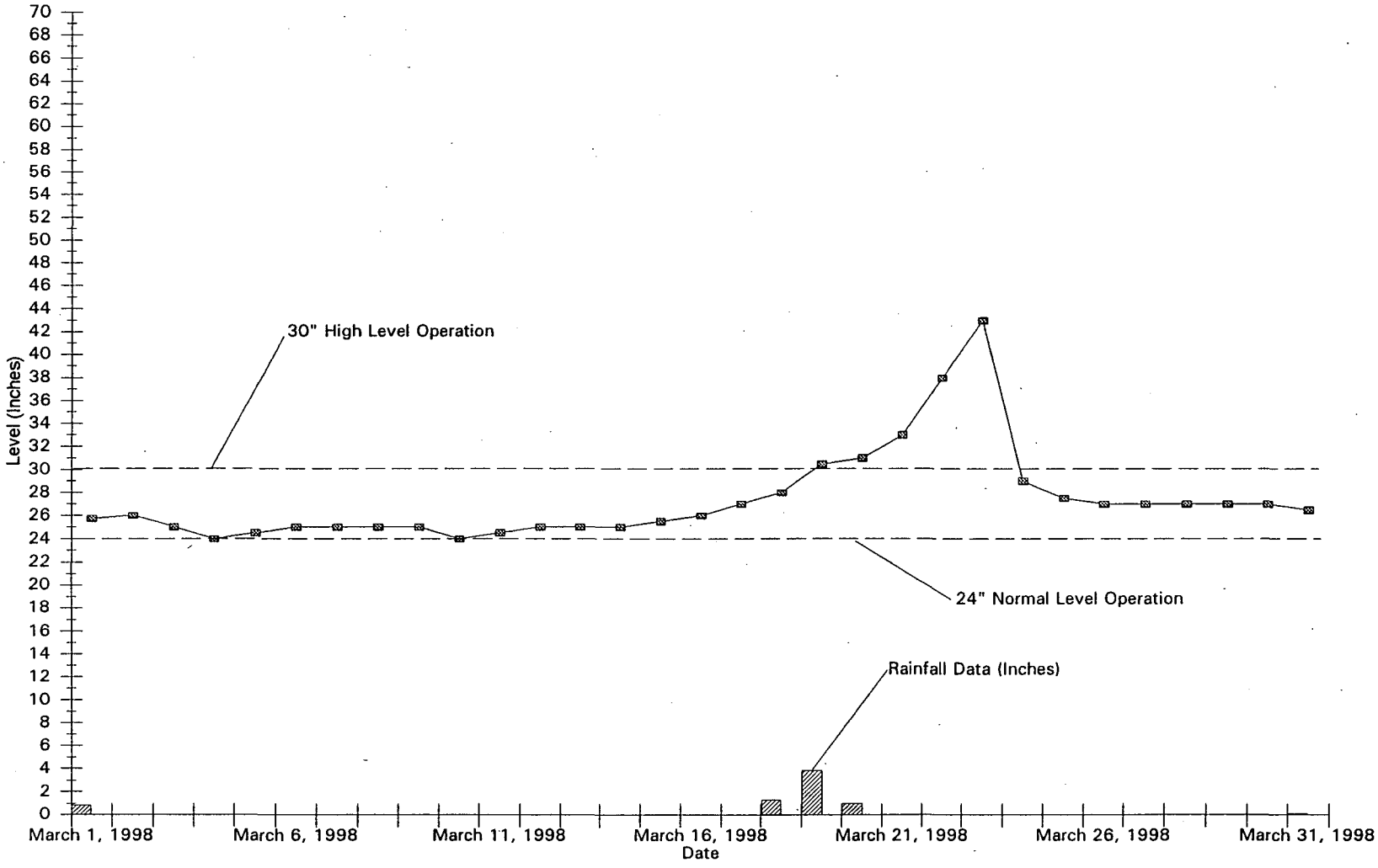
Figure 1.

Phase IV Piezometer



SCS ENGINEERS

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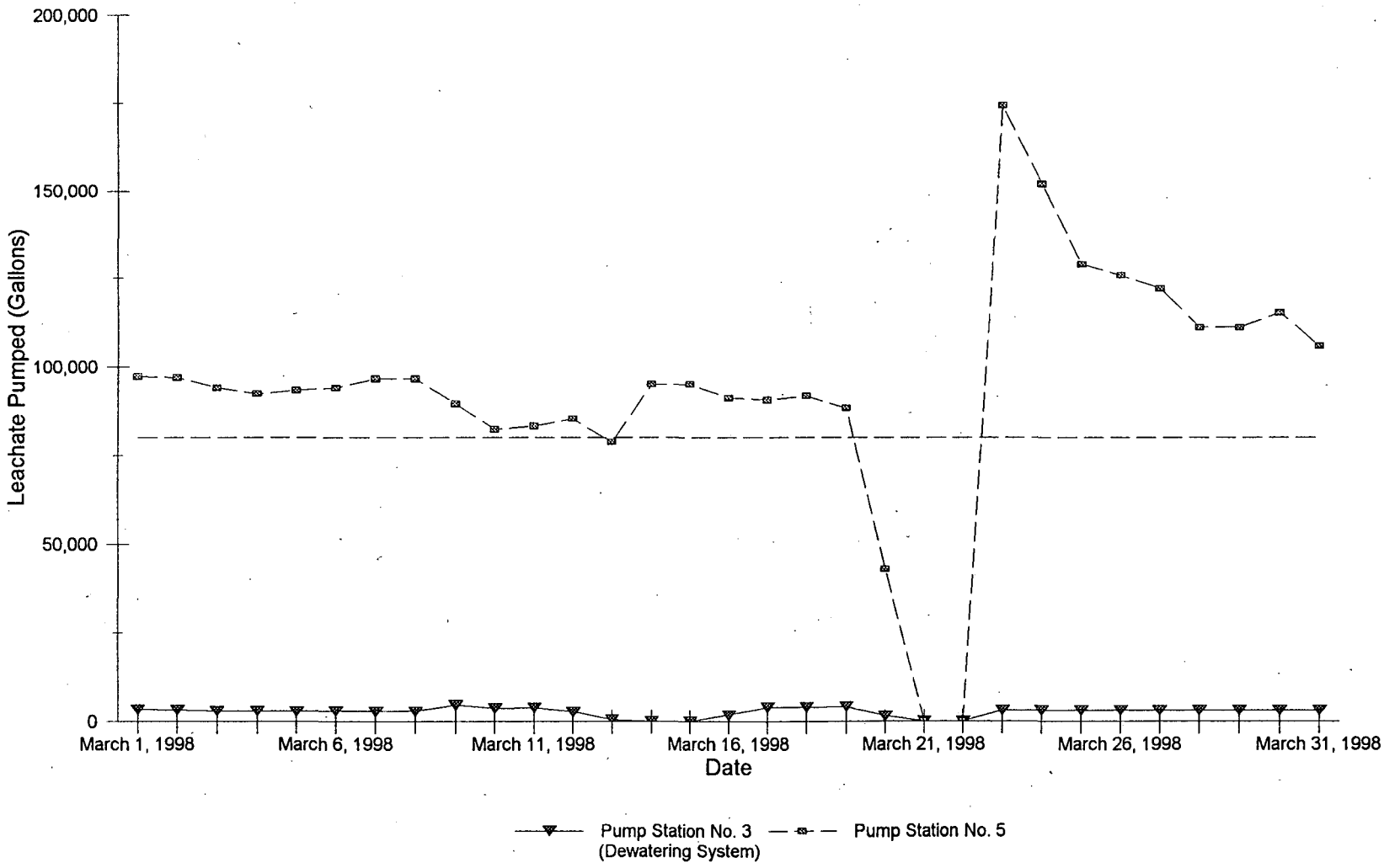
Figure 2.

Pump Station No. 3 and No. 5



SCS ENGINEERS

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) Mar. 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading ([redacted])	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		NR			NR	NR	NR	NR	Ø	Ø	Ø	0.82
2		26			NR	626410	612450	18.10	138,100	Ø	4,000	Ø
3		25			NR	629570	712475	17.7	102,300	Ø	4,000	Ø
4		24			NR	632530	809580	17.3	168,000	Ø	4,000	Ø
5		24.5			NR	635415	904900	14.10	150,000	Ø	4,000	Ø
6		25			NR	638147	1001050	13.5	125,900	Ø	4,000	Ø
7		25			NR	641070	1098152	12.7	90,000	Ø	4,000	Ø
8		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
9		25			NR	646770	1297110	16.7	120,000	Ø	4,000	Ø
10		24			NR	651282	1391250	14.5	132,000	Ø	4,000	Ø
11		24.5			NR	654980	1477275	13.3	132,000	Ø	4,000	Ø
12		25			NR	658760	1564260	11.6	60,000	Ø	4,000	Ø
13		25			NR	661373	1652220	12.1	54,000	Ø	4,000	Ø
14		25			NR	661764	1731260	13.8	18,000	Ø	3,000	Ø
15		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
16		26			NR	661765	1921555	19.1	126,000	Ø	4,000	Ø

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Prepared by: [signature]

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Mar. 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		27			NR	663480	2014480	17.3	78,000	Ø	4,000	
18		28			NR	667440	2108970	17.8	84,000	Ø	4,000	1.33
19		30.5			NR	671380	2204755	18.4	84,000	Ø	Ø	3.85
20		31			NR	675560	2297340	19.2	132,000	Ø	Ø	0.98
21		33			NR	676960	2341555	17.2	144,000	Ø	Ø	Ø
22		NR			NR	NR	NR	NR	115,000	Ø	Ø	Ø
23		43			NR	676960	2341555	9.5	90,000	Ø	Ø	Ø
24		29			NR	* NR	2518900	12.3	132,000	Ø	4,000	Ø
25		27.5			NR	NR	2674050	11.5	108,000	6,300	4,000	Ø
26		27			NR	NR	2806045	12.7	78,000	Ø	4,000	Ø
27		27			NR	NR	2935055	13.6	66,000	Ø	4,000	Ø
28		27			NR	NR	3060190	14.6	156,000	Ø	2,000	Ø
29		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
30		27			NR	NR	3288850	16.9	156,000	Ø	4,000	Ø
31		26.5			NR	NR	3407150	15	120,000	Ø	2,000	0.08

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: * 3-24-98 thru 3-31-98 Well point flow meter not working

Leachate Hauled Month Total: _____

Prepared by: [signature]

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) Mar. 98

Action	Date 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer-Phase IV																
Low Level Operation, depth less than or equal to 12 inches.																
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.	NR			✓				NR		✓					NR	
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.		✓	✓		✓	✓	✓		✓		✓	✓	✓	✓		✓
Pump Station No. 4-Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTRF																
Normal Operation.	NR															
If level is greater than 11 feet, increase treatment, hauling , or recirculation.		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
If level is less than 6 feet, decrease or stop hauling, recirculation.																
* Effluent Pond																
Normal Operation.																
If level is 6 inches or less, stop irrigation, recirculation, hauling.																
If level is greater than 4 feet, increase irrigation, recirculation, hauling.																
* Observed runoff of effluent to stormwater basins?																
No.																
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.																
Runoff Type / To Basin																
1=Severe / A, B, C, D																
2=Moderate																
3=Minor																

Comments/Remedial Action: *Treatment Plant not in operation

Prepared by: [signature]

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year)_____

Action	Date														
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer-Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.						NR							NR		
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓
Pump Station No. 4-Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.							✓								
If level is greater than 11 feet, increase treatment, hauling , or recirculation.	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
If level is less than 6 feet, decrease or stop hauling, recirculation.															
Effluent Pond															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.															
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.															
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.															
Runoff Type: 1=Severe, 2=Moderate, 3=Minor / To Basin: A, B, C, D															

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Comments/Remedial Action:_____

Prepared by: _____

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Mar. 98

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									

(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: Treatment Plant not in operation

Prepared by: [signature]

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) Mar. 98

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

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(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: _____

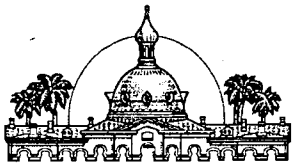
Prepared by: _____

HILLSBOROUGH COUNTY

FLORIDA

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS
Dottie Berger
Joe Chillura
Chris Hart
Jim Norman
Jan Platt
Thomas Scott
Ed Turanchik



Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimmie Keel

March 11, 1998

RECEIVED
MAR 16 1998
DEP

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of February 1998. In addition, the SWMD is providing the February 1998 field data forms for the Landfill, the daily leachate and collection system evaluation reports, the top of clay survey, and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for February 1998 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from TPS-5 and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of February 1998 was 25.6 inches.

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

amount of leachate stored in the tank for February 1998, based on recorded days, was 429,000 gallons. Under normal operating conditions, the amount of leachate stored in the tank fluctuates based on the daily amount of leachate pumped to the LTRF, the daily amount of leachate treated, and the daily amount of leachate hauled from the tank.

There is a difference of 227,000 gallons between the in-line flow meter readings and the change in storage observed in the leachate storage tank. This difference is within the expected margin of error (5 percent or 295,000 gallons) for the month February.

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for February 1998 was 0 gallons. The daily amount of leachate treated at the LTRF may increase or decrease depending on the influent loading/concentrations.

Note: The LTRF has not been operational since September 3, 1996 to allow for repairs to the treatment tanks. The repairs to the tank are expected to be completed in March 1998. Start-up of the treatment plant should occur in April or May 1998.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. Leachate is pumped from the 575,000 gallon raw leachate tank and into a tanker truck for transport. During February 1998, a total of 2,773,500 gallons of leachate was hauled off site compared to a total of 2,730,000 gallons during the previous month. The HCSWMD will continue off site hauling of untreated leachate until the repairs to the LTRF are completed.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF and is measured from the flow meter at the bypass loading arm. The average daily amount of leachate pumped from the 575,000 gallon leachate tank for use in dust control/evaporation, based on recorded days, was 4,200 gallons for February 1998 (total of 50,000 gallons for the month). Weather permitting, the HCSWMD will continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. The effluent pond was drained for maintenance in March 1997. The average daily amount of effluent stored in the effluent pond for February 1998 was 0 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF. Currently, any rainfall that accumulates in the Pond is pumped to stormwater Basin C.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flow meter at the irrigation pump station. Since the LTRF is shut down for repairs, and the effluent pond is empty for maintenance, effluent was not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in February 1998 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flow meter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During February 1998, the total amount of effluent used for dust control/evaporation was 0 gallons.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site measured from the flow meter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During February 1998, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site. The total estimated amount of leachate/effluent evaporation for February 1998 was 40,000 gallons.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Senior Project Engineer

Robert B. Gardner, P.E.
Vice President
SCS ENGINEERS

RBG/LER:blj
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
FEBRUARY 1998
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in Effluent	Est. Depth Over	Pumped From	Pumped From	Leachate Pumped	Leachate in 575K	Leachate Treated	Total Leachate	Leachate Dust Cont./	Effluent Pond	Effluent Irrigation	Effluent Dust Cont./	Total Effluent	Landfill
Day	final	active	int.	Rainfall (in.)	Pond (in.)	Liner (in.)	Sta. No 3 (gal.)	Sta. No. 5 (gal.)	to LTRF (gal.)	Tank (gal.)	at LTRF (gal.)	Hauled (gal.)	Evaporation (gal.)	Storage (gal.)	Evaporation (gal.)	Evaporation (gal.)	Hauled (gal.)	Evaporation (gal.)
1	25.2	5	90.2	0.0	0	NR	*4,353*	99,698	*104,050*	NR	0	0	0	0	0	0	0	0
2	25.2	5	90.2	1.4	0	24.5	4,400	108,200	112,600	481,000	0	126,000	0	0	0	0	0	0
3	25.2	5	90.2	0.1	0	28.5	4,300	114,400	118,700	412,000	0	156,000	0	0	0	0	0	0
4	25.2	5	90.2	0.0	0	26.5	4,300	106,200	110,500	417,000	0	144,000	0	0	0	0	0	0
5	25.2	5	90.2	0.0	0	25	4,145	102,155	106,300	449,000	0	54,000	4,000	0	0	0	0	3,200
6	25.2	5	90.2	0.2	0	25.5	4,128	101,472	105,600	435,000	0	84,000	4,000	0	0	0	0	3,200
7	25.2	5	90.2	0.0	0	26	4,124	92,327	96,450	478,000	0	120,200	0	0	0	0	0	0
8	25.2	5	90.2	0.0	0	NR	*4,124*	92,327	*96,450*	NR	0	30,000	0	0	0	0	0	0
9	25.2	5	90.2	0.0	0	25	3,980	91,220	95,200	400,000	0	162,000	4,000	0	0	0	0	3,200
10	25.2	5	90.2	0.0	0	25	5,500	93,500	99,000	320,000	0	156,000	4,000	0	0	0	0	3,200
11	25.2	5	90.2	0.0	0	24.5	5,270	98,030	103,300	366,000	0	84,000	4,000	0	0	0	0	3,200
12	25.2	5	90.2	0.0	0	24	4,814	70,186	74,800	360,000	0	78,000	2,000	0	0	0	0	1,600
13	25.2	5	90.2	0.3	0	24	4,422	104,578	109,000	377,000	0	72,000	2,000	0	0	0	0	1,600
14	25.2	5	90.2	0.0	0	23	4,297	101,353	105,650	472,000	0	102,000	0	0	0	0	0	0
15	25.2	5	90.2	1.0	0	NR	*4,297*	101,353	*105,650*	NR	0	0	0	0	0	0	0	0
16	25.2	5	90.2	2.7	0	27	4,000	109,400	113,400	481,000	0	120,000	0	0	0	0	0	0
17	25.2	5	90.2	0.8	0	28.6	3,700	129,100	132,800	449,000	0	114,000	2,000	0	0	0	0	1,600
18	25.2	5	90.2	0.0	0	25	3,500	124,500	128,000	438,000	0	114,000	4,000	0	0	0	0	3,200
19	25.2	5	90.2	2.9	0	25	3,634	106,766	110,400	351,000	0	186,000	0	0	0	0	0	0
20	25.2	5	90.2	0.0	0	27	3,548	134,452	138,000	343,000	0	126,000	0	0	0	0	0	0
21	25.2	5	90.2	0.0	0	26	3,182	131,919	135,100	464,000	0	114,000	0	0	0	0	0	0
22	25.2	5	90.2	0.0	0	NR	*3,182*	131,919	*135,100*	NR	0	0	0	0	0	0	0	0
23	25.2	5	90.2	0.1	0	26	3,010	126,990	130,000	426,000	0	126,500	4,000	0	0	0	0	3,200
24	25.2	5	90.2	0.0	0	25.5	2,810	90,680	93,490	426,000	0	126,000	4,000	0	0	0	0	3,200
25	25.2	5	90.2	0.0	0	26.5	3,675	106,835	110,510	469,000	0	54,300	4,000	0	0	0	0	3,200
26	25.2	5	90.2	0.0	0	25.5	3,185	101,965	105,150	469,000	0	84,000	4,000	0	0	0	0	3,200
27	25.2	5	90.2	0.0	0	25.5	2,935	98,505	101,440	495,000	0	84,000	4,000	0	0	0	0	3,200
28	25.2	5	90.2	0.3	0	25.5	3,325	97,255	100,580	508,000	0	156,500	0	0	0	0	0	0
Total				9.7			109,938	2,967,283	3,077,220		0	2,773,500	50,000	0	0	0	0	40,000
Daily Average					0	25.6	3,900	106,000	109,900	429,000	0	110,900	3,600	0	0	0	0	2,900
Monthly Average					0	22.0	3,900	106,000	109,900	367,000	0	99,100	1,800	0	0	0	0	1,000

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VII calculated by subtracting VI from flow meter reading.
6. Column VIII, quantity from flow meter.
7. Column IX, calculated from depth in 575,000 gal. leachate tank.
8. Columns X and XIV, quantities from flow meters.
9. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
10. Column XVII, 80% of the daily values from Columns XII, XIV and XV.
11. Values in italic are substitute for missing data and are based on averaged values.
12. Daily average calculated by dividing the total by the active days in the month.
13. Monthly average calculated by dividing the total by the number of days of the month.

TABLE 2. FIELD DATA ENTRY FORM
FEBRUARY 1998
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
							Landfill Flow		Leachate Hauled		Leachate			Leachate	Effluent	Effluent Hauled		Effluent
Day	Active Area (ac.)	Piezometer Phase IV (in.)	Phase IV LCRS Cleanout (in.)	Phase III LCR Cleanout (in.)	Pump Sta. No. 4 (in.)	Pump Sta No. 3 Reading (gal.)	Meter Pump Sta. No. 5 (gal.)	Depth in 575K Tank (ft.)	Contractor (gal.)	County (gal.)	Dust Cont./ Evaporation (gal.)	Rainfall (in.)	Depth in Effl. Pond (in.)	Treated at LTRF (gal.)	Irrigation Evaporation (gal.)	Contractor (gal.)	County (gal.)	Dust Cont./ Evaporation (gal)
1	5	NR			NR	***513,148***	***62,283,450***	NR	0	0	0	0.00	0	0	0	0	0	0
2	5	24.5			73	517,500	62,387,500	17.6	126,000	0	0	1.43	0	0	0	0	0	0
3	5	28.5			83	521,900	62,500,100	16.7	156,000	0	0	0.05	0	0	0	0	0	0
4	5	26.5			78.5	526,200	62,618,800	14.3	144,000	0	0	0.00	0	0	0	0	0	0
5	5	25			74	530,500	62,729,300	14.5	54,000	0	4,000	0.00	0	0	0	0	0	0
6	5	25.5			74	534,645	62,835,600	15.6	84,000	0	4,000	0.18	0	0	0	0	0	0
7	5	26			75	538,773	62,941,200	15.1	120,200	0	0	0.00	0	0	0	0	0	0
8	5	NR			NR	***542,897***	***63,037,650***	NR	30,000	0	0	0.00	0	0	0	0	0	0
9	5	25			73	547,020	63,134,100	16.6	162,000	0	4,000	0.00	0	0	0	0	0	0
10	5	25			73	551,000	63,229,300	13.9	156,000	0	4,000	0.00	0	0	0	0	0	0
11	5	24.5			73	556,500	63,328,300	11.11	84,000	0	4,000	0.00	0	0	0	0	0	0
12	5	24			73	561,770	63,431,600	12.7	78,000	0	2,000	0.00	0	0	0	0	0	0
13	5	24			72	566,384	63,506,400	12.5	72,000	0	2,000	0.30	0	0	0	0	0	0
14	5	23			74	570,806	63,615,400	13.1	102,000	0	0	0.00	0	0	0	0	0	0
15	5	NR			NR	***575,103***	***63,721,050***	NR	0	0	0	1.00	0	0	0	0	0	0
16	5	27			74	579,400	63,826,700	16.4	120,000	0	0	2.67	0	0	0	0	0	0
17	5	28.6			74	583,400	63,940,100	16.7	114,000	0	2,000	0.80	0	0	0	0	0	0
18	5	25			74	587,100	64,072,900	15.6	114,000	0	4,000	0.00	0	0	0	0	0	0
19	5	25			74	590,600	64,200,900	15.2	186,000	0	0	2.85	0	0	0	0	0	0
20	5	27			89	594,234	64,311,300	12.2	126,000	0	0	0.00	0	0	0	0	0	0
21	5	26			83	597,782	64,449,300	11.9	114,000	0	0	0.00	0	0	0	0	0	0
22	5	NR			NR	***600,964***	***64,584,400***	NR	0	0	0	0.00	0	0	0	0	0	0
23	5	26			74	604,145	64,719,500	16.1	126,500	0	4,000	0.08	0	0	0	0	0	0
24	5	25.5			78	607,155	64,849,500	14.8	126,000	0	4,000	0.00	0	0	0	0	0	0
25	5	26.5			78	609,965	94,190	14.8	48,000	6,300	4,000	0.00	0	0	0	0	0	0
26	5	25.5			78	613,640	204,700	16.3	84,000	0	4,000	0.00	0	0	0	0	0	0
27	5	25.5			74	616,825	309,850	16.3	84,000	0	4,000	0.00	0	0	0	0	0	0
28	5	25.5			73.5	619,760	411,290	17.2	156,500	0	0	0.30	0	0	0	0	0	0

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Notes:

1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column XIII, Trace is less than 0.01 inches.
5. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
6. Column III, Phase IV piezometer began monitoring on 7/10/95.
7. Columns VII, XV and XVI, quantities from flow meters.

TABLE 3. 1997 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change in Storage For Month (gal.)
January	4.10	0	3,423,300	2,730,000	46,000	0	0	0	0	3,423,300	2,776,000	647,300
February	9.66		3,077,220	2,773,500	50,000	0	0	0	0	3,077,220	2,823,500	253,720
March										0	0	0
April										0	0	0
May										0	0	0
June										0	0	0
July										0	0	0
August										0	0	0
September										0	0	0
October										0	0	0
November										0	0	0
December										0	0	0
YTD Total	13.76	0	6,500,520	5,503,500	96,000	0	0	0	0	6,500,520	5,599,500	

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Note:
1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

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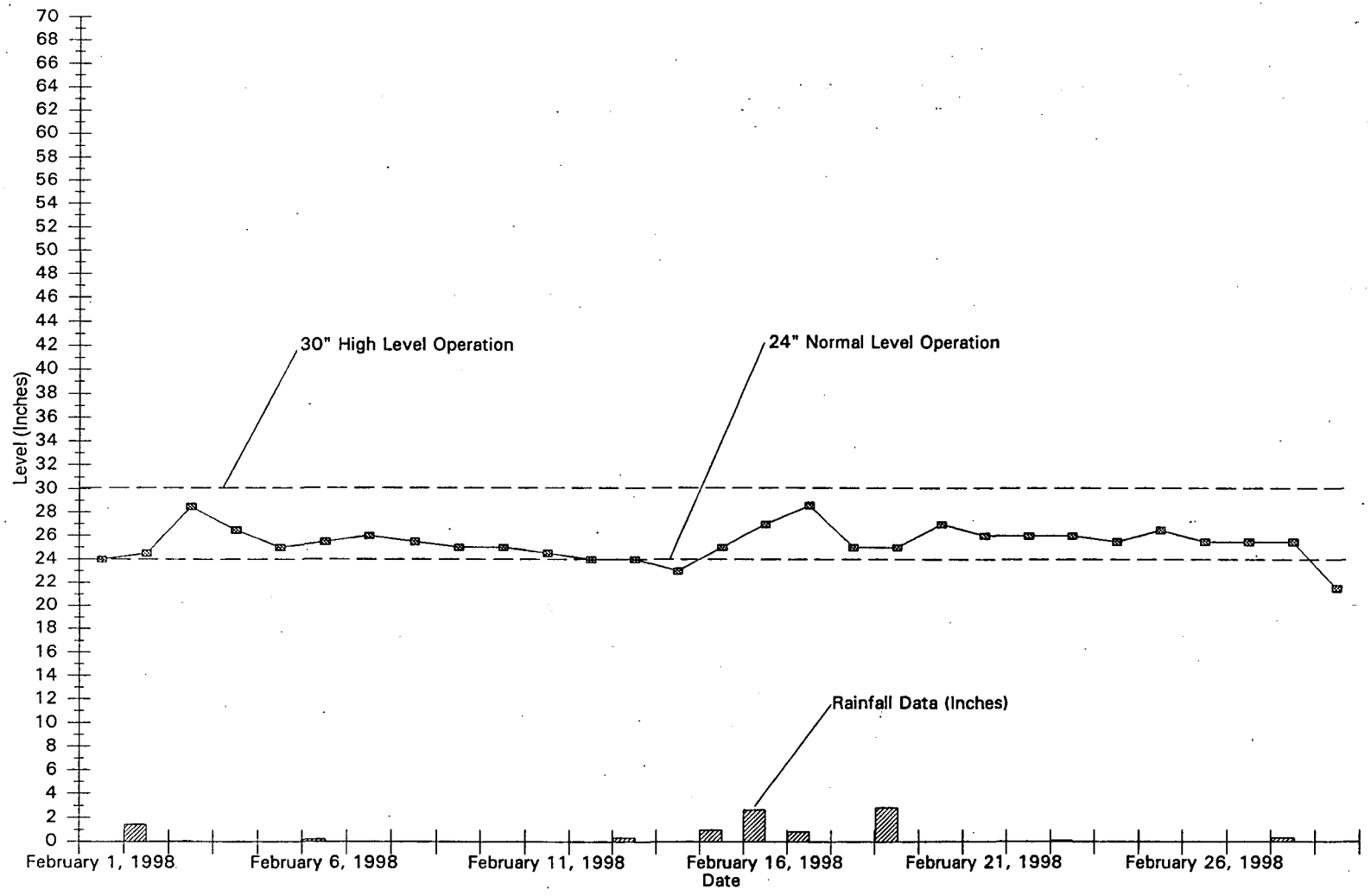
Figure 1.

Phase IV Piezometer



SCS ENGINEERS

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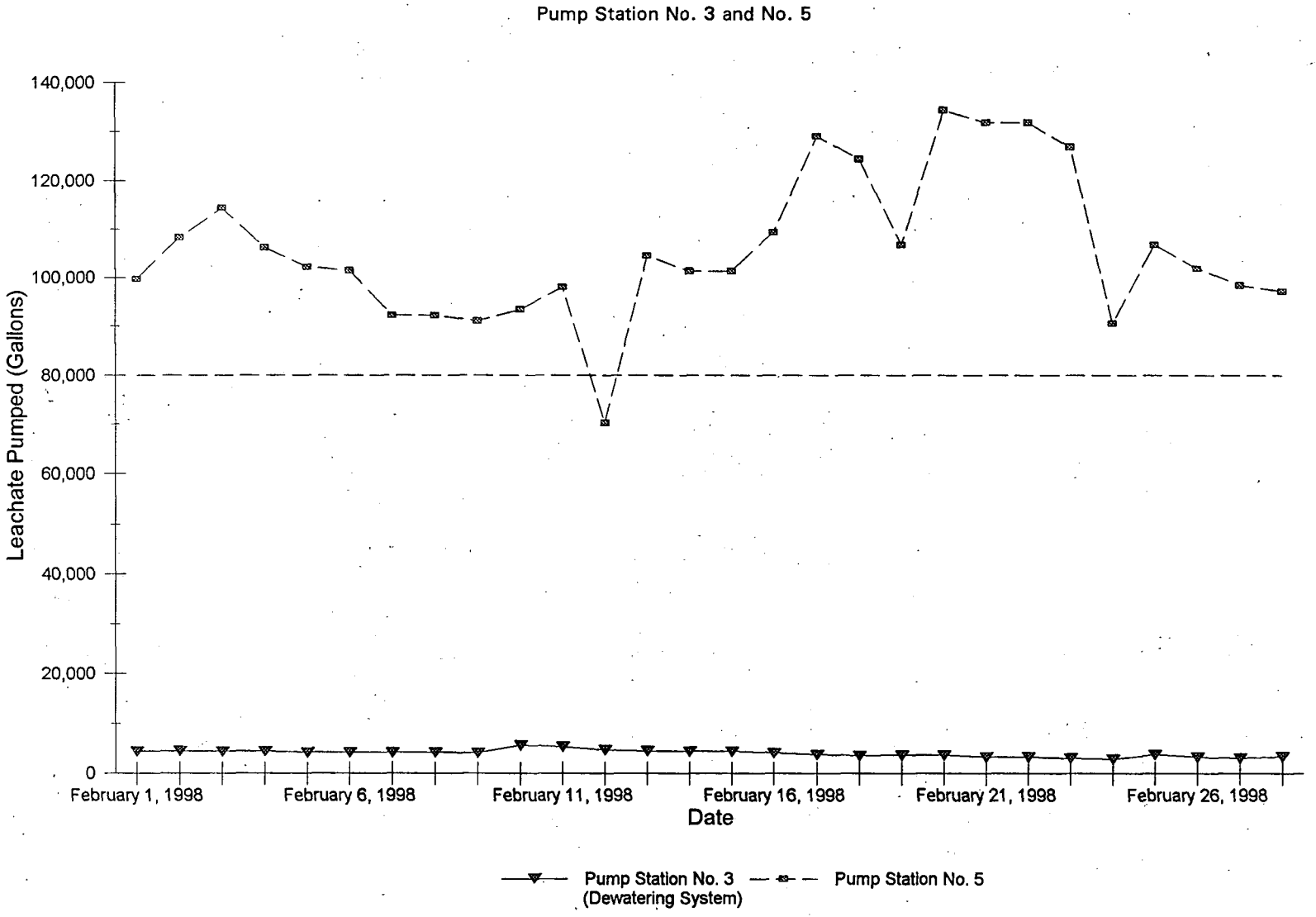
Figure 2.



SCS ENGINEERS

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) Feb. 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading ([redacted])	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
2		24.5			73	517500	62387500	17.6	126,000	Ø	Ø	1.43
3		28.5			83	521900	62500100	16.7	156,000	Ø	Ø	0.05
4		26.5			78.5	526200	62618800	14.3	144,000	Ø	Ø	Ø
5		25			74	530500	62729300	14.5	54,000	Ø	4,000	Ø
6		25.5			74	534645	62835600	15.6	84,000	Ø	4,000	0.18
7		26			75	538773	62941200	15.10	120,200	Ø	Ø	Ø
8		NR			NR	NR	NR	NR	30,000	Ø	Ø	Ø
9		25			73	547020	63134100	16.6	162,000	Ø	4,000	Ø
10		25			73	551000	63229300	13.9	156,000	Ø	4,000	Ø
11		24.5			73	556500	63328300	11.11	84,000	Ø	4,000	Ø
12		24			73	561770	63431600	12.7	78,000	Ø	2,000	Ø
13		24			72	566384	63506400	12.5	72,000	Ø	2,000	0.30
14		23			74	570806	63615400	13.10	102,000	Ø	Ø	Ø
15		NR			NR	NR	NR	NR	Ø	Ø	Ø	1.00
16		27			74	579400	63826700	16.4	120,000	Ø	Ø	2.67

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor Immediately. Complete Evaluation Report Form.

Comments: _____

Prepared by: T. McAlpine

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Feb. 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculatk.n (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		28.6			74	583400	63940100	16.7	114,000	Ø	2,000	0.80
18		25			74	587100	64072900	15.6	114,000	Ø	4,000	Ø
19		25			74	590600	64200900	15.2	186,000	Ø	Ø	2.85
20		27			89	594234	64311300	12.2	126,000	Ø	Ø	Ø
21		26			83	597782	64449300	11.9	114,000	Ø	Ø	Ø
22		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
23		26			74	604145	64719500	16.1	126,500	Ø	4000	0.08
24		25.5			78	607155	64849500	14.8	126,000	Ø	4000	Ø
25		26.5			78	609965	94190	14.8	48,000	6,300	4000	Ø
26		25.5			78	613640	204700	16.3	84,000	Ø	4000	Ø
27		25.5			74	616825	309850	16.3	84,000	Ø	4000	Ø
28		25.5			73.5	619760	411290	17.2	156,500	Ø	Ø	0.30
29												
30												
31												

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Leachate Hauled Month Total: _____

Prepared by: M. Martinez

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) Feb. 98

Action	Date 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer-Phase IV																
Low Level Operation, depth less than or equal to 12 inches.																
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.	NR							NR				✓	✓	✓	NR	
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase achate removal and contact supervisor immediately.		✓	✓	✓	✓	✓	✓		✓	✓	✓					✓
F p Station No. 4-Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTRF																
Normal Operation.	NR							NR							NR	
If level is greater than 11 feet, increase treatment, hauling , or recirculation.		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓
If level is less than 6 feet, decrease or stop hauling, recirculation.																
Effluent Pond																
Normal Operation.																
If level is 6 inches or less, stop irrigation, recirculation, hauling.																
If level is greater than 4 feet, increase irrigation, circulation, hauling.																
O. ved runoff of effluent to stormwater basins?																
No.																
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.																
Runoff Type / To Basin																
1=Severe / A, B, C, D																
2=Moderate																
3=Minor																

Comments/Remedial Action: * No effluent - Treatment plant down for repairs

Prepared by: M. Mallette

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) Feb. 98

Action	Date														
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer-Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.						NR									
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓			
ıp Station No. 4-Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓			
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.						NR									
If level is greater than 11 feet, increase treatment, hauling , or recirculation.	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓			
If level is less than 6 feet, decrease or stop hauling, recirculation.															
Effluent Pond															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.															
ıf level is greater than 4 feet, increase irrigation, ;circulation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.															
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.															
Runoff Type / To Basin															
1=Severe / A, B, C, D															
2=Moderate															
3=Minor															

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Comments/Remedial Action: _____

Prepared by M. Walters

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Feb 98

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									

(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: Treatment plant down for repairs

Prepared by: M. Matthews

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) Feb. 98

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

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(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: _____

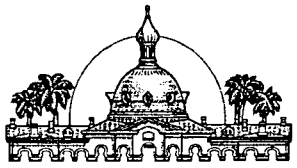
Prepared by M. Matthews

HILLSBOROUGH COUNTY

FLORIDA

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS
Dottie Berger
Joe Chillura
Chris Hart
Jim Norman
Jan Platt
Thomas Scott
Ed Turanchik



Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimmie Keel

February 17, 1998

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of January 1997. In addition, the SWMD is providing the January 1997 field data forms for the Landfill, the daily leachate and collection system evaluation reports, the top of clay survey, and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for January 1997 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from TPS-5 and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of January 1997 was 19.9 inches.

Also, please find attached a revised Leachate Depth/Summary Data Form for the month of December 1997. The contractor's hauled amount was corrected for the 27th and was revised on the previously submitted SCS monthly water balance for that month. This form should be substituted for the one that went with the December package.

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

Environmental Consultants

3012 U.S. Highway 301 North
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

February 19, 1998
File No. 0995029.23

RECEIVED
FEB 23 1998
Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Department
P. O. Box 1110
Tampa, Florida 33601

Subject: January 1998, Leachate Water Balance Report Forms
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed the leachate management operational data from the Southeast County Landfill (SCLF) for January 1998. Attached is the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), the 1998 updated summary (Table 3), and the Approximate Top of Clay Elevations (Table 4). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD). SCS provides the following commentary on the monthly data, including recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations where appropriate.

Day (Column I)

This column presents the calender day for the month of January 1998.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the average rainfall in inches as measured in the field from rainfall stations at the site. Total rainfall at the SCLF for January 1998 was 4.1 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. The effluent pond was drained for maintenance in March 1997, and any rainfall that accumulates in the pond is pumped to stormwater Basin C. The average depth for recorded days of effluent in the effluent pond for January 1998 was 0 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (in inches) at the bottom of the SCLF. This measurement is based on the daily piezometer measurements taken in the field and represents worst case conditions since the piezometer is currently located within the sump area of the SCLF. The average depth of recorded days of leachate over the liner for January 1998 was 19.9 inches (see Figure 1).

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 3 (TPS-3) and pumped to the Main Leachate Pump Station for subsequent treatment. The leachate pumped from TPS-3 represents the leachate being removed by the dewatering system. The average daily amount of leachate collected and pumped from TPS-3 for January 1998 was approximately 3,600 gallons (Figure 2).

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 5 (TPS-5) and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 currently is measured from the landfill flow meter minus the amount pumped from TPS-3. The vacuum pump for TPS-5 was out of service for repairs for part of the days of January 12, 13, and 14. The average daily amount of leachate collected and pumped from TPS-5 for January 1998 was approximately 106,900 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped to the Leachate Treatment and Reclamation Facility (LTRF) for treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flowmeter near TPS-3. The average daily amount of leachate pumped from the landfill to the LTRF was 110,400 gallons (total of 3,423,300 gallons for the month).

Leachate in 575,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 575,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily gauge level reading. The average daily amount of leachate stored in the tank for January 1998, based on recorded days, was 390,000 gallons. Under normal operating conditions, the amount of leachate stored in

the tank fluctuates based on the daily amount of leachate pumped to the LTRF, the daily amount of leachate treated, and the daily amount of leachate hauled from the tank.

There appears to be a discrepancy of 335,000 gallons between the in-line flow meter readings and the change in storage observed in the leachate storage tank. SCS has concluded based on field observations and review of the data that this discrepancy may be due to the questionable accuracy of the in-line flow meter at the Temporary Pump Station No. 3. SCS recommends that the HCSWMD replace this flow meter with a "low flow" capacity meter which will more accurately represent the leachate quantity being removed from the SCLF. After the new meter is installed, continue to evaluate the performance of the measuring devices.

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for January 1998 was 0 gallons. The daily amount of leachate treated at the LTRF may increase or decrease depending on the influent loading/concentrations.

Note: The LTRF has not been operational since September 3, 1996 to allow for repairs to the treatment tanks. At this time it is unknown when the LTRF is anticipated to be back in operation. On January 12, 1998, US Filter/Zimpro mobilized to begin the repairs to the treatment tanks. The Florida Department of Environmental Protection (FDEP) was notified of the corrective action plan and schedule on January 30, 1998.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. Leachate is pumped from the 575,000 gallon raw leachate tank and into a tanker truck for transport. During January 1998, a total of 2,730,000 gallons of leachate was hauled off site compared to a total of 2,730,800 gallons during the previous month. The HCSWMD will continue off site hauling of untreated leachate until the repairs to the LTRF are completed.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF and is measured from the flowmeter at the bypass loading arm. The average daily amount of leachate pumped from the 575,000 gallon leachate tank for use in dust control/evaporation, based on recorded days, was 3,300 gallons for January 1998 (total of 46,000 gallons for the month). Weather permitting, the HCSWMD will continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. The effluent pond was drained for maintenance in March 1997. The average daily amount of effluent stored in the effluent pond for January 1998 was 0 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF. Currently, any rainfall that accumulates in the Pond is pumped to stormwater Basin C.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flowmeter at the irrigation pump station. Since the LTRF is shut down for repairs, and the effluent pond is empty for maintenance, effluent was not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in January 1998 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During January 1998, the total amount of effluent used for dust control/evaporation was 0 gallons.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During January 1998, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
JANUARY 1998
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in	Est. Depth	Pumped	Pumped	Leachate	Leachate	Leachate	Total	Leachate	Effluent	Effluent	Effluent	Total	
Day	final	active	int.	Rainfall (in.)	Effluent Pond (in.)	Over Liner (in.)	From Sta. No 3 (gal.)	From Sta. No. 5 (gal.)	Pumped to LTRF (gal.)	in 575K Tank (gal.)	Treated at LTRF (gal.)	Leachate Hauled (gal.)	Dust Cont./ Evaporation (gal.)	Pond Storage (gal.)	Irrigation Evaporation (gal.)	Dust Cont./ Evaporation (gal.)	Effluent Hauled (gal.)	Landfill Evaporation (gal.)
1	25.2	5	90.2	0	0	NR	3,392	99,159	102,550	NR	0	42,000	0	0	0	0	0	0
2	25.2	5	90.2	0	0	23	1,074	92,326	93,400	478,000	0	60,600	0	0	0	0	0	0
3	25.2	5	90.2	0	0	26	4,122	90,979	95,100	489,000	0	144,600	0	0	0	0	0	0
4	25.2	5	90.2	0	0	NR	4,122	90,979	95,100	NR	0	0	0	0	0	0	0	0
5	25.2	5	90.2	0	0	20.5	3,700	136,900	140,600	403,000	0	102,600	0	0	0	0	0	0
6	25.2	5	90.2	0	0	20	3,500	137,800	141,300	461,000	0	95,900	0	0	0	0	0	0
7	25.2	5	90.2	0	0	19.5	3,597	139,003	142,600	420,000	0	126,100	0	0	0	0	0	0
8	25.2	5	90.2	1.28	0	19.5	3,315	128,285	131,600	423,000	0	86,000	0	0	0	0	0	0
9	25.2	5	90.2	0	0	20	3,188	110,612	113,800	371,000	0	126,300	0	0	0	0	0	0
10	25.2	5	90.2	0	0	19.5	3,350	70,250	73,600	345,000	0	102,000	2,000	0	0	0	0	1,600
11	25.2	5	90.2	0	0	NR	3,350	70,250	73,600	NR	0	0	0	0	0	0	0	0
12	25.2	5	90.2	0	0	18.5	3,300	2,200	5,500	210,000	0	138,600	4,000	0	0	0	0	3,200
13	25.2	5	90.2	0	0	18	3,300	109,900	113,200	170,000	0	132,900	4,000	0	0	0	0	3,200
14	25.2	5	90.2	0	0	18	3,482	168,918	172,400	176,000	0	120,000	4,000	0	0	0	0	3,200
15	25.2	5	90.2	0.62	0	18	3,353	157,547	160,900	299,000	0	42,000	0	0	0	0	0	0
16	25.2	5	90.2	0	0	20.5	3,252	124,448	127,700	363,000	0	42,000	2,000	0	0	0	0	1,600
17	25.2	5	90.2	0	0	19	3,157	112,444	115,600	481,000	0	48,000	2,000	0	0	0	0	1,600
18	25.2	5	90.2	0	0	NR	3,157	112,444	115,600	NR	0	0	0	0	0	0	0	0
19	25.2	5	90.2	0	0	18.5	3,200	110,800	114,000	455,000	0	138,000	2,000	0	0	0	0	1,600
20	25.2	5	90.2	0	0	17.5	3,100	99,000	102,100	443,000	0	96,000	4,000	0	0	0	0	3,200
21	25.2	5	90.2	0	0	17	3,100	101,200	104,300	420,000	0	120,000	4,000	0	0	0	0	3,200
22	25.2	5	90.2	0	0	17	3,180	105,520	108,700	389,000	0	120,000	0	0	0	0	0	0
23	25.2	5	90.2	2	0	17	2,895	96,005	98,900	348,000	0	126,000	0	0	0	0	0	0
24	25.2	5	90.2	0.17	0	20	3,013	105,888	108,900	452,000	0	108,000	0	0	0	0	0	0
25	25.2	5	90.2	0	0	NR	3,013	105,888	108,900	NR	0	0	0	0	0	0	0	0
26	25.2	5	90.2	0	0	18	5,800	112,700	118,500	432,000	0	120,000	2,000	0	0	0	0	1,600
27	25.2	5	90.2	0	0	21.5	4,900	112,200	117,100	449,000	0	84,000	0	0	0	0	0	0
28	25.2	5	90.2	0.03	0	21.5	4,800	102,000	106,800	392,000	0	174,400	4,000	0	0	0	0	3,200
29	25.2	5	90.2	0	0	22.5	4,792	105,908	110,700	403,000	0	66,000	4,000	0	0	0	0	3,200
30	25.2	5	90.2	0	0	23.5	4,503	101,697	106,200	423,000	0	84,000	4,000	0	0	0	0	3,200
31	25.2	5	90.2	0	0	23.5	4,353	99,698	104,050	446,000	0	84,000	4,000	0	0	0	0	3,200
Total				4.1			110,356	3,312,944	3,423,300		0	2,730,000	46,000	0	0	0	0	36,800
Daily Average					0	19.9	3,600	106,900	110,400	390,000	0	101,100	3,300	0	0	0	0	2,600
Monthly Average					0	16.7	3,600	106,900	110,400	327,000	0	88,100	1,500	0	0	0	0	1,000

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VII calculated by subtracting VI from flow meter reading.
6. Column VIII, quantity from flow meter.
7. Column IX, calculated from depth in 575,000 gal. leachate tank.
8. Columns X and XIV, quantities from flow meters.
9. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
10. Column XVII, 80% of the daily values from Columns XII, XIV and XV.
11. Values in italic are substitute for missing data and are based on averaged values.
12. Daily average calculated by dividing the total by the active days in the month.
13. Monthly average calculated by dividing the total by the number of days of the month.

water balance analysis for the site. The total estimated amount of leachate/effluent evaporation for January 1998 was 36,800 gallons.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Senior Project Engineer

Robert B. Gardner, P.E.
Vice President
SCS ENGINEERS

RBG/LER:blj
Attachments

cc: Matt Matthews

TABLE 2. FIELD DATA ENTRY FORM
JANUARY 1998
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
									Leachate Hauled							Effluent Hauled		
Day	Active Area (ac.)	Piezometer Phase IV (in.)	Phase IV LCRS Cleanout (in.)	Phase III LCR Cleanout (in.)	Pump Sta. No. 4 (in.)	Pump Sta No. 3 Reading (gal.)	Landfill Flow Meter Pump Sta. No. 5 (gal.)	Depth in 575K Tank (ft.)	Contractor (gal.)	County (gal.)	Leachate Dust Cont./ Evaporation (gal.)	Rainfall (in.)	Depth in Effl. Pond (in.)	Leachate Treated at LTRF (gal.)	Effluent Irrigation Evaporation (gal.)	Contractor (gal.)	County (gal.)	Effluent Dust Cont./ Evaporation (gal)
1	5	NR			NR	*402,792*	*58,860,150*	NR	42,000	0	0	0.00	0	0	0	0	0	0
2	5	23			73.5	406,183	58,962,700	16.3	48,000	12,600	0	0.00	0	0	0	0	0	0
3	5	26			73	407,257	59,056,100	16.6	144,600	0	0	0.00	0	0	0	0	0	0
4	5	NR			NR	*411,379*	*59,151,200*	NR	0	0	0	0.00	0	0	0	0	0	0
5	5	20.5			72.5	415,500	59,246,300	17	90,000	12,600	0	0.00	0	0	0	0	0	0
6	5	20			70	419,200	59,386,900	14	77,000	18,900	0	0.00	0	0	0	0	0	0
7	5	19.5			69.5	*422,700*	*59,528,200*	16	126,100	0	0	0.00	0	0	0	0	0	0
8	5	19.5			73.75	426,297	59,670,800	14.6	86,000	0	0	1.28	0	0	0	0	0	0
9	5	20			78	429,612	59,802,400	14.7	120,000	6,300	0	0.00	0	0	0	0	0	0
10	5	19.5			75.75	432,800	59,916,200	12.9	102,000	0	2,000	0.00	0	0	0	0	0	0
11	5	NR			NR	*436,150*	*59,989,800*	NR	0	0	0	0.00	0	0	0	0	0	0
12	5	18.5			73.5	439,500	60,063,400	12	126,000	12,600	4,000	0.00	0	0	0	0	0	0
13	5	18			72	442,800	60,068,900	7.3	114,000	18,900	4,000	0.00	0	0	0	0	0	0
14	5	18			71.5	*446,100*	*60,182,100*	5.9	120,000	0	4,000	0.00	0	0	0	0	0	0
15	5	18			71.5	449,582	60,354,500	6.1	42,000	0	0	0.62	0	0	0	0	0	0
16	5	20.5			71.75	452,935	60,515,400	10.4	42,000	0	2,000	0.00	0	0	0	0	0	0
17	5	19			72	456,187	60,643,100	12.6	48,000	0	2,000	0.00	0	0	0	0	0	0
18	5	NR			NR	*459,344*	*60,758,700*	NR	0	0	0	0.00	0	0	0	0	0	0
19	5	18.5			72	462,500	60,874,300	16.7	138,000	0	2,000	0.00	0	0	0	0	0	0
20	5	17.5			70.5	465,700	60,988,300	15.8	96,000	0	4,000	0.00	0	0	0	0	0	0
21	5	17			70	*468,800*	*61,090,400*	15.4	120,000	0	4,000	0.00	0	0	0	0	0	0
22	5	17			69	471,900	61,194,700	14.6	120,000	0	0	0.00	0	0	0	0	0	0
23	5	17			70	475,080	61,303,400	13.5	126,000	0	0	2.00	0	0	0	0	0	0
24	5	20			82.5	477,975	61,402,300	12.1	108,000	0	0	0.17	0	0	0	0	0	0
25	5	NR			NR	*480,988*	*61,511,200*	NR	0	0	0	0.00	0	0	0	0	0	0
26	5	18			76	484,000	61,620,100	15.7	120,000	0	2,000	0.00	0	0	0	0	0	0
27	5	21.5			78	489,800	61,738,600	15	84,000	0	0	0.00	0	0	0	0	0	0
28	5	21.5			75	*494,700*	*61,855,700*	15.6	168,100	6,300	4,000	0.03	0	0	0	0	0	0
29	5	22.5			75	499,500	*61,962,500*	13.6	66,000	0	4,000	0.00	0	0	0	0	0	0
30	5	23.5			74	504,292	*62,073,200*	14	84,000	0	4,000	0.00	0	0	0	0	0	0
31	5	23.5			74	508,795	*62,179,400*	14.7	84,000	0	4,000	0.00	0	0	0	0	0	0

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Notes:

1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column XIII, Trace is less than 0.01 inches.
5. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
6. Column III, Phase IV piezometer began monitoring on 7/10/95.
7. Columns VII, XV and XVI, quantities from flow meters.

TABLE 3. 1997 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change in Storage For Month (gal.)
January	4.10	0	3,423,300	2,730,000	46,000	0	0	0	0	3,423,300	2,776,000	647,300
February										0	0	0
March										0	0	0
April										0	0	0
May										0	0	0
June										0	0	0
July										0	0	0
August										0	0	0
September										0	0	0
October										0	0	0
November										0	0	0
December										0	0	0
YTD Total	4.10	0	3,423,300	2,730,000	46,000	0	0	0	0	3,423,300	2,776,000	

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Note:

1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

TABLE 4. APPROXIMATE TOP OF CLAY ELEVATIONS
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FL

	PHASE III	PHASE IV			PHASE VI		
DATE	LCRS Cleanout	LCRS Cleanout	Piezometer	Pump Control Well	Pump Station No. 3	Pump Station No. 4	Settling Plate
28-Dec-93	NR	NR	NR	NR	118.97	NR	NR
05-Dec-94	NR	NR	NR	NR	118.76	NR	NR
26-Jan-95	NR	NR	NR	NR	118.59	122.01	NR
22-Feb-95	119.89	118.09	NR	NR	118.59	122.00	NR
13-Jul-95	NR	NR	NR	NR	118.50	121.98	NR
21-Nov-95	119.81	117.80	116.45	116.55	118.45	121.93	NR
07-Dec-95	NR	NR	NR	NR	NR	NR	117.35
06-Jun-96	119.75	117.69	116.20	116.26	118.35	121.87	116.96
02-Oct-96	119.80	117.66	116.14	116.21	118.15	121.97	116.95
20-Jan-97	119.70	117.54	115.97	116.00	118.04	121.88	116.85
02-May-97	119.68	117.43	115.92	115.94	118.04	121.88	116.79
01-Aug-97	119.70	117.50	115.88	115.89	118.04	121.88	116.81
13-Jan-98	119.68	117.48	115.83	115.83	118.05	121.88	116.81

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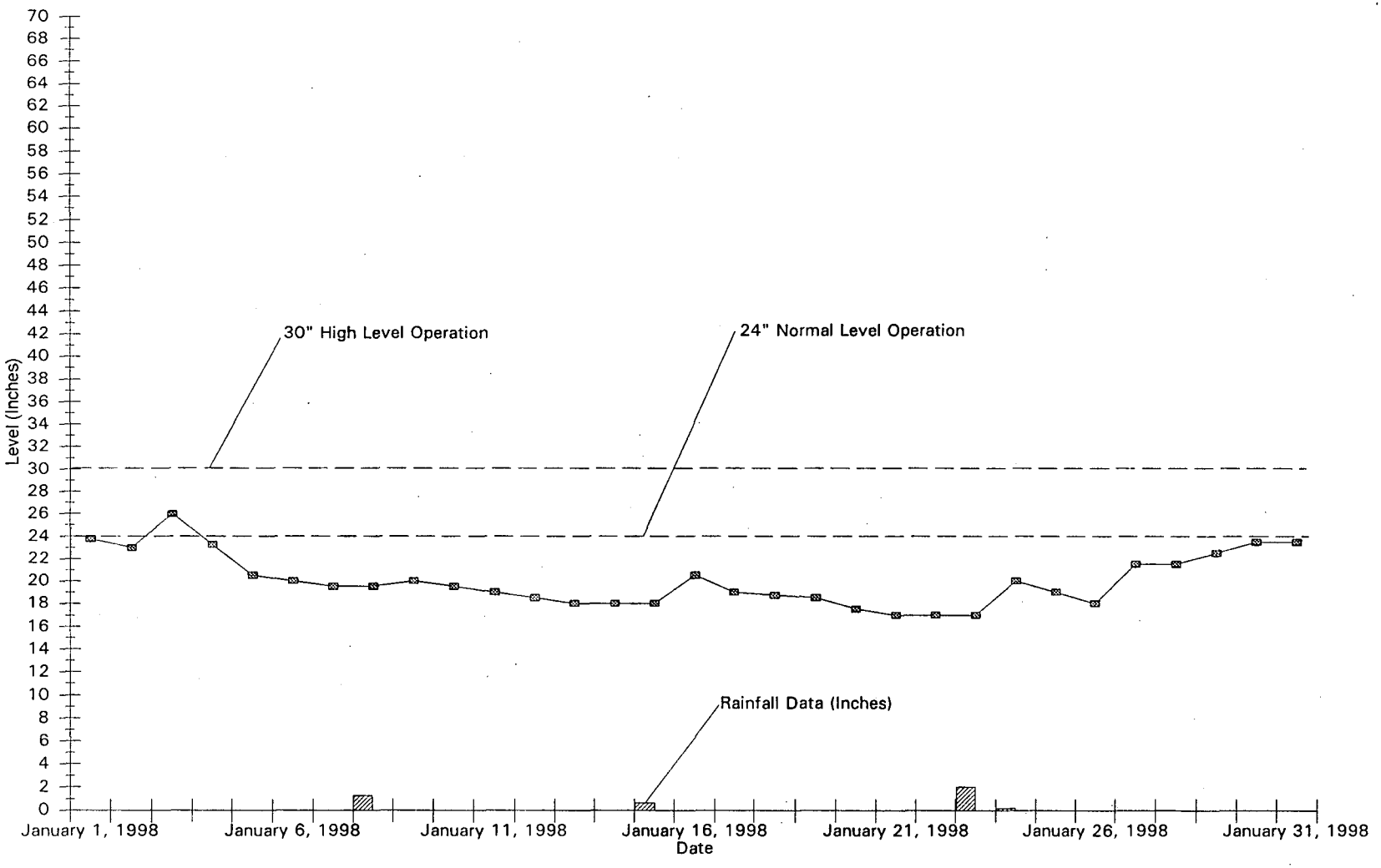
Figure 1.

Phase IV Piezometer



SCS ENGINEERS

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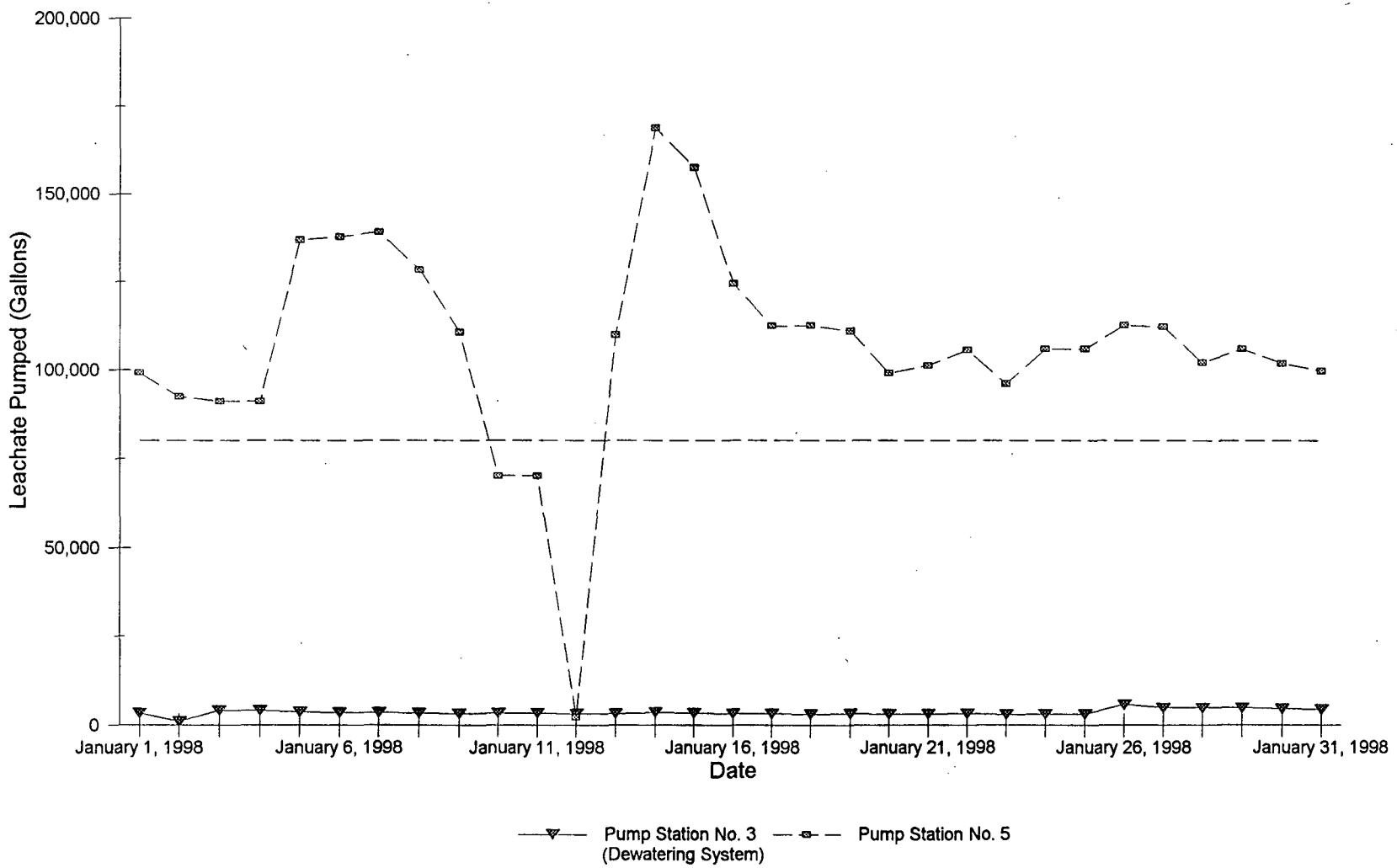
Figure 2.

Pump Station No. 3 and No. 5



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LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Jan 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		NR			NR	NR	NR	NR	42,000	Ø	Ø	Ø
2		23			73.5	406183	58962700	16.3	48,000	12,600	Ø	Ø
3		26			*P	407257	59056100	16.6	144,600	Ø	Ø	Ø
4		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
5		20.5			72.5	415500	59246300	17	90,000	12,600	Ø	Ø
6		20			70	419200	59386900	14	77,000	18,900	Ø	Ø
7		19.5			69.5	422700	59528200	16	126,100	Ø	Ø	Ø
8		19.5			*P	426297	59670800	14.6	86,000	Ø	Ø	1.28
9		20			78	429612	59802400	14.7	120,000	6,300	Ø	Ø
10		19.5			*P	432800	59916200	12.9	102,000	Ø	2,000	Ø
11		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
12		18.5			73.5	439500	60063400	12	126,000	12,600	4,000	Ø
13		18			72	442800	60068900	7.3	114,000	18,900	4,000	Ø
14		18			71.5	446100	60182100	5.9	120,000	Ø	4,000	Ø
15		18			71.5	449582	60354500	6.10	42,000	Ø	Ø	0.62
16		20.5			*P	452935	60515400	10.4	42,000	Ø	2,000	Ø

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: *P = pumping

Prepared by: M. Matthews

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Jan. 98

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (~~Hours~~)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		19			72	456187	60643100	12.6	48,000	Ø	2,000	Ø
18		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
19		18.5			72	462500	60874300	16.7	138,000	Ø	2,000	Ø
20		17.5			70.5	465700	60988300	15.8	96,000	Ø	4,000	Ø
21		17			70	468800	61090400	15.4	120,000	Ø	4,000	Ø
22		17			69	471900	61194700	14.6	120,000	Ø	Ø	Ø
23		17			70	475080	61303400	13.5	126,000	Ø	Ø	2.00
24		20			82.5	477975	61402300	12.10	108,000	Ø	Ø	0.17
25		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
26		18			76	484000	61620100	15.7	120,000	Ø	2,000	Ø
27		21.5			78	489800	61738600	15	84,000	Ø	Ø	Ø
28		21.5			75	494700	61855700	15.6	168,100	6,300	4,000	0.03
29		22.5			75	499500	61962500	13.6	66,000	Ø	4,000	Ø
30		23.5			74	504292	62073200	14	84,000	Ø	4,000	Ø
31		23.5			74	508795	62179400	14.7	84,000	Ø	4,000	Ø

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor Immediately. Complete Evaluation Report Form.

Comments: _____

Leachate Hauled Month Total: _____

Prepared by W. Walthers

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM EVALUATION REPORT SOUTHEAST COUNTY LANDFILL

(Month/Year) Jan. 98

Action	Date 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer-Phase IV																
Low Level Operation, depth less than or equal to 12 inches.																
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.	NR	✓		NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.			✓													
Pump Station No. 4-Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	NR	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTRF																
Normal Operation.	NR			NR							NR		✓		✓	✓
If level is greater than 11 feet, increase treatment, hauling , or recirculation.		✓	✓		✓	✓	✓	✓	✓	✓		✓				
If level is less than 6 feet, decrease or stop hauling, recirculation.														✓		
Effluent Pond																
Normal Operation.																
If level is 6 inches or less, stop irrigation, recirculation, hauling.																
If level is greater than 4 feet, increase irrigation, recirculation, hauling.																
Observed runoff of effluent to stormwater basins?																
No.																
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.																
Runoff Type / To Basin																
1=Severe / A, B, C, D																
2=Moderate																
3=Minor																

Comments/Remedial Action: No readings 1-1-98 Holiday * Effluent pond empty, Treatment plant down for repairs

Prepared by: M Maddox

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL
(Month/Year) Jan. 98

Action	Date 17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer-Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.															
Pump Station No. 4-Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.		NR							NR						
If level is greater than 11 feet, increase treatment, hauling , or recirculation.	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
If level is less than 6 feet, decrease or stop hauling, recirculation.															
* Effluent Pond															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.															
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.															
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken. Runoff Type: 1=Severe, 2=Moderate, 3=Minor. To Basin: A, B, C, D															

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Comments/Remedial Action: * Effluent Pond empty, Treatment plant down for repairs

Prepared by: M. Matthews

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Dec. 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		34.5			75	355300	57268300	10.3	54,000	6,300	Ø	Ø
18		34.5			74	355300	57374800	11.6	60,000	6,300	Ø	Ø
19		34.5			72.5	357862	57488800	12.8	48,000	18,900	Ø	Ø
20		34			*P	362530	57587200	13	138,900	Ø	Ø	Ø
21		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
22		32.5			72.5	372900	57806300	14.8	102,000	12,600	Ø	Ø
23		32.5			70.5	374600	57921100	14.6	72,000	Ø	Ø	Ø
24		33			*P	378371	58029300	15.5	138,000	Ø	Ø	Ø
25		NR			NR	NR	NR	NR	Ø	Ø	Ø	0.5
26		33			74	382500	58241600	16.6	156,000	Ø	Ø	4.0
27		39.5			90	384658	58338300	14.3	120,000	Ø	Ø	1.5
28		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
29		39			80	388700	58549100	16.3	96000	12,600	Ø	0.1
30		29.5			76.5	394500	58655600	15.4	96,000	18,900	Ø	Ø
31		24.5			75	399400	58757600	14.8	96,000	Ø	Ø	Ø

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Leachate Hauled Month Total: _____

Prepared by: M. Matthews

HILLSBOROUGH COUNTY

FLORIDA

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS
Dottie Berger
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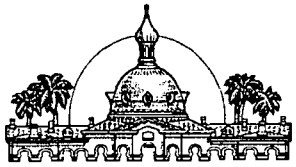
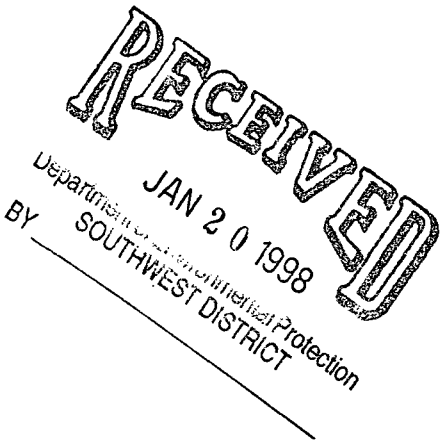


Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimmie Keel



January 15, 1998

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of December 1997. In addition, the SWMD is providing the December 1997 field data forms for the Landfill, the daily leachate and collection system evaluation reports, the top of clay survey, and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for December 1997 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from TPS-5 and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of December 1997 was 32.3 inches. The depth reached levels that exceed the LMP from December 12 through December 29. On December 16, 1997, the SWMD notified the DEP in writing of the elevated level and the implementation of additional contract leachate hauling. As explained in the SWMD's previous correspondence, the area received extensive rain during December (12.29 inches).

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BY SOUTHWEST DISTRICT

The SWMD will continue to manage the Landfill's leachate as aggressively as possible during this unusual rainy period.

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

Environmental Consultants

3012 U.S. Highway 301 North
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

January 15, 1998
File No. 0995029.23

RECEIVED
JAN 20 1998
Department of Environmental Protection
BY SOUTHWEST DISTRICT

Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Department
P. O. Box 1110
Tampa, Florida 33601

Subject: December 1997, Leachate Water Balance Report Forms
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed the leachate management operational data from the Southeast County Landfill (SCLF) for December 1997. Attached is the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), the 1997 updated summary (Table 3), and the 1997 rainfall data (Table 4). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD). SCS provides the following commentary on the monthly data, including recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations where appropriate.

Day (Column I)

This column presents the calender day for the month of December 1997.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the amount of daily rainfall in inches as measured in the field. Total rainfall at the SCLF for December 1997 was 12.29 inches. The rainfall data as reported in previous months was over estimated. SCS compiled and recalculated the rainfall data for the SCLF and a summary is presented in Table 4.

The monthly rainfall data shown in the 1997 Leachate Balance Summary (Table 3) was revised to reflect the recalculated rainfall values. The total rainfall for 1997 at the SCLF was 73.65 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. The average depth for recorded days of effluent in the effluent pond for December 1997 was 0 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (in inches) at the bottom of the SCLF. This measurement is based on the daily piezometer measurements taken in the field and represents worst case condition since the piezometer is currently located within the sump area of the SCLF. The average depth of recorded days of leachate over the liner for December 1997 was 32.3 inches (see Figure 1).

The depth over the liner reached levels that exceeded the Leachate Management Plan limit of 30 inches from December 12 through December 29. SCS believes that the increased leachate depth over the liner was due to the unusually high rainfall amount for the month of December (i.e. 12.29 inches). The normal average rainfall for December is approximately 2 inches.

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 3 (TPS-3) and pumped to the Main Leachate Pump Station for subsequent treatment. The leachate pumped from TPS-3 represents the leachate being removed from the dewatering system. The average daily amount of leachate collected and pumped from TPS-3 for December 1997 was approximately 3,400 gallons (Figure 2).

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 5 (TPS-5) and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 currently is measured from the landfill flow meter minus the amount pumped from TPS-3. The average daily amount of leachate collected and pumped from TPS-5 for December 1997 was approximately 98,500 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped to the Leachate Treatment and Reclamation Facility (LTRF) for

treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flowmeter near TPS-3. The average daily amount of leachate pumped from the landfill to the LTRF was 102,000 gallons (total of 3,058,850 gallons for the month).

Leachate in 575,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 575,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily gauge level reading. The average daily amount of leachate stored in the tank for December 1997, based on recorded days, was 347,000 gallons. Under normal operating conditions, the amount of leachate stored in the tank fluctuates based on the daily amount of leachate pumped to the LTRF, the daily amount of leachate treated, and the daily amount of leachate hauled from the tank.

The change in storage as measured in the 575,000 gallon storage tank was +36,000 gallons. The change in storage as calculated from the total inflow minus outflow from the leachate system was +325,050 gallons. There appears to be a discrepancy of 240,800 gallons between the in-line flow meter reading and the change in storage observed in the leachate storage tank. The HCSWMD and SCS will continue to evaluate procedures that could be implemented to more precisely record the water levels in the tank.

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for December 1997 was 0 gallons. The daily amount of leachate treated at the LTRF may increase or decrease depending on the influent loading/concentrations.

Note: The LTRF has not been operational since September 3, 1996 to allow for repairs to the treatment tanks. At this time it is unknown when the LTRF is anticipated to be back in operation. Currently the HCSWMD is preparing a corrective action schedule, the Florida Department of Environmental Protection (FDEP) will be notified when the corrective action plan and schedule are completed.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. Leachate is pumped from the 575,000 gallon raw leachate tank and into a tanker truck for transport. During December 1997, a total of 2,730,800 gallons of leachate was hauled off site compared to a total of 2,137,200 gallons during the previous month. The HCSWMD should continue off site hauling of untreated leachate until the repairs to the LTRF are completed.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF and is measured from the flowmeter at the bypass loading arm. The average daily amount of leachate pumped from the 575,000 gallon leachate tank for use in dust control/evaporation, based on recorded days, was 3,000 gallons for December 1997 (total of 3,000 gallons for the month). Weather permitting, the HCSWMD should continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. The effluent pond was drained for maintenance in March 1997. The average daily amount of effluent stored in the effluent pond for December 1997 was 0 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF. Currently, any rainfall that accumulates in the Pond is pumped to stormwater Basin C.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flowmeter at the irrigation pump station. Since the LTRF is shut down for repairs, and the effluent pond is empty for maintenance, effluent was not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in December 1997 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During December 1997, the total amount of effluent used for dust control/evaporation was 0 gallons.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During December 1997, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site. The total estimated amount of leachate/effluent evaporation for December 1997 was 2,400 gallons.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Senior Project Engineer

Robert B. Gardner, P.E.
Vice President
SCS ENGINEERS

RBG/LER:blj
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
DECEMBER 1997
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in Effluent	Est. Depth Over	Pumped From	Pumped From	Leachate Pumped	Leachate in 575K	Leachate Treated	Total Leachate	Leachate Dust Cont./	Effluent Pond	Effluent Irrigation	Effluent Dust Cont./	Total Effluent	Landfill
Day	final	active	int.	Rainfall (in.)	Pond (in.)	Liner (in.)	Sta. No 3 (gal.)	Sta. No. 5 (gal.)	to LTRF (gal.)	Tank (gal.)	at LTRF (gal.)	Hauled (gal.)	Evaporation (gal.)	Storage (gal.)	Evaporation (gal.)	Evaporation (gal.)	Hauled (gal.)	Evaporation (gal.)
1	25.2	5	90.2	0.17	0	27	3,655	78,145	81,800	412,000	0	108,600	0	0	0	0	0	0
2	25.2	5	90.2	0	0	27	3,415	71,485	74,900	354,000	0	132,900	0	0	0	0	0	0
3	25.2	5	90.2	0	0	26.5	3,510	82,290	85,800	345,000	0	108,000	0	0	0	0	0	0
4	25.2	5	90.2	0	0	27	3,570	79,730	83,300	291,000	0	126,900	0	0	0	0	0	0
5	25.2	5	90.2	0.83	0	26.5	3,580	77,820	81,400	207,000	0	156,600	0	0	0	0	0	0
6	25.2	5	90.2	0	0	25	3,435	81,015	84,450	285,000	0	84,000	0	0	0	0	0	0
7	25.2	5	90.2	0	0	NR	3,435	81,015	84,450	NR	0	0	0	0	0	0	0	0
8	25.2	5	90.2	0	0	27.5	3,400	89,300	92,700	253,000	0	114,600	3,000	0	0	0	0	2,400
9	25.2	5	90.2	0	0	28	3,368	90,532	93,900	216,000	0	102,700	0	0	0	0	0	0
10	25.2	5	90.2	0	0	29	3,366	85,734	89,100	193,000	0	114,000	0	0	0	0	0	0
11	25.2	5	90.2	0.93	0	30	3,113	83,387	86,500	130,000	0	126,900	0	0	0	0	0	0
12	25.2	5	90.2	0.33	0	31.5	3,445	92,055	95,500	118,000	0	109,600	0	0	0	0	0	0
13	25.2	5	90.2	3.58	0	33.5	2,954	104,896	107,850	256,000	0	48,000	0	0	0	0	0	0
14	25.2	5	90.2	1.7	0	NR	2,954	104,896	107,850	NR	0	0	0	0	0	0	0	0
15	25.2	5	90.2	0.4	0	34.5	2,800	105,100	107,900	268,000	0	84,600	0	0	0	0	0	0
16	25.2	5	90.2	0	0	34	2,400	107,200	109,600	297,000	0	60,900	0	0	0	0	0	0
17	25.2	5	90.2	0	0	34.5	*2,481*	104,019	106,500	334,000	0	60,300	0	0	0	0	0	0
18	25.2	5	90.2	0	0	34.5	2,562	111,438	114,000	369,000	0	66,300	0	0	0	0	0	0
19	25.2	5	90.2	0	0	34.5	4,668	93,732	98,400	374,000	0	66,900	0	0	0	0	0	0
20	25.2	5	90.2	0	0	34	5,185	104,365	109,550	426,000	0	138,900	0	0	0	0	0	0
21	25.2	5	90.2	0	0	NR	5,185	104,365	109,550	NR	0	0	0	0	0	0	0	0
22	25.2	5	90.2	0	0	32.5	1,700	113,100	114,800	420,000	0	114,600	0	0	0	0	0	0
23	25.2	5	90.2	0	0	32.5	3,771	104,429	108,200	446,000	0	72,000	0	0	0	0	0	0
24	25.2	5	90.2	0	0	33	2,065	104,086	106,150	478,000	0	138,000	0	0	0	0	0	0
25	25.2	5	90.2	0	0	NR	2,065	104,086	106,150	NR	0	0	0	0	0	0	0	0
26	25.2	5	90.2	3.07	0	33	2,158	94,542	96,700	412,000	0	156,000	0	0	0	0	0	0
27	25.2	5	90.2	1.28	0	39.5	2,021	103,379	105,400	469,000	0	120,000	0	0	0	0	0	0
28	25.2	5	90.2	0	0	NR	2,021	103,379	105,400	NR	0	0	0	0	0	0	0	0
29	25.2	5	90.2	0	0	39	5,800	100,700	106,500	443,000	0	108,600	0	0	0	0	0	0
30	25.2	5	90.2	0	0	29.5	4,900	97,100	102,000	426,000	0	114,900	0	0	0	0	0	0
31	25.2	5	90.2	0	0	24.5	3,392	99,159	102,550	448,000	0	96,000	0	0	0	0	0	0
Total				12.29			102,373	2,956,478	3,058,850		0	2,730,800	3,000	0	0	0	0	2,400
Daily Average					0	32.3	3,400	98,500	102,000	347,000	0	109,200	3,000	0	0	0	0	2,400
Monthly Average					0	26.9	3,400	98,500	102,000	289,000	0	91,000	100	0	0	0	0	0

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VII calculated by subtracting VI from flow meter reading.
6. Column VIII, quantity from flow meter.
7. Column IX, calculated from depth in 575,000 gal. leachate tank.
8. Columns X and XIV, quantities from flow meters.
9. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
10. Column XVII, 80% of the daily values from Columns XII, XIV and XV.
11. Values in italic are substitute for missing data and are based on averaged values.
12. Daily average calculated by dividing the total by the active days in the month.
13. Monthly average calculated by dividing the total by the number of days of the month.

TABLE 2. FIELD DATA ENTRY FORM
DECEMBER 1997
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
							Landfill Flow		Leachate Hauled		Leachate			Leachate	Effluent	Effluent Hauled		Effluent
Day	Active Area (ac.)	Piezometer Phase IV (in.)	Phase IV LCRS Cleanout (in.)	Phase III LCR Cleanout (in.)	Pump Sta. No. 4 (in.)	Pump Sta No. 3 Reading (gal.)	Meter Pump Sta. No. 5 (gal.)	Depth in 575K Tank (ft.)	Contractor (gal.)	County (gal.)	Dust Cont./ Evaporation (gal.)	Rainfall (in.)	Depth in Effl. Pond (in.)	Treated at LTRF (gal.)	Irrigation Evaporation (gal.)	Contractor (gal.)	County (gal.)	Dust Cont./ Evaporation (gal)
1	5	27			68.5	302,900	55,801,300	16.1	96,000	12,600	0	0.2	0	0	0	0	0	0
2	5	27				306,555	55,883,100	14.3	114,000	18,900	0	0.0	0	0	0	0	0	0
3	5	26.5				309,970	55,958,000	12.3	108,000	0	0	0.0	0	0	0	0	0	0
4	5	27				313,480	56,043,800	12	108,000	18,900	0	0.0	0	0	0	0	0	0
5	5	26.5			68	317,050	56,127,100	10.1	144,000	12,600	0	0.8	0	0	0	0	0	0
6	5	25			68	320,630	56,208,500	7.2	84,000	0	0	0.0	0	0	0	0	0	0
7	5	NR			NR	*324,065*	*56,292,950*	NR	0	0	0	0.0	0	0	0	0	0	0
8	5	27.5			68.5	327,500	56,377,400	9.9	102,000	12,600	3,000	0.0	0	0	0	0	0	0
9	5	28			69	330,900	56,470,100	8.8	102,700	0	0	0.0	0	0	0	0	0	0
10	5	29			69	334,268	56,564,000	7.5	108,000	6,000	0	0.0	0	0	0	0	0	0
11	5	30			74	337,634	56,653,100	6.7	108,000	18,900	0	0.9	0	0	0	0	0	0
12	5	31.5			75.5	340,747	56,739,600	4.5	97,000	12,600	0	0.3	0	0	0	0	0	0
13	5	33.5			91	344,192	56,835,100	4.1	48,000	0	0	3.6	0	0	0	0	0	0
14	5	NR			NR	*347,146*	*56,942,950*	NR	0	0	0	1.7	0	0	0	0	0	0
15	5	34.5			82	350,100	57,050,800	8.9	72,000	12,600	0	0.4	0	0	0	0	0	0
16	5	34			77	352,900	57,158,700	9.3	42,000	18,900	0	0.0	0	0	0	0	0	0
17	5	34.5			75	355,300	57,268,300	10.3	54,000	6,300	0	0.0	0	0	0	0	0	0
18	5	34.5			74	355,300	57,374,800	11.6	60,000	6,300	0	0.0	0	0	0	0	0	0
19	5	34.5			72.5	357,862	57,488,800	12.8	48,000	18,900	0	0.0	0	0	0	0	0	0
20	5	34				362,530	57,587,200	13	138,900	0	0	0.0	0	0	0	0	0	0
21	5	NR			NR	*367,715*	*57,696,750*	NR	0	0	0	0.0	0	0	0	0	0	0
22	5	32.5			72.5	372,900	57,806,300	14.8	102,000	12,600	0	0.0	0	0	0	0	0	0
23	5	32.5			70.5	374,600	57,921,100	14.6	72,000	0	0	0.0	0	0	0	0	0	0
24	5	33				378,371	58,029,300	15.5	138,000	0	0	0.0	0	0	0	0	0	0
25	5	NR			NR	*380,436*	*58,135,450*	NR	0	0	0	0.0	0	0	0	0	0	0
26	5	33			74	382,500	58,241,600	16.6	156,000	0	0	3.1	0	0	0	0	0	0
27	5	39.5			90	384,658	58,338,300	14.3	120,000	0	0	1.3	0	0	0	0	0	0
28	5	NR			NR	*386,679*	*58,443,700*	NR	0	0	0	0.0	0	0	0	0	0	0
29	5	39			80	388,700	*58,549,100*	16.3	96,000	12,600	0	0.0	0	0	0	0	0	0
30	5	29.5			76.5	394,500	*58,655,600*	15.4	96,000	18,900	0	0.0	0	0	0	0	0	0
31	5	24.5			75	399,400	*58,757,600*	14.8	96,000	0	0	0.0	0	0	0	0	0	0

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Notes:

1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column XIII, Trace is less than 0.01 inches.
5. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
6. Column III, Phase IV piezometer began monitoring on 7/10/95.
7. Columns VII, XV and XVI, quantities from flow meters.

TABLE 3. 1997 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change in Storage For Month (gal.)
January	2.43	0	1,892,150	2,006,378	0	0	0	0	10,470	1,892,150	2,006,378	(114,228)
February	1.34	0	1,672,700	1,558,554	0	0	0	0	49,290	1,672,700	1,558,554	114,146
March	2.10	0	1,587,700	1,610,179	196,000	0	0	0	140,080	1,587,700	1,806,179	(218,479)
April	5.46	0	1,647,900	1,534,642	92,000	0	0	0	0	1,647,900	1,626,642	21,258
May	4.23	0	1,931,600	1,794,472	151,000	0	0	0	0	1,931,600	1,945,472	(13,872)
June	7.45	0	2,022,500	1,595,334	77,000	0	0	0	64,000	2,022,500	1,672,334	350,166
July	12.01	0	2,625,400	2,466,447	0	0	0	0	0	2,625,400	2,466,447	158,953
August	4.87	0	2,750,533	2,285,200	15,000	0	0	0	0	2,750,533	2,300,200	450,333
September	13.07	0	2,121,000	1,914,600	35,000	0	0	0	0	2,121,000	1,949,600	171,400
October	5.56	0	2,418,000	2,468,300	35,000	0	0	0	0	2,418,000	2,503,300	(85,300)
November	2.84	0	2,561,000	2,137,200	10,000	0	0	0	0	2,561,000	2,147,200	413,800
December	12.29	0	3,058,850	2,730,800	3,000	0	0	0	0	3,058,850	2,733,800	325,050
YTD Total	73.65	0	26,289,333	24,102,106	614,000	0	0	0	263,840	26,289,333	24,716,106	

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Note:

1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

TABLE 4. RAINFALL DATA - 1997
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY FLORIDA

Date	Rainfall Gauge I.D.							Monthly Total
	Station #1	Station #2	Station #3	Station #4	Station #5	Station #6	Average	
01/10	0.7	1.2	0.8	0.5	0.6	0.6	0.73	
01/26	0.4	0.7	0.3	0.3	0.2	0.3	0.37	
01/30	1.3	1.4	1.3	1.2	1.4	1.4	1.33	2.43
02/15	0.4	0.5	0.6	0.2	0.5	0.4	0.43	
02/16	0.1	0.1	0.1	0.1	0.2	0.2	0.13	
02/17	0.6	0.8	0.6	0.3	0.8	1	0.68	
02/20	0	0	0.1	0.4	0	0.1	0.10	1.34
03/15	0.8	0.7	0.7	0.9	0.7	0.7	0.75	
03/21	0.7	0.6	0.7	0.7	0.6	0.6	0.65	
03/22	0.4	0.4	0.5	0.4	0.5	0.4	0.43	
03/31	0.3	0.2	0.3	0.2	0.3	0.3	0.27	2.10
04/12	0.3	0.3	0.3	0.5	0.3	0.3	0.33	
04/14	0.9	0.9	0.8	1.1	0.8	0.8	0.88	
04/15	0.1	0.1	0.1	0.1	0.1	0.1	0.10	
04/24	0.6	0.7	0.7	0.3	0.7	0.7	0.62	
04/27	2.4	2.8	2.9	2.2	2.6	2.6	2.58	
04/29	0.9	1.1	1	0.9	0.9	0.9	0.95	5.46
05/12	0.3	0.2	0	0.2	0	0	0.12	
05/13	0.9	0.9	0.9	0.9	0.9	1	0.92	
05/22	0.1	0.2	0.1	0.3	0.2	0.1	0.17	
05/24	3.5	3.2	3.5	3.8	1.5	2	2.92	
05/29	0.2	0	0	0.1	0.2	0.1	0.10	4.23
06/01	0.1	0.1	0.1	0.1	0.1	0.1	0.10	
06/02	0.1	0.1	0.2	0	0.1	0.1	0.10	
06/12	2.2	2.5	1.6	1.8	1.3	1.7	1.85	
06/14	1.7	1.9	1.9	1.7	2.7	2	1.98	
06/15	0.3	0.2	0.2	0.1	0.1	0.2	0.18	
06/25	0.7	0.8	0.9	1	0.8	1	0.87	
06/26	0.4	0.4	0.3	0.3	0.4	0.3	0.35	
06/27	2.2	2	2	2	2.3	1.6	2.02	7.45
07/01	0.1	0.1	0.2	0.6	0.3	0.2	0.25	
07/05	1.4	1.3	1.2	1.4	1.3	1.2	1.30	
07/06	0.7	0.6	0.5	0.6	0.6	0.7	0.62	
07/08	0.2	0.2	0.1	0	0	0	0.08	
07/10	0.3	0.4	0.6	0.9	1.8	0.8	0.80	
07/11	0.1	0.1	0.1	0.1	0.1	0.1	0.10	
07/12	1.8	1.6	3.2	4	1.8	2.7	2.52	
07/15	1.5	2	1.7	1.9	1.8	1.4	1.72	
07/16	0.8	0.4	0.4	0.4	0.7	0.5	0.53	
07/18	0	0	0.2	0.2	0.2	0.2	0.13	
07/20	0.3	0.7	1	0.45	1.5	1.7	0.94	
07/21	0.8	0.7	0.2	0	0	0.2	0.32	
07/22	0.2	0.2	0.2	0.2	0.5	0.3	0.27	
07/23	0.1	0.1	0.1	0.2	0.1	0.1	0.12	
07/24	0	0	0	0.4	0.3	0	0.12	
07/25	0	0.2	0.2	0.1	0.3	0.3	0.18	
07/27	0.8	0.7	0.8	0.4	0.45	0.6	0.63	
07/28	0.6	0.6	0.4	0.2	0.5	0.3	0.43	
07/29	0.1	0.1	0	0.3	0.2	0.1	0.13	
07/30	0.3	0.2	0.2	0.3	0.3	0.2	0.25	
07/31	0.5	0.8	0.6	0.5	0.4	0.6	0.57	12.01
08/02	0.3	0.4	0.6	0.4	0.45	0.35	0.42	
08/03	0.5	0.4	0.75	0.6	0.8	0.7	0.63	
08/04	0.1	0.2	0.1	0.1	0	0.1	0.10	
08/05	0.5	0.5	0.5	0.1	0.4	0.3	0.38	
08/06	0.2	0.1	0.1	0	0.2	0.1	0.12	
08/08	0.5	0.5	0.4	0.4	0.4	0.4	0.43	
08/09	1.3	1.9	1.8	1.6	1.3	1.6	1.58	
08/10	0.4	0.8	0.6	0.6	0.3	0.4	0.52	
08/11	0.1	0	0.1	0.1	0.2	0	0.08	
08/12	0.3	0.2	0	0	0	0	0.08	
08/21	0	0.3	0	0	0	0	0.05	
08/22	0.5	0.4	0.3	0.4	0.2	0.2	0.33	
08/30	0.3	0.1	0.1	0.1	0.2	0.1	0.15	4.87
09/04	0.1	0.1	0	0	0.1	0.1	0.07	
09/11	0	0	0	0	0	0.1	0.02	
09/17	0.7	1.1	0.8	1.1	0.8	0.7	0.87	
09/18	0.3	0.6	0.8	0.9	0.6	0.5	0.62	
09/23	1.4	1.7	1.2	1.3	1	1.2	1.30	
09/24	0	0	0.1	0	0.1	0	0.03	
09/25	0.2	0.1	0.1	0	0.2	0.1	0.12	
09/26	7.1	7.1	7.3	8.8	6.2	6.4	7.15	
09/27	2.7	2.6	2.8	3.2	2.8	2.8	2.82	
09/29	0.1	0	0.1	0.1	0.1	0	0.07	13.07
10/19	0.75	0.7	0	0.6	0.5	0	0.43	
10/28	1.8	1.9	1.6	1.2	1.7	1.7	1.65	
10/29	0	0	0.1	0	0	0	0.02	
10/31	3.25	3.25	3	3.25	4.5	3.5	3.46	5.56
11/03	0	0.1	0	0	0	0	0.02	
11/14	3.3	3.6	3.2	2.6	3.4	0.8	2.82	2.84
12/01	0.2	0.2	0.2	0	0.2	0.2	0.17	
12/05	0.9	0.9	0.8	0.7	0.8	0.9	0.83	
12/11	1.3	1.1	1.2	0.8	1.2	0	0.93	
12/12	0.3	0.4	0.3	0.3	0.4	0.3	0.33	
12/13	3.7	3.9	3.5	3	3.9	3.5	3.58	
12/14	1.7	1.8	1.4	1.5	1.4	2.4	1.70	
12/15	0.4	0.5	0.4	0.3	0.4	0.4	0.40	
12/26	3.1	2.8	2.8	4	3	2.7	3.07	
12/27	1.3	1.3	1.5	0.8	1.4	1.4	1.28	12.29
Year Total								73.65

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Figure 1.

Phase IV Piezometer

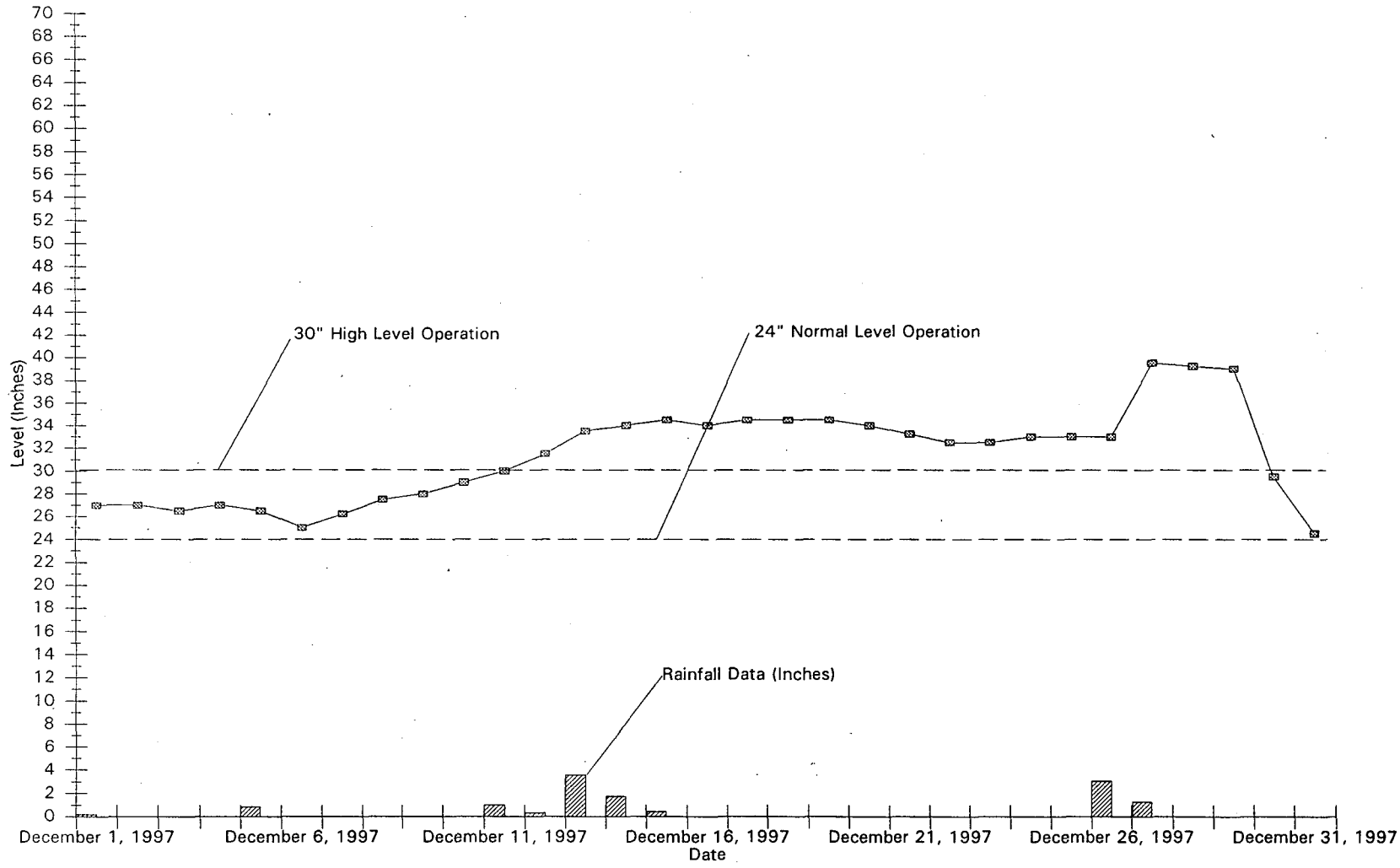

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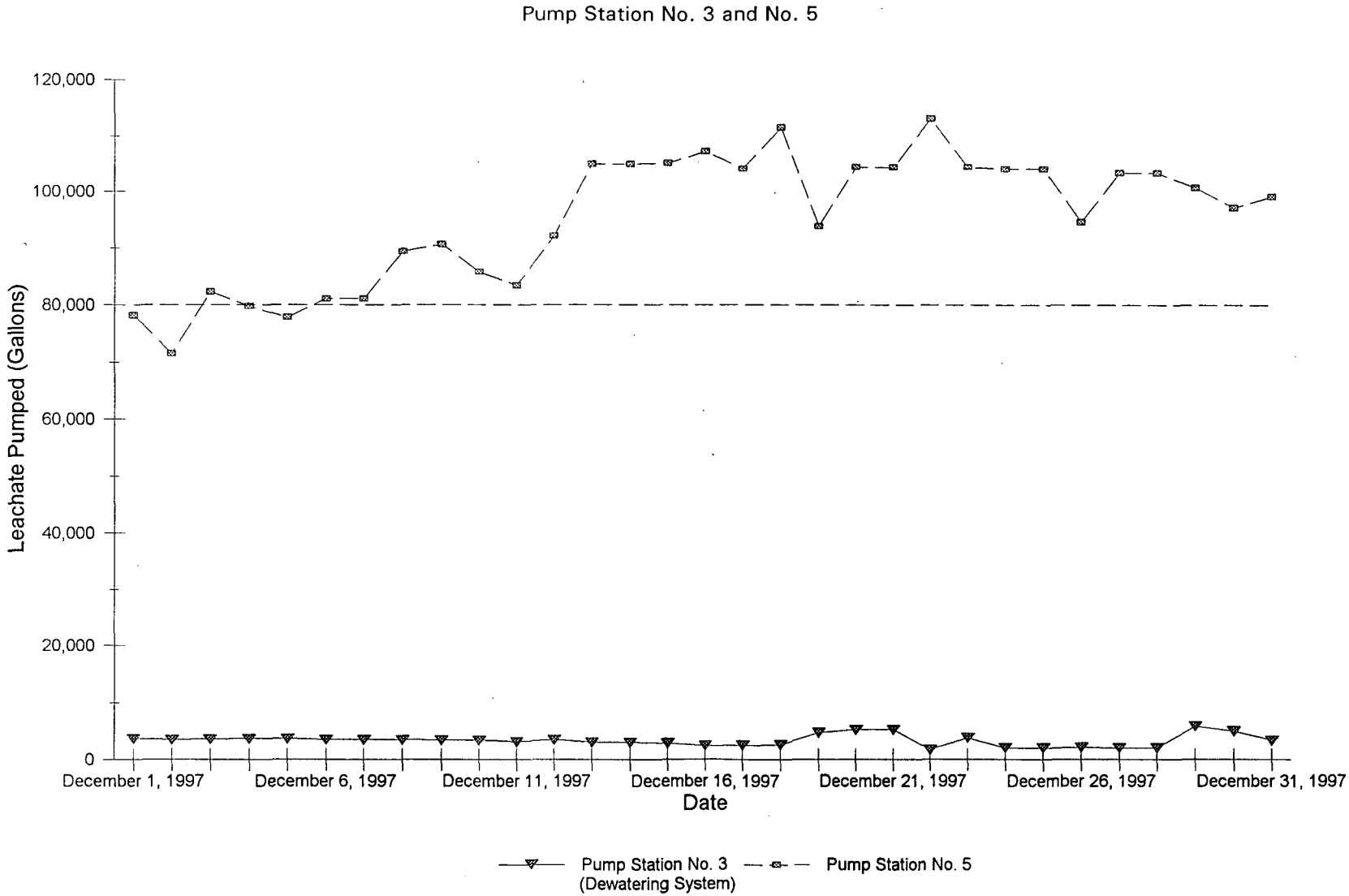
Figure 2.



SCS ENGINEERS

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Dec. 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading ([redacted])	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		27			68.5	302900	55801300	16.1	96,000	12,600	Ø	Ø
2		27			* P	306555	55883100	14.3	114,000	18,900	Ø	Ø
3		26.5			* P	309970	55958000	12.3	108,000	Ø	Ø	Ø
4		27			* P	313480	56043800	12	108,000	18,900	Ø	0.9
5		26.5			68	317050	56127100	10.1	144,000	12,600	Ø	Ø
6		25			68	320630	56208500	7.2	84,000	Ø	Ø	Ø
7		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
8		27.5			68.5	327500	56377400	9.9	102,000	12,600	3,000	Ø
9		28			69	330900	56470100	8.8	102,700	Ø	Ø	Ø
10		29			69	334268	56564000	7.5	108,000	6,000	Ø	1.8
11		30			74	337634	56653100	6.7	108,000	18,900	Ø	0.4
12		31.5			75.5	340747	56739600	4.5	97,000	12,600	Ø	3.9
13		33.5			91	344192	56835100	4.1	48,000	Ø	Ø	2.4
14		NR			NR	NR	NR	NR	Ø	Ø	Ø	0.5
15		34.5			82	350100	57050800	8.9	72000	12,600	Ø	Ø
16		34			77	352900	57158700	9.3	42,000	18,900	Ø	Ø

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor Immediately. Complete Evaluation Report Form.

Comments: *P = pumping \ 12-25-97 - No readings Holiday

Prepared by: [signature]

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Dec. 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (gallons)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		34.5			75	355300	57268300	10.3	54,000	6,300	Ø	Ø
18		34.5			74	355300	57374800	11.6	60,000	6,300	Ø	Ø
19		34.5			72.5	357862	57488800	12.8	48,000	18,900	Ø	Ø
20		34			*P	362530	57587200	13	138,900	Ø	Ø	Ø
21		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
22		32.5			72.5	372900	57806300	14.8	102,000	12,600	Ø	Ø
23		32.5			70.5	374600	57921100	14.6	72,000	Ø	Ø	Ø
24		33			*P	378371	58029300	15.5	138,000	Ø	Ø	Ø
25		NR			NR	NR	NR	NR	Ø	Ø	Ø	0.5
26		33			74	382500	58241600	16.6	156,000	Ø	Ø	4.0
27		39.5			90	384658	58338300	14.3	108,000	Ø	Ø	1.5
28		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
29		39			80	388700	58549100	16.3	96000	12,600	Ø	0.1
30		29.5			76.5	394500	58655600	15.4	96,000	18,900	Ø	Ø
31		24.5			75	399400	58757600	14.8	96,000	Ø	Ø	Ø

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Leachate Hauled Month Total: _____

Prepared by: M. Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) Dec. 97

Action	Date 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer Phase IV																
Low Level Operation, depth less than or equal to 12 inches.																
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.							NR							NR		
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓
Sump No. 4 Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTRF																
Normal Operation.					✓	✓	NR	✓	✓	✓	✓			NR	✓	✓
If level is greater than 11 feet, increase treatment, hauling , or recirculation.	✓	✓	✓	✓												
If level is less than 6 feet, decrease or stop hauling, recirculation.												✓	✓			
* Effluent Pond																
Normal Operation.																
If level is 6 inches or less, stop irrigation, recirculation, hauling.																
If level is greater than 4 feet, increase irrigation, recirculation, hauling.																
* Observed runoff of effluent to stormwater basins?																
No.																
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.																

Runoff Type — To Basin

1 = Severe — A, B, C, D

2 = Moderate

3 = Minor

Comments/Remedial Action: ** Effluent Pond Empty - Treatment Plant not in Operation

Prepared by: M Waterbury

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL
(Month/Year) Dec. 97

Action	Date 17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer-Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.					NR				NR			NR			
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓	✓		✓	✓	✓		✓	✓		✓	✓	✓
Pump Station No. 4-Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	✓	✓	✓	NR	✓	✓	✓	NR	✓	✓	NR	✓	✓	✓
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.	✓				NR				NR			NR			
If level is greater than 11 feet, increase treatment, hauling , or recirculation.		✓	✓	✓		✓	✓	✓		✓	✓		✓	✓	✓
If level is less than 6 feet, decrease or stop hauling, recirculation.															
* Effluent Pond															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.															
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
* Observed runoff of effluent to stormwater basins?															
No.															
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.															
Runoff Type / To Basin															
1=Severe / A, B, C, D															
2=Moderate															
3=Minor															

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Comments/Remedial Action: _____

Prepared by M. Mallinson

HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS
Dottie Berger
Joe Chillura
Chris Hart
Jim Norman
Jan Platt
Thomas Scott
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Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimmie Keel

December 12, 1997

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of November 1997. In addition, the SWMD is providing the November 1997 field data forms for the Landfill, the daily leachate and collection system evaluation reports, the top of clay survey, and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for November 1997 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from TPS-5 and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of November 1997 was 27 inches, which is below the LMP 30 inch limit.

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

Environmental Consultants

3012 U.S. Highway 301 North
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

December 10, 1997
File No. 0995029.23

Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Department
P. O. Box 1110
Tampa, Florida 33601

Subject: November 1997, Leachate Water Balance Report Forms
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed the leachate management operational data from the Southeast County Landfill (SCLF) for November 1997. Attached is the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 1997 updated summary (Table 3). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD). SCS provides the following commentary on the monthly data, including recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations where appropriate.

Day (Column I)

This column presents the calender day for the month of November 1997.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the amount of daily rainfall in inches as measured in the field. Total rainfall at the SCLF for November 1997 was 3.8 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. The average depth for recorded days of effluent in the effluent pond for November 1997 was 0 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (in inches) at the bottom of the SCLF. This measurement is based on the daily piezometer measurements taken in the field and represents worst case condition since the piezometer is currently located within the sump area of the SCLF. The average depth of recorded days of leachate over the liner for November 1997 was 27 inches (see Figure 1).

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 3 (TPS-3) and pumped to the Main Leachate Pump Station for subsequent treatment. The leachate pumped from TPS-3 represents the leachate being removed from the dewatering system. The average daily amount of leachate collected and pumped from TPS-3 for November 1997 was approximately 3,400 gallons (Figure 2).

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 5 (TPS-5) and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 currently is measured from the landfill flow meter minus the amount pumped from TPS-3. TPS-5 was down for service on November 24. The average daily amount of leachate collected and pumped from TPS-5 for November 1997 was approximately 82,000 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped to the Leachate Treatment and Reclamation Facility (LTRF) for treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flowmeter near TPS-3. The average daily amount of leachate pumped from the landfill to the LTRF was 85,400 gallons (total of 2,561,000 gallons for the month).

Leachate in 575,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 575,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily gauge level reading. The average daily amount of leachate stored in the tank for November 1997, based on recorded days, was 281,000 gallons. Under normal operating conditions, the amount of leachate stored in

the tank fluctuates based on the daily amount of leachate pumped to the LTRF, the daily amount of leachate treated, and the daily amount of leachate hauled from the tank.

The change in storage as measured in the 575,000 gallon storage tank was +173,000 gallons. The change in storage as calculated from the total inflow minus outflow from the leachate system was +413,800 gallons. There appears to be a discrepancy of 240,800 gallons between the in-line flow meter reading and the change in storage observed in the leachate storage tank. SCS recommends the HCSWMD continue to implement procedures to more precisely record the water levels in the tank, which will result in change in storage readings that will be within the expected accuracy of the system (i.e., ±80,000 for this month).

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for November 1997 was 0 gallons. The daily amount of leachate treated at the LTRF may increase or decrease depending on the influent loading/concentrations.

Note: The LTRF has not been operational since September 3, 1996 to allow for repairs to the treatment tanks. At this time it is unknown when the LTRF is anticipated to be back in operation. Currently the HCSWMD is preparing a corrective action schedule, the Florida Department of Environmental Protection (FDEP) will be notified when the corrective action plan and schedule are completed.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. Leachate is pumped from the 575,000 gallon raw leachate tank and into a tanker truck for transport. During November 1997, a total of 2,137,200 gallons of leachate was hauled off site compared to a total of 2,468,300 gallons during the previous month. The HCSWMD should continue off site hauling of untreated leachate until the repairs to the LTRF are completed.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF and is measured from the flowmeter at the bypass loading arm. The average daily amount of leachate pumped from the 575,000 gallon leachate tank for use in dust control/evaporation, based on recorded days, was 3,300 gallons for November 1997 (total of 10,000 gallons for the month).

Weather permitting, the HCSWMD should continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. The effluent pond was drained for maintenance in March 1997. The average daily amount of effluent stored in the effluent pond for November 1997 was 0 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF. Currently, any rainfall that accumulates in the Pond is pumped to stormwater Basin C.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flowmeter at the irrigation pump station. Since the LTRF is shut down for repairs, and the effluent pond is empty for maintenance, effluent was not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in November 1997 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During November 1997, the total amount of effluent used for dust control/evaporation was 0 gallons.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During November 1997, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site. The total estimated amount of leachate/effluent evaporation for November 1997 was 8,000 gallons.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Senior Project Engineer

Robert B. Gardner, P.E.
Vice President
SCS ENGINEERS

RBG/LER:blj
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
NOVEMBER 1997
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in	Est. Depth	Pumped	Pumped	Leachate	Leachate	Leachate	Total	Leachate	Effluent	Effluent	Effluent	Total	
					Effluent	Over	From	From	Pumped	in 575K	Treated	Leachate	Dust Cont./	Pond	Irrigation	Dust Cont./	Effluent	Landfill
Day	final	active	int.	Rainfall (in.)	Pond (In.)	Liner (in.)	Sta. No 3 (gal.)	Sta. No. 5 (gal.)	to LTRF (gal.)	Tank (gal.)	at LTRF (gal.)	Hauled (gal.)	Evaporation (gal.)	Storage (gal.)	Evaporation (gal.)	Evaporation (gal.)	Hauled (gal.)	Evaporation (gal.)
1	25.2	5	90.2	0	0	30	3,010	81,391	84,400	291,000	0	60,000	0	0	0	0	0	0
2	25.2	5	90.2	0	0	NR	*3,010*	81,391	*84,400*	NR	0	0	0	0	0	0	0	0
3	25.2	5	90.2	0	0	29	3,200	82,100	85,300	262,000	0	90,000	0	0	0	0	0	0
4	25.2	5	90.2	0	0	30	3,205	84,795	88,000	222,000	0	126,000	0	0	0	0	0	0
5	25.2	5	90.2	0	0	29	3,300	85,400	88,700	164,000	0	144,600	0	0	0	0	0	0
6	25.2	5	90.2	0	0	28.5	3,160	92,340	95,500	181,000	0	60,300	2,000	0	0	0	0	1,600
7	25.2	5	90.2	0	0	27	3,166	89,234	92,400	204,000	0	66,900	0	0	0	0	0	0
8	25.2	5	90.2	0	0	28	3,323	78,977	82,300	328,000	0	30,500	0	0	0	0	0	0
9	25.2	5	90.2	0	0	NR	*3,323*	78,977	*82,300*	NR	0	0	0	0	0	0	0	0
10	25.2	5	90.2	0	0	26.5	3,033	74,967	78,000	320,000	0	55,100	0	0	0	0	0	0
11	25.2	5	90.2	0	0	27	2,995	73,505	76,500	369,000	0	55,000	0	0	0	0	0	0
12	25.2	5	90.2	0	0	27.5	2,905	82,795	85,700	374,000	0	49,000	0	0	0	0	0	0
13	25.2	5	90.2	3.6	0	28	3,260	83,140	86,400	320,000	0	96,900	0	0	0	0	0	0
14	25.2	5	90.2	0	0	30	2,975	92,625	95,600	253,000	0	204,600	4,000	0	0	0	0	3,200
15	25.2	5	90.2	0	0	29.5	2,835	89,315	92,150	380,000	0	60,000	4,000	0	0	0	0	3,200
16	25.2	5	90.2	0	0	NR	*2,835*	89,315	*92,150*	NR	0	0	0	0	0	0	0	0
17	25.2	5	90.2	0	0	27.5	3,480	86,820	90,300	291,000	0	157,200	0	0	0	0	0	0
18	25.2	5	90.2	0	0	26	3,975	89,825	93,800	196,000	0	168,300	0	0	0	0	0	0
19	25.2	5	90.2	0	0	26.5	4,205	88,195	92,400	135,000	0	156,300	0	0	0	0	0	0
20	25.2	5	90.2	0	0	22.5	4,130	84,470	88,600	150,000	0	96,900	0	0	0	0	0	0
21	25.2	5	90.2	0	0	25.5	3,824	83,176	87,000	181,000	0	62,100	0	0	0	0	0	0
22	25.2	5	90.2	0	0	27	3,798	77,552	81,350	343,000	0	0	0	0	0	0	0	0
23	25.2	5	90.2	0	0	NR	*3,798*	77,552	*81,350*	NR	0	0	0	0	0	0	0	0
24	25.2	5	90.2	0	0	25	2,905	8,695	11,600	268,000	0	66,600	0	0	0	0	0	0
25	25.2	5	90.2	0	0	22	2,650	119,650	122,300	311,000	0	84,900	0	0	0	0	0	0
26	25.2	5	90.2	0	0	25	3,765	70,735	74,500	374,000	0	78,000	0	0	0	0	0	0
27	25.2	5	90.2	0	0	NR	*3,765*	70,735	*74,500*	NR	0	0	0	0	0	0	0	0
28	25.2	5	90.2	0	0	24	3,881	87,219	91,100	371,000	0	78,000	0	0	0	0	0	0
29	25.2	5	90.2	0	0	26.5	3,530	87,671	91,200	464,000	0	90,000	0	0	0	0	0	0
30	25.2	5	90.2	0.2	0	NR	*3,530*	87,671	*91,200*	NR	0	0	0	0	0	0	0	0
Total				3.8			100,769	2,460,231	2,561,000		0	2,137,200	10,000	0	0	0	0	8,000
Daily Average					0	27.0	3,400	82,000	85,400	281,000	0	92,900	3,300	0	0	0	0	3,000
Monthly Average					0	21.6	3,400	82,000	85,400	225,000	0	71,200	300	0	0	0	0	0

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VII calculated by subtracting VI from flow meter reading.
6. Column VIII, quantity from flow meter.
7. Column IX, calculated from depth in 575,000 gal. leachate tank.
8. Columns X and XIV, quantities from flow meters.
9. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
10. Column XVII, 80% of the daily values from Columns XII, XIV and XV.
11. Values in italic are substitute for missing data and are based on averaged values.
12. Daily average calculated by dividing the total by the active days in the month.
13. Monthly average calculated by dividing the total by the number of days of the month.

TABLE 2. FIELD DATA ENTRY FORM
NOVEMBER 1997
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
							Landfill Flow		Leachate Hauled		Leachate			Leachate	Effluent	Effluent Hauled		Effluent
Day	Active Area (ac.)	Piezometer Phase IV (in.)	Phase IV LCRS Cleanout (in.)	Phase III LCR Cleanout (in.)	Pump Sta. No. 4 (in.)	Pump Sta No. 3 Reading (gal.)	Meter Pump Sta. No. 5 (gal.)	Depth in 575K Tank (ft.)	Contractor (gal.)	County (gal.)	Dust Cont./ Evaporation (gal.)	Rainfall (in.)	Depth in Effl. Pond (in.)	Treated at LTRF (gal.)	Irrigation Evaporation (gal.)	Contractor (gal.)	County (gal.)	Dust Cont./ Evaporation (gal)
1	5	30	NR	NR	81	202,131	53,240,300	7.7	60,000	0	0	0.0	0	0	0	0	0	0
2	5	NR	NR	NR	NR	*205,141*	*53,324,700*	NR	0	0	0	0.0	0	0	0	0	0	0
3	5	29	NR	NR	74	208,150	53,409,100	10.1	90,000	0	0	0.0	0	0	0	0	0	0
4	5	30	NR	NR	72.5	211,350	53,494,400	9.1	126,000	0	0	0.0	0	0	0	0	0	0
5	5	29	NR	NR	71	214,555	53,582,400	7.7	132,000	12,600	0	0.0	0	0	0	0	0	0
6	5	28.5	NR	NR	70	217,855	53,671,100	5.7	54,000	6,300	2,000	0.0	0	0	0	0	0	0
7	5	27	NR	NR	70	221,015	53,766,600	6.3	48,000	18,900	0	0.0	0	0	0	0	0	0
8	5	28	NR	NR	69.5	224,181	53,859,000	7.1	30,500	0	0	0.0	0	0	0	0	0	0
9	5	NR	NR	NR	NR	*227,504*	*53,941,300*	NR	0	0	0	0.0	0	0	0	0	0	0
10	5	26.5	NR	NR	68	230,827	54,023,600	11.4	36,200	18,900	0	0.0	0	0	0	0	0	0
11	5	27	NR	NR	67.5	233,860	54,101,600	11.1	55,000	0	0	0.0	0	0	0	0	0	0
12	5	27.5	NR	NR	67.5	236,855	54,178,100	12.8	49,000	0	0	0.0	0	0	0	0	0	0
13	5	28	NR	NR	68	239,760	54,263,800	13	78,000	18,900	0	3.6	0	0	0	0	0	0
14	5	30	NR	NR	72	243,020	54,350,200	11.11	192,000	12,600	4,000	0.0	0	0	0	0	0	0
15	5	29.5	NR	NR	NR	245,995	54,445,800	8.8	60,000	0	4,000	0.0	0	0	0	0	0	0
16	5	NR	NR	NR	NR	*248,830*	*54,537,950*	NR	0	0	0	0.0	0	0	0	0	0	0
17	5	27.5	NR	NR	NR	251,665	54,630,100	13.2	157,200	0	0	0.0	0	0	0	0	0	0
18	5	26	NR	NR	NR	255,145	54,720,400	10.1	162,000	6,300	0	0.00	0	0	0	0	0	0
19	5	26.5	NR	NR	NR	259,120	54,814,200	6.8	150,000	6,300	0	0.0	0	0	0	0	0	0
20	5	22.5	NR	NR	NR	263,325	54,906,600	4.7	78,000	18,900	0	0.0	0	0	0	0	0	0
21	5	25.5	NR	NR	NR	267,455	54,995,200	5.2	43,200	18,900	0	0.0	0	0	0	0	0	0
22	5	27	NR	NR	NR	271,279	55,082,200	6.3	0	0	0	0.0	0	0	0	0	0	0
23	5	NR	NR	NR	NR	*275,077*	*55,163,550*	NR	0	0	0	0.0	0	0	0	0	0	0
24	5	25	NR	NR	64.5	278,875	55,244,900	11.9	54,000	12,600	0	0.0	0	0	0	0	0	0
25	5	22	NR	NR	65.5	281,780	55,256,500	9.3	66,000	18,900	0	0.0	0	0	0	0	0	0
26	5	25	NR	NR	66.5	284,430	55,378,800	10.8	78,000	0	0	0.0	0	0	0	0	0	0
27	5	NR	NR	NR	NR	*288,195*	*55,453,300*	NR	0	0	0	0.0	0	0	0	0	0	0
28	5	24	NR	NR	67	291,960	55,527,800	13	78,000	0	0	0.0	0	0	0	0	0	0
29	5	26.5	NR	NR	67	295,841	55,618,900	12.9	90,000	0	0	0.0	0	0	0	0	0	0
30	5	NR	NR	NR	NR	*299,371*	*55,710,100*	NR	0	0	0	0.2	0	0	0	0	0	0

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Notes:

1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column XIII, Trace is less than 0.01 inches.
5. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
6. Column III, Phase IV piezometer began monitoring on 7/10/95.
7. Columns VII, XV and XVI, quantities from flow meters.

TABLE 3. 1997 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change in Storage For Month (gal.)
January	3.30	0	1,892,150	2,006,378	0	0	0	0	10,470	1,892,150	2,006,378	(114,228)
February	2.20	0	1,672,700	1,558,554	0	0	0	0	49,290	1,672,700	1,558,554	114,146
March	2.40	0	1,587,700	1,610,179	196,000	0	0	0	140,080	1,587,700	1,806,179	(218,479)
April	6.50	0	1,647,900	1,534,642	92,000	0	0	0	0	1,647,900	1,626,642	21,258
May	5.70	0	1,931,600	1,794,472	151,000	0	0	0	0	1,931,600	1,945,472	(13,872)
June	9.30	0	2,022,500	1,595,334	77,000	0	0	0	64,000	2,022,500	1,672,334	350,166
July	18.60	0	2,625,400	2,466,447	0	0	0	0	0	2,625,400	2,466,447	158,953
August	6.80	0	2,750,533	2,285,200	15,000	0	0	0	0	2,750,533	2,300,200	450,333
September	17.50	0	2,121,000	1,914,600	35,000	0	0	0	0	2,121,000	1,949,600	171,400
October	7.55	0	2,418,000	2,468,300	35,000	0	0	0	0	2,418,000	2,503,300	(85,300)
November	3.80	0	2,561,000	2,137,200	10,000	0	0	0	0	2,561,000	2,147,200	413,800
December										0	0	0
YTD Total	83.65	0	23,230,483	21,371,306	611,000	0	0	0	263,840	23,230,483	21,982,306	

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Note:
1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

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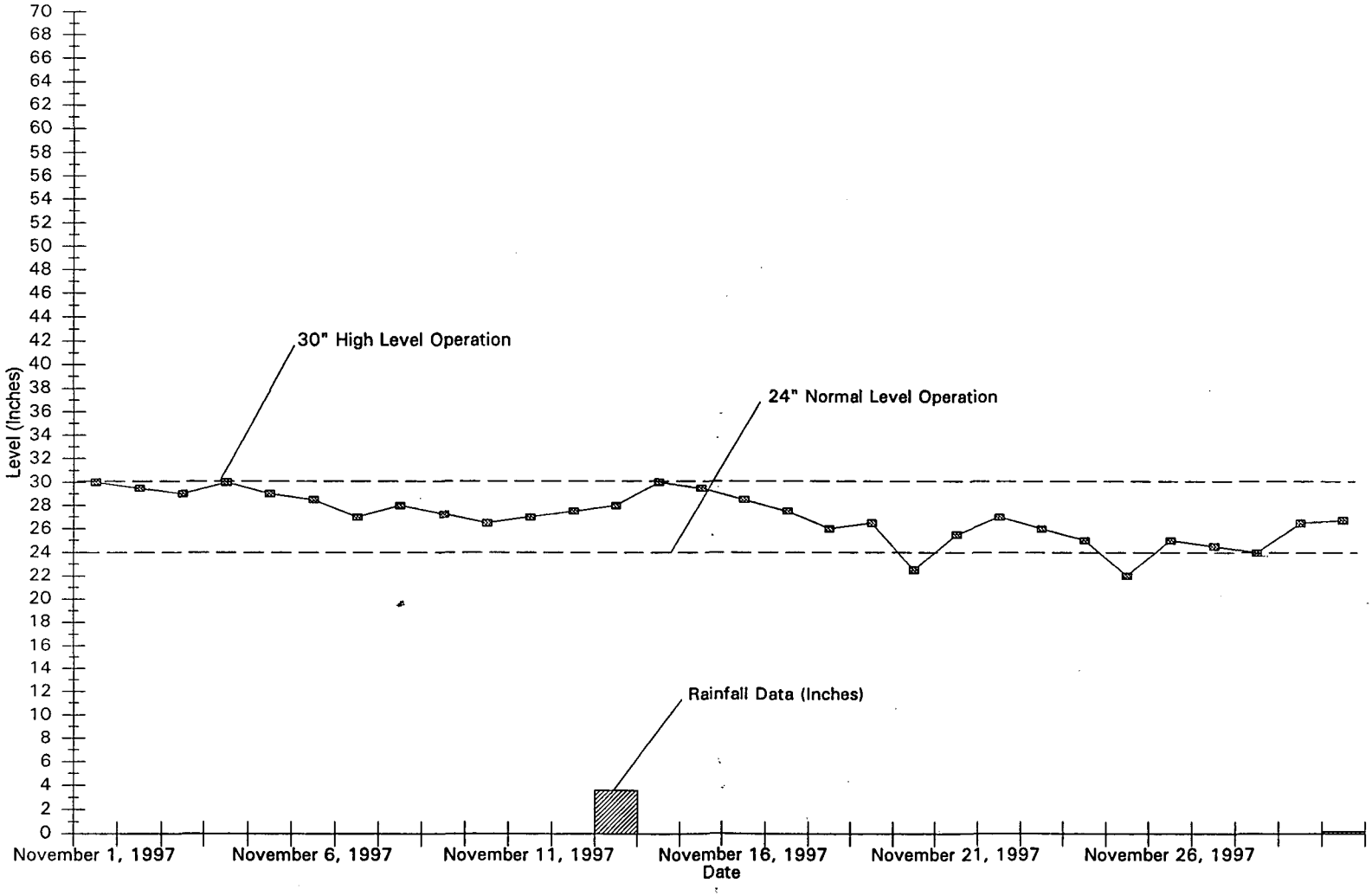
Figure 1.

Phase IV Piezometer



SCS ENGINEERS

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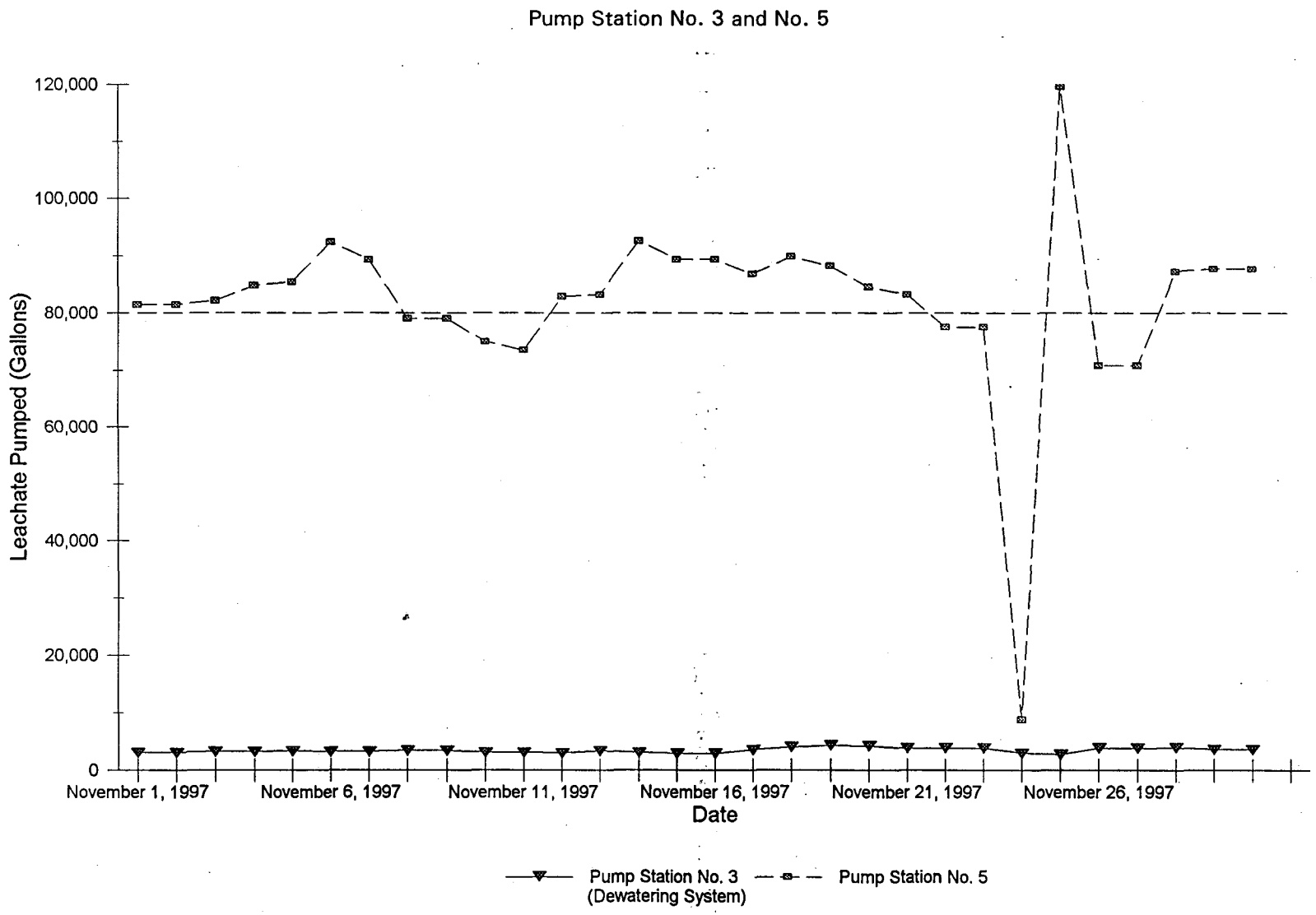
Figure 2.



SCS ENGINEERS

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Nov. 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		30			81	202131	53240300	7.7	60,000	Ø	Ø	Ø
2		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
3		29			74	208150	53409100	10.1	90,000	Ø	Ø	Ø
4		30			72.5	211350	53494400	9.1	126,000	Ø	Ø	Ø
5		29			71	214555	53582400	7.7	132,000	12,600	Ø	Ø
6		28.5			70	217855	53671100	5.7	54,000	6,300	2,000	Ø
7		27			70	221015	53766600	6.3	48,000	18,900	Ø	Ø
8		28			69.5	224181	53859000	7.1	30,500	Ø	Ø	Ø
9		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
10		26.5			68	230827	54023600	11.4	36,200	18,900	Ø	Ø
11		27			67.5	233860	54101600	11.10	55,000	Ø	Ø	Ø
12		27.5			67.5	236855	54178100	12.8	49,000	Ø	Ø	Ø
13		28			68	239760	54263800	13	78,000	18,900	Ø	3.6
14		30			72	243020	54350200	11.11	192,000	12,600	4,000	Ø
15		29.5			*P	245995	54445800	8.8	60,000	Ø	4,000	Ø
16		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: *P = pumping - 11-27-97 no readings Holiday

Prepared by M. Walker

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Nov. 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		27.5			*P	251665	54630100	13.2	157,200	Ø	Ø	Ø
18		26			*P	255145	54720400	10.1	162,000	6,300	Ø	Ø
19		26.5			*P	259120	54814200	6.8	150,000	6,300	Ø	Ø
20		22.5			*P	263325	54906600	4.7	78,000	18,900	Ø	Ø
21		25.5			*P	267455	54995200	5.2	43,200	18,900	Ø	Ø
22		27			*P	271279	55082200	6.3	Ø	Ø	Ø	Ø
23		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
24		25			64.5	278875	55244900	11.9	54,000	12,600	Ø	Ø
25		22			65.5	281780	55256500	9.3	66,000	18,900	Ø	Ø
26		25			66.5	284430	55378800	10.8	78,000	Ø	Ø	Ø
27		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
28		24			67	291960	55527800	13	78000	Ø	Ø	Ø
29		26.5			67	295841	55618900	12.9	90,000	Ø	Ø	Ø
30		NR			NR	NR	NR	NR	Ø	Ø	Ø	.2
31												

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Leachate Hauled Month Total: _____

Prepared by M. Trattner

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) Nov. 97

Action	Date														
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer Phase IV															
Low Level Operation, depth less than or equal to 12 inches.							NR				NR			NR	
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.				✓					✓			✓			
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓		✓	✓		✓		✓			✓		
Sump No. 4 Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	NR	✓	✓	NR	
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.		✓	✓			✓	NR		✓	✓	NR			NR	
If level is greater than 11 feet, increase treatment, hauling , or recirculation.	✓							✓				✓	✓		
If level is less than 6 feet, decrease or stop hauling, recirculation.				✓	✓										
* Effluent Pond															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.															
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	NR	✓	✓	NR	
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.															
Runoff Type / To Basin															
1 = Severe / A, B, C, D															
2 = Moderate															
3 = Minor															

Comments/Remedial Action: _____

Prepared by: M. Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) Nov 97

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Department of Environmental Protection
SOUTHWEST DISTRICT

Action	Date BY 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer Phase IV																
Low Level Operation, depth less than or equal to 12 inches.		NR							NR							NR
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.																
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	
Sump No. 4 Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTRF																
Normal Operation.	✓	NR	✓	✓	✓	—	✓	✓	NR						✓	NR
If level is greater than 11 feet, increase treatment, hauling , or recirculation.										✓	✓	✓	✓	✓		
If level is less than 6 feet, decrease or stop hauling, recirculation.						✓										
* Effluent Pond																
Normal Operation.																
If level is 6 inches or less, stop irrigation, recirculation, hauling.																
If level is greater than 4 feet, increase irrigation, recirculation, hauling.																
Observed runoff of effluent to stormwater basins?																
No.	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.																
Runoff Type / To Basin: 1 = Severe, 2 = Moderate, 3 = Minor / A, B, C, D																

Comments/Remedial Action: * Effluent Pond empty, plant not in operation \ 11-27-97 no readings, Holiday

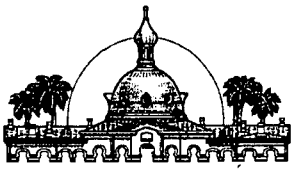
Prepared by: M. Matthews

HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS
Dottie Berger
Joe Chillura
Chris Hart
Jim Norman
Jan Platt
Thomas Scott
Ed Turanchik



Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimmie Keel

November 21, 1997

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of October 1997. In addition, the SWMD is providing the October 1997 field data forms for the Landfill, the daily leachate and collection system evaluation reports, the top of clay survey, and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for October 1997 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from TPS-5 and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of October 1997 was 28.6 inches, which is below the LMP 30 inch limit. The depth over the liner reached levels that exceeded the LMP on October 1 and 2, 1997. The County and SCS attribute the elevated levels during the first of October to the high rainfall during the month of September (17.5 inches).

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

Environmental Consultants

3012 U.S. Highway 301 North
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

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Department of Environmental Protection
SOUTHWEST DISTRICT

NOV 1997
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November 19, 1997
File No. 0995029.23

Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Department
P. O. Box 1110
Tampa, Florida 33601

Subject: October 1997, Leachate Water Balance Report Forms
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed the leachate management operational data from the Southeast County Landfill (SCLF) for October 1997. Attached are the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 1997 updated summary (Table 3). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD). SCS provides the following commentary on the monthly data, including recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations where appropriate.

Day (Column I)

This column presents the calender day for the month of October 1997.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the amount of daily rainfall in inches as measured in the field. Total rainfall at the SCLF for October 1997 was 7.5 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. The average depth for recorded days of effluent in the effluent pond for October 1997 was 0 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (in inches) at the bottom of the SCLF. This measurement is based on the daily piezometer measurements taken in the field and represents worst case condition since the piezometer is currently located within the sump area of the SCLF. The average depth of recorded days of leachate over the liner for October 1997 was 28.6 inches (see Figure 1). The depth over the liner reached levels that exceeded the Leachate Management Plan limit of 30 inches on October 1 and October 2. SCS believes that the increased leachate depth over the liner was due to the high rainfall amount for the month of September (i.e. 17.5 inches).

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 3 (TPS-3) and pumped to the Main Leachate Pump Station for subsequent treatment. The leachate pumped from TPS-3 represents the leachate being removed form the dewatering system. On September 5, 1997 the HCSWMD installed an in-line flow meter to measure the leachate being removed form the dewatering system. Based on the flow meter reading, the average daily amount of leachate collected and pumped from TPS-3 for October 1997 was approximately 4,200 gallons (Figure 2).

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 5 (TPS-5) and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 currently is measured from the landfill flow meter minus the amount pumped from TPS-3. The average daily amount of leachate collected and pumped from TPS-5 for October 1997 was approximately 73,800 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped to the Leachate Treatment and Reclamation Facility (LTRF) for treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flowmeter near TPS-3. The average daily amount of leachate pumped from the landfill to the LTRF was 78,000 gallons (total of 2,418,000 gallons for the month).

Leachate in 575,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 575,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily gauge level reading. The average daily amount of leachate stored in the tank for October 1997, based on recorded days, was 344,000 gallons. Under normal operating conditions, the amount of leachate stored in the tank fluctuates based on the daily amount of leachate pumped to the LTRF, the daily amount of leachate treated, and the daily amount of leachate hauled from the tank.

The change in storage as measured in the 575,000 gallon storage tank was -158,000 gallons. The change in storage as calculated from the total inflow minus outflow from the leachate system was -85,300 gallons. The 72,700 gallon difference between the two methods of measuring change in storage is within the expected accuracy of the leachate volume and flow measurement.

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for October 1997 was 0 gallons. The daily amount of leachate treated at the LTRF may increase or decrease depending on the influent loading/concentrations.

Note: The LTRF has not been operational since September 3, 1996 to allow for repairs to the treatment tanks. At this time it is unknown when the LTRF is anticipated to be back in operation.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. Leachate is pumped from the 575,000 gallon raw leachate tank and into a tanker truck for transport. During October 1997, a total of 2,468,300 gallons of leachate was hauled off site compared to a total of 1,914,600 gallons during the previous month. The HCSWMD should continue off site hauling of untreated leachate until the repairs to the LTRF are completed.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF and is measured from the flowmeter at the bypass loading arm. The average daily amount of leachate pumped from the 575,000 gallon leachate tank for use in dust control/evaporation, based on recorded

days, was 3,200 gallons for October 1997 (total of 35,000 gallons for the month). Weather permitting, the HCSWMD should continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. The effluent pond was drained for maintenance in March 1997. The average daily amount of effluent stored in the effluent pond for October 1997 was 0 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF. Currently, any rainfall that accumulates in the Pond is pumped to stormwater Basin C.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flowmeter at the irrigation pump station. Since the LTRF is shut down for repairs, and the effluent pond is empty for maintenance, effluent was not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in October 1997 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During October 1997, the total amount of effluent used for dust control/evaporation was 0 gallons.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During October 1997, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site. The total estimated amount of leachate/effluent evaporation for October 1997 was 27,000 gallons.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Senior Project Engineer

for Robert B. Gardner, P.E.
Vice President
SCS ENGINEERS

RBG/LER:ler
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
OCTOBER 1997
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in Effluent	Est. Depth Over	Pumped From	Pumped From	Leachate Pumped	Leachate In 575K	Leachate Treated	Total Leachate	Leachate Dust Cont./	Effluent Pond	Effluent Irrigation	Effluent Dust Cont./	Total Effluent	Landfill
Day	final	active	int.	Rainfall (in.)	Pond (in.)	Liner (in.)	Sta. No 3 (gal.)	Sta. No. 5 (gal.)	to LTRF (gal.)	Tank (gal.)	at LTRF (gal.)	Hauled (gal.)	Evaporation (gal.)	Storage (gal.)	Evaporation (gal.)	Evaporation (gal.)	Hauled (gal.)	Evaporation (gal.)
1	25.2	5	90.2	0	0	31	7,030	99,770	106,800	380,000	0	114,300	0	0	0	0	0	0
2	25.2	5	90.2	0	0	30.5	5,327	94,373	99,700	377,000	0	102,600	0	0	0	0	0	0
3	25.2	5	90.2	0	0	30	6,201	87,199	93,400	403,000	0	60,000	0	0	0	0	0	0
4	25.2	5	90.2	0	0	29	3,874	76,227	80,100	NR	0	156,000	0	0	0	0	0	0
5	25.2	5	90.2	0	0	NR	3,874	*76,227*	80,100	443,000	0	0	0	0	0	0	0	0
6	25.2	5	90.2	0	0	29	4,417	73,483	77,900	360,000	0	144,000	0	0	0	0	0	0
7	25.2	5	90.2	0	0	29	3,108	77,092	80,200	369,000	0	73,200	0	0	0	0	0	0
8	25.2	5	90.2	0	0	29	3,500	75,100	78,600	311,000	0	138,300	0	0	0	0	0	0
9	25.2	5	90.2	0	0	29	3,565	74,435	78,000	337,000	0	67,200	0	0	0	0	0	0
10	25.2	5	90.2	0	0	29	3,327	72,773	76,100	282,000	0	116,900	2,000	0	0	0	0	2,000
11	25.2	5	90.2	0	0	29	3,306	76,995	80,300	NR	0	72,000	1,000	0	0	0	0	1,000
12	25.2	5	90.2	0	0	NR	3,306	*76,995*	80,300	349,000	0	0	0	0	0	0	0	0
13	25.2	5	90.2	0	0	29	3,050	73,450	76,500	374,000	0	55,200	0	0	0	0	0	0
14	25.2	5	90.2	0	0	27	2,446	74,754	77,200	343,000	0	84,900	4,000	0	0	0	0	3,000
15	25.2	5	90.2	0	0	30	5,330	76,270	81,600	299,000	0	114,300	4,000	0	0	0	0	3,000
16	25.2	5	90.2	0	0	29.5	3,821	59,079	62,900	256,000	0	108,900	4,000	0	0	0	0	3,000
17	25.2	5	90.2	0	0	29	6,090	80,310	86,400	219,000	0	132,900	4,000	0	0	0	0	3,000
18	25.2	5	90.2	0.75	0	29	5,418	71,433	76,850	NR	0	6,000	0	0	0	0	0	0
19	25.2	5	90.2	0	0	NR	5,418	*71,433*	76,850	360,000	0	0	0	0	0	0	0	0
20	25.2	5	90.2	0.3	0	27.5	4,610	67,390	72,000	334,000	0	60,900	0	0	0	0	0	0
21	25.2	5	90.2	0	0	27.5	4,290	71,310	75,600	314,000	0	108,900	4,000	0	0	0	0	3,000
22	25.2	5	90.2	0	0	28.5	4,300	69,300	73,600	317,000	0	48,000	4,000	0	0	0	0	3,000
23	25.2	5	90.2	0	0	27	4,200	73,400	77,600	334,000	0	53,300	4,000	0	0	0	0	3,000
24	25.2	5	90.2	0	0	28	4,375	68,925	73,300	345,000	0	60,900	4,000	0	0	0	0	3,000
25	25.2	5	90.2	0	0	27.5	4,125	72,225	76,350	NR	0	0	0	0	0	0	0	0
26	25.2	5	90.2	0	0	NR	4,125	*72,225*	76,350	472,000	0	0	0	0	0	0	0	0
27	25.2	5	90.2	1.9	0	28	4,245	59,755	64,000	449,000	0	78,300	0	0	0	0	0	0
28	25.2	5	90.2	0.1	0	28	3,815	60,185	64,000	397,000	0	102,900	0	0	0	0	0	0
29	25.2	5	90.2	0	0	27	3,680	63,520	67,200	360,000	0	107,600	0	0	0	0	0	0
30	25.2	5	90.2	0	0	27.5	3,470	70,230	73,700	285,000	0	138,200	0	0	0	0	0	0
31	25.2	5	90.2	4.5	0	27.5	2,396	72,104	74,500	222,000	0	162,600	0	0	0	0	0	0
Total				7.55			130,036	2,287,964	2,418,000		0	2,468,300	35,000	0	0	0	0	27,000
Daily Average					0	28.6	4,200	73,800	78,000	344,000	0	94,900	3,200	0	0	0	0	2,000
Monthly Average					0	24.9	4,200	73,800	78,000	300,000	0	79,600	1,100	0	0	0	0	1,000

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VI calculated based on average 180 gpm and hour conversion.
6. Column VII calculated by subtracting VI from flow meter reading.
7. Column VIII, quantity from flow meter.
8. Column IX, calculated from depth in 575,000 gal. leachate tank.
9. Columns X and XIV, quantities from flow meters.
10. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
11. Column XVII, 80.8% of the daily values from Columns XII, XIV and XV.
12. Values in italic are substitute for missing data and are based on averaged values.
13. Values in bold are estimated.
14. Daily average calculated by dividing the total by the active days in the month.
15. Monthly average calculated by dividing the total by the number of days of the month.

TABLE 2. FIELD DATA ENTRY FORM
OCTOBER 1997
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
							Landfill Flow		Leachate Hauled		Leachate			Leachate	Effluent	Effluent Hauled		Effluent
Day	Active Area (ac.)	Piezometer Phase IV (in.)	Phase IV LCRS Cleanout (in.)	Phase III LCR Cleanout (in.)	Pump Sta. No. 4 (in.)	Pump Sta No. 3 Reading (gal.)	Meter Pump Sta. No. 5 (gal.)	Depth in 575K Tank (ft.)	Contractor (gal.)	County (gal.)	Dust Cont./ Evaporation (gal.)	Rainfall (in.)	Depth in Effl. Pond (in.)	Treated at LTRF (gal.)	Irrigation Evaporation (gal.)	Contractor (gal.)	County (gal.)	Dust Cont./ Evaporation (gal)
1	5	31	NR	NR	NR	72,095	50,822,300	14.2	108,000	6,300	0	0.0	0	0	0	0	0	0
2	5	30.5	NR	NR	NR	79,125	50,929,100	13.2	90,000	12,600	0	0.0	0	0	0	0	0	0
3	5	30	NR	NR	NR	84,452	51,028,800	13.1	60,000	0	0	0.0	0	0	0	0	0	0
4	5	29	NR	NR	NR	90,653	51,122,200	14	156,000	0	0	0.0	0	0	0	0	0	0
5	5	NR	NR	NR	NR	*94,527*	*51,202,300*	NR	0	0	0	0.0	0	0	0	0	0	0
6	5	29	NR	NR	NR	98,400	51,282,400	15.4	144,000	0	0	0.0	0	0	0	0	0	0
7	5	29	NR	NR	62	102,817	51,360,300	12.5	48,000	25,200	0	0.0	0	0	0	0	0	0
8	5	29	NR	NR	63	105,925	51,440,500	12.8	132,000	6,300	0	0.0	0	0	0	0	0	0
9	5	29	NR	NR	NR	109,425	51,519,100	10.8	42,000	25,200	0	0.0	0	0	0	0	0	0
10	5	29	NR	NR	NR	112,990	51,597,100	11.7	98,000	18,900	2,000	0.0	0	0	0	0	0	0
11	5	29	NR	NR	NR	116,317	51,673,200	9.8	72,000	0	1,000	0.0	0	0	0	0	0	0
12	5	NR	NR	NR	NR	*119,623*	*51,753,500*	NR	0	0	0	0.0	0	0	0	0	0	0
13	5	29	NR	NR	69	122,928	51,833,800	12.11	36,000	19,200	0	0.0	0	0	0	0	0	0
14	5	27	NR	NR	71	125,978	51,910,300	13	66,000	18,900	4,000	0.0	0	0	0	0	0	0
15	5	30	NR	NR	NR	128,424	51,987,500	11.9	108,000	6,300	4,000	0.0	0	0	0	0	0	0
16	5	29.5	NR	NR	NR	133,754	52,069,100	10.4	90,000	18,900	4,000	0.0	0	0	0	0	0	0
17	5	29	NR	NR	NR	137,575	52,132,000	8.9	114,000	18,900	4,000	0.0	0	0	0	0	0	0
18	5	29	NR	NR	NR	143,665	52,218,400	7.6	6,000	0	0	0.75	0	0	0	0	0	0
19	5	NR	NR	NR	NR	*149,083*	*52,295,250*	NR	0	0	0	0.0	0	0	0	0	0	0
20	5	27.5	NR	NR	NR	154,500	52,372,100	12.5	42,000	18,900	0	0.3	0	0	0	0	0	0
21	5	27.5	NR	NR	NR	159,110	52,444,100	11.6	90,000	18,900	4,000	0.0	0	0	0	0	0	0
22	5	28.5	NR	NR	NR	163,400	52,519,700	10.9	48,000	0	4,000	0.0	0	0	0	0	0	0
23	5	27	NR	NR	NR	167,700	52,593,300	11	47,000	6,300	4,000	0.0	0	0	0	0	0	0
24	5	28	NR	NR	68	171,900	52,670,900	11.6	42,000	18,900	4,000	0.0	0	0	0	0	0	0
25	5	27.5	NR	NR	58	176,275	52,744,200	12	0	0	0	0.0	0	0	0	0	0	0
26	5	NR	NR	NR	NR	*180,400*	*52,820,550*	NR	0	0	0	0.0	0	0	0	0	0	0
27	5	28	NR	NR	67	184,525	52,896,900	16.4	72,000	6,300	0	1.9	0	0	0	0	0	0
28	5	28	NR	NR	69	188,770	52,960,900	15.6	84,000	18,900	0	0.1	0	0	0	0	0	0
29	5	27	NR	NR	71	192,585	53,024,900	13.8	107,600	0	0	0.0	0	0	0	0	0	0
30	5	27.5	NR	NR	71	196,265	53,092,100	12.5	119,300	18,900	0	0.0	0	0	0	0	0	0
31	5	27.5	NR	NR	68	199,735	53,165,800	9.9	150,000	12,600	0	4.5	0	0	0	0	0	0

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Notes:

1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column XIII, Trace is less than 0.01 inches.
5. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
6. Column III, Phase IV piezometer began monitoring on 7/10/95.
7. Columns VII, XV and XVI, quantities from flow meters.

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Figure 1.

Phase IV Piezometer

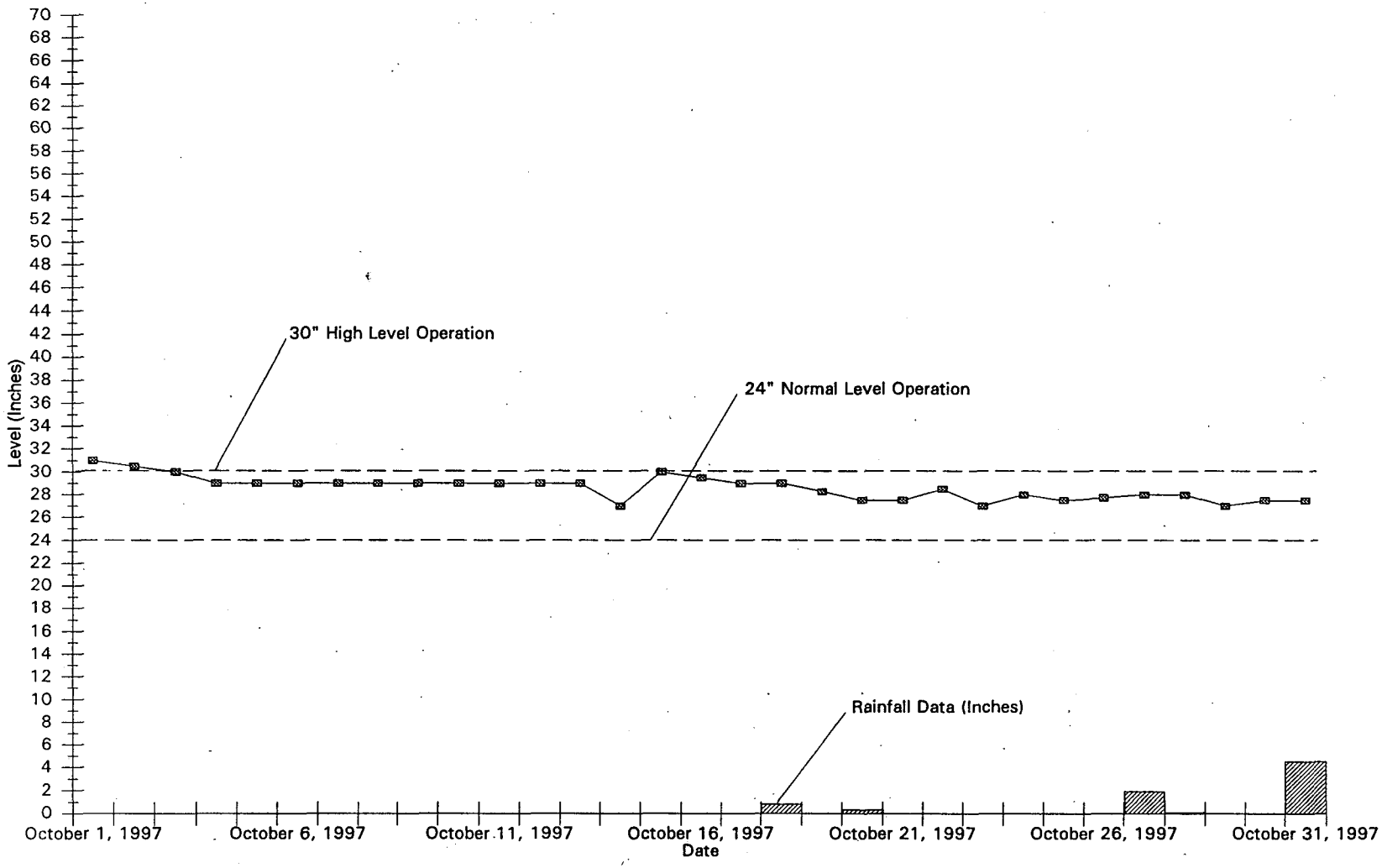

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Figure 2.

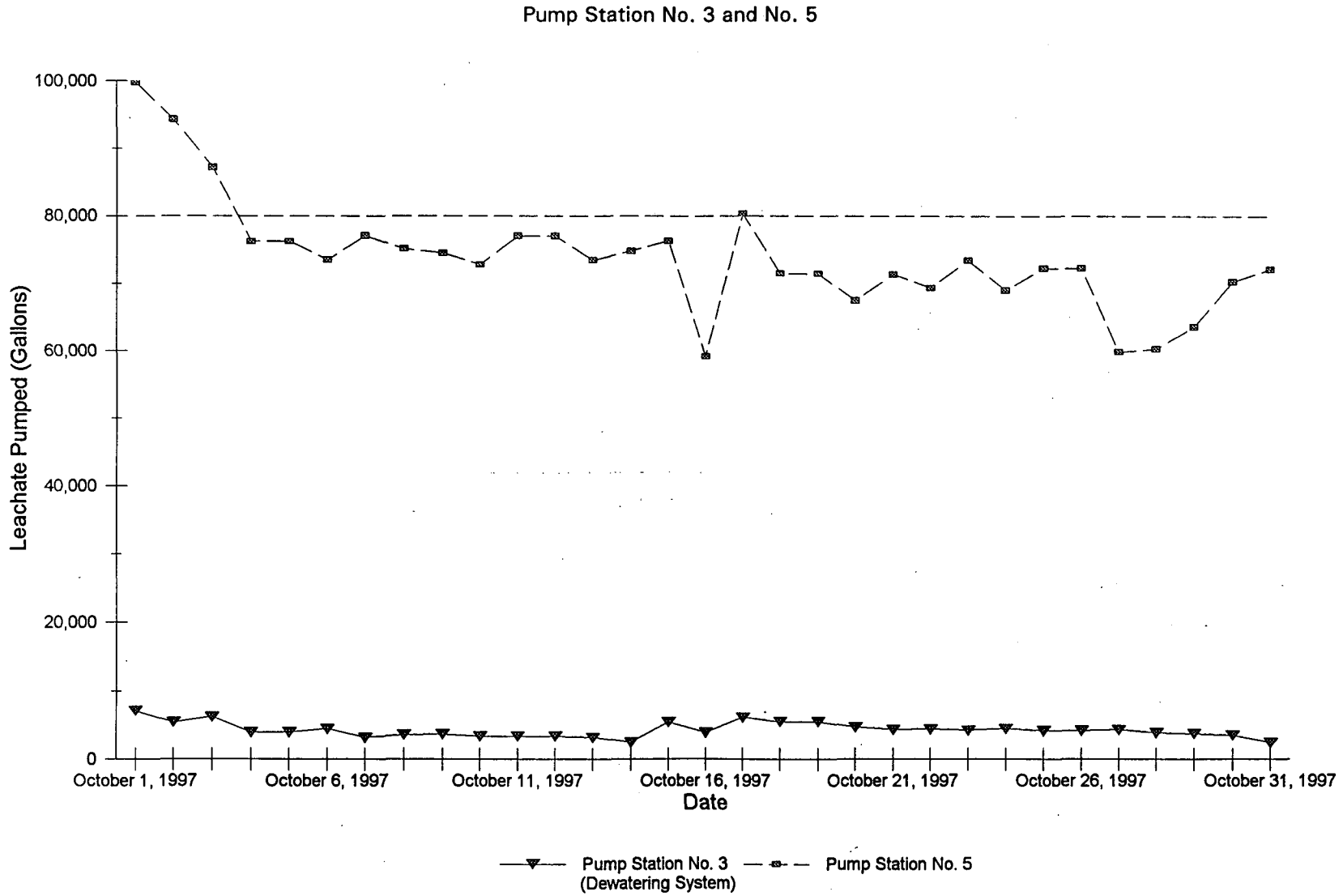

TABLE 3. 1997 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change in Storage For Month (gal.)
January	3.30	0	1,892,150	2,006,378	0	0	0	0	10,470	1,892,150	2,006,378	(114,228)
February	2.20	0	1,672,700	1,558,554	0	0	0	0	49,290	1,672,700	1,558,554	114,146
March	2.40	0	1,587,700	1,610,179	196,000	0	0	0	140,080	1,587,700	1,806,179	(218,479)
April	6.50	0	1,647,900	1,534,642	92,000	0	0	0	0	1,647,900	1,626,642	21,258
May	5.70	0	1,931,600	1,794,472	151,000	0	0	0	0	1,931,600	1,945,472	(13,872)
June	9.30	0	2,022,500	1,595,334	77,000	0	0	0	64,000	2,022,500	1,672,334	350,166
July	18.60	0	2,625,400	2,466,447	0	0	0	0	0	2,625,400	2,466,447	158,953
August	6.80	0	2,750,533	2,285,200	15,000	0	0	0	0	2,750,533	2,300,200	450,333
September	17.50	0	2,121,000	1,914,600	35,000	0	0	0	0	2,121,000	1,949,600	171,400
October	7.55	0	2,418,000	2,468,300	35,000	0	0	0	0	2,418,000	2,503,300	(85,300)
November										0	0	0
December										0	0	0
YTD Total	79.85	0	20,669,483	19,234,106	601,000	0	0	0	263,840	20,669,483	19,835,106	

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Note:

1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

TABLE 1. LEACHATE HAULING SUMMARY

SOUTHEAST COUNTY LANDFILL

YEAR-1997

Date	Leachate Hauled		Effluent Hauled	
	Contractor (gal.)	County (gal.)	Contractor (gal.)	County (gal.)
January	1,556,318	450,060	0	0
February	1,194,751	363,803	0	0
March	1,125,638	484,541	0	0
April	1,067,485	467,157	0	0
May	1,371,768	422,704	0	0
June	1,197,043	398,291	0	0
July	2,099,144	367,303	0	0
August	1,991,200	294,000	0	0
September	1,542,900	371,700	0	0
October	2,171,900	296,400	0	0
November	NR	NR	NR	NR
December	NR	NR	NR	NR
Total	15,318,147	3,915,959	0	0

Note: NR = No Record

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LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Oct. 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading ([redacted])	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		31			*P	72095	50822300	14.2	108,000	6,300	Ø	Ø
2		30.5			*P	79125	50929100	13.2	90,000	12,600	Ø	Ø
3		30			*P	84452	51028800	13.10	60,000 *	Ø	Ø	Ø
4		29			*P	90653	51122200	14	156,000	Ø	Ø	Ø
5		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
6		29			*P	98400	51282400	15.4	144,000	Ø	Ø	Ø
7		29			62	102817	51360300	12.5	48,000	25,200	Ø	Ø
8		29			63	105925	51440500	12.8	132,000	6,300	Ø	Ø
9		29			*P	109425	51519100	10.8	42,000	25,200	Ø	Ø
10		29			*P	112990	51597100	11.7	98,000	18,900	2,000	Ø
11		29			*P	116317	51673200	9.8	72,000 *	Ø	1,000	Ø
12		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
13		29			69	122928	51833800	12.11	36,000	19,200	Ø	Ø
14		27			71	125978	51910300	13	66,000	18,900	4,000	Ø
15		30			*P	128424	51987500	11.9	108,000 *	6,300	4,000	Ø
16		29.5			*P	133754	52069100	10.4	90,000	18,900	4,000	Ø

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: * Contractor Total Gallons Hauled Corrected M.M.

Prepared by: M. Matthews

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Oct. 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		29			*P	137575	52132000	8.9	114,000 *	18,900	4,000	Ø
18		29			*P	143665	52218400	7.6	6,000	Ø	Ø	.75
19		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
20		27.5			*P	154500	52372100	12.5	42,000	18,900	Ø	.3
21		27.5			*P	159110	52444100	11.6	90,000	18,900	4,000	Ø
22		28.5			*P	163400	52519700	10.9	48,000	Ø	4,000	Ø
23		27			*P	167700	52593300	11	47,000	6,300	4,000	Ø
24		28			68	171900	52670900	11.6	42,000	18,900	4,000	Ø
25		27.5			58	176275	52744200	12	Ø	Ø	Ø	Ø
26		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
27		28			67	184525	52896900	16.4	72,000	6,300	Ø	1.9
28		28			69	188770	52960900	15.6	84,000	18,900	Ø	.1
29		27			71	192585	53024900	13.8	107,600 *	Ø	Ø	Ø
30		27.5			71	196265	53092100	12.5	119,300	18,900	Ø	Ø
31		27.5			68	199735	53165800	9.9	150,000	12,600	Ø	4.5

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Leachate Hauled Month Total: _____

Prepared by M. Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM EVALUATION REPORT SOUTHEAST COUNTY LANDFILL

(Month/Year) Oct. 97

Action	Date 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer Phase IV																
Low Level Operation, depth less than or equal to 12 inches.																
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.					NR							NR				
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
Sump No. 4 Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTRF																
Normal Operation.					NR				✓		✓	NR				✓
If level is greater than 11 feet, increase treatment, hauling , or recirculation.	✓	✓	✓	✓		✓	✓	✓		✓			✓	✓	✓	
If level is less than 6 feet, decrease or stop hauling, recirculation.																
* Effluent Pond																
Normal Operation.																
If level is 6 inches or less, stop irrigation; recirculation, hauling.																
If level is greater than 4 feet, increase irrigation, recirculation, hauling.																
Observed runoff of effluent to stormwater basins?																
No.	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken. Runoff Type: 1 = Severe, 2 = Moderate, 3 = Minor. To Basin: A, B, C, D																

Comments/Remedial Action: * No Effluent - Treatment plant not in operation

Prepared by: M. Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) Oct. 97

Action	Date														
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.			NR							NR					
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Sump No. 4 Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.	✓	✓	NR			✓	✓			NR					✓
If level is greater than 11 feet, increase treatment, hauling , or recirculation.				✓	✓			✓	✓		✓	✓	✓	✓	
If level is less than 6 feet, decrease or stop hauling, recirculation.															
Effluent Pond															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.															
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.															
Runoff Type / To Basin															
1 = Severe / A, B, C, D															
2 = Moderate															
3 = Minor															

Comments/Remedial Action: _____

Prepared by: M. Matthews

HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS
Dottie Berger
Joe Chillura
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Jimmie Keel

October 15, 1997

RECEIVED
OCT 16 1997
Department of Environmental Protection
BY SOUTHWEST DISTRICT

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of September 1997. In addition, the SWMD is providing the September 1997 field data forms for the Landfill, the daily leachate and collection system evaluation reports, the top of clay survey, and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for September 1997 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from TPS-5 and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of September 1997 was 28.1 inches, which is below the LMP 30 inch limit. The depth over the liner reached levels that exceeded the LMP for the period of September 6-9, 1997 and again on September 27-30, 1997. The County and SCS attribute the elevated levels to the high rainfall during the month (17.5 inches).

During this monitoring period, the SWMD installed an in-line flow meter to measure leachate being removed from the dewatering system. In addition, the SWMD implemented new procedures to more precisely record the water levels in the 575,000 gallon storage tank. Both of these improvements have resulted in higher quality and more accurate data.

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

Environmental Consultants

3012 U.S. Highway 301 No.
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

RECEIVED
OCT 16 1997
Department of Environmental Protection
BY SOUTHWEST DISTRICT

OCT 1997
RECEIVED

October 13, 1997
File No. 0995029.12

Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Department
P. O. Box 1110
Tampa, Florida 33601

Subject: September 1997, Leachate Water Balance Report Forms
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed the leachate management operational data from the Southeast County Landfill (SCLF) for September 1997. Attached are the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 1997 updated summary (Table 3). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD). SCS provides the following commentary on the monthly data, including recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations where appropriate.

Day (Column I)

This column presents the calender day for the month of September 1997.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the amount of daily rainfall in inches as measured in the field. Total rainfall at the SCLF for September 1997 was 17.5 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. The average depth for recorded days of effluent in the effluent pond for September 1997 was 0 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (in inches) at the bottom of the SCLF. This measurement is based on the daily piezometer measurements taken in the field and represents worst case condition since the piezometer is currently located within the sump area of the SCLF. The average depth of recorded days of leachate over the liner for September 1997 was 28.1 inches (see Figure 1). The depth over the liner reached levels that exceeded the Leachate Management Plan limit of 30 inches for the period of September 6 through September 9, and September 27 through September 30. SCS believes that the increased leachate depth over the liner was due to the high rainfall amount for the month of September (i.e. 17.5 inches).

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 3 (TPS-3) and pumped to the Main Leachate Pump Station for subsequent treatment. The leachate pumped from TPS-3 represents the leachate being removed form the dewatering system. On September 5, 1997 the HCSWMD installed an in-line flow meter to measure the leachate being removed form the dewatering system. Based on the flow meter reading, the average daily amount of leachate collected and pumped from TPS-3 for September 1997 was approximately 2,500 gallons (Figure 2).

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 5 (TPS-5) and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 currently is measured from the landfill flow meter minus the amount pumped from TPS-3. The average daily amount of leachate collected and pumped from TPS-5 for September 1997 was approximately 68,200 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped to the Leachate Treatment and Reclamation Facility (LTRF) for treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flowmeter near TPS-3. The average daily amount of leachate pumped from the landfill to the LTRF was 70,700 gallons (total of 2,121,000 gallons for the month).

Leachate in 575,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 575,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily gauge level reading. The average daily amount of leachate stored in the tank for September 1997, based on recorded days, was 358,000 gallons. Under normal operating conditions, the amount of leachate stored in the tank fluctuates based on the daily amount of leachate pumped to the LTRF, the daily amount of leachate treated, and the daily amount of leachate hauled from the tank.

The change in storage as measured in the 575,000 gallon storage tank was +145,000, the change in storage as calculated from the total inflow minus outflow from the leachate system was 171,400 gallons. The 26,400 gallon difference between the two methods of measuring change in storage is within the expected accuracy of the leachate volume and flow measurement. The difference of the two changes in storage calculations had been more significant in previous months. The HCSWMD implemented new procedures to more precisely record the water levels in the tank, which has resulted in higher quality and more accurate data.

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for September 1997 was 0 gallons. The daily amount of leachate treated at the LTRF may increase or decrease depending on the influent loading/concentrations.

Note: The LTRF has not been operational since September 3, 1996 to allow for repairs to the treatment tanks. At this time it is unknown when the LTRF is anticipated to be back in operation.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. Leachate is pumped from the 575,000 gallon raw leachate tank and into a tanker truck for transport. During September 1997, a total of 1,914,600 gallons of leachate was hauled off site compared to a total of 2,285,200 gallons during the previous month. The HCSWMD should continue off site hauling of untreated leachate until the repairs to the LTRF are completed.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF and is measured from the flowmeter at the bypass loading arm. The average daily amount of leachate pumped from the

575,000 gallon leachate tank for use in dust control/evaporation, based on recorded days, was 3,500 gallons for September 1997 (total of 35,000 gallons for the month). Weather permitting, the HCSWMD should continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. The effluent pond was drained for maintenance in March 1997. The average daily amount of effluent stored in the effluent pond for September 1997 was 0 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flowmeter at the irrigation pump station. Since the LTRF is shut down for repairs, and the effluent pond is empty for maintenance, effluent was not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in September 1997 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During September 1997, the total amount of effluent used for dust control/evaporation was 0 gallons.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During September 1997, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site.

The total estimated amount of leachate/effluent evaporation for September 1997 was 25,000 gallons.

CONCLUSION

As mentioned under the discussion of the 575,000 gallon leachate storage tank above, the discrepancy in the change in storage observed in previous months, appears to have been resolved by increasing the precision of measurement at the gauge of the 575,000 gallon tank. The 575,000 storage tank, leachate force main, and the in-line flow meters seem to be operating properly.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Senior Project Engineer

Robert B. Gardner, P.E.
Vice President
SCS ENGINEERS

RBG/LER:ler
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
SEPTEMBER 1997
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in Effluent	Est. Depth Over	Pumped From	Pumped From	Leachate Pumped	Leachate in 575K	Leachate Treated	Total Leachate	Leachate Dust Cont./	Effluent Pond	Effluent Irrigation	Effluent Dust Cont./	Total Effluent	Landfill
Day	final	active	int.	Rainfall (in.)	Pond (in.)	Liner (in.)	Sta. No 3 (gal.)	Sta. No. 5 (gal.)	to LTRF (gal.)	Tank (gal.)	at LTRF (gal.)	Hauled (gal.)	Evaporation (gal.)	Storage (gal.)	Evaporation (gal.)	Evaporation (gal.)	Hauled (gal.)	Evaporation (gal.)
1	25.2	5	90.2	0.4	0	NR	*1,080*	*64,120*	65,200	NR	0	0	0	0	0	0	0	0
2	25.2	5	90.2	0	0	29	1,080	65,920	67,000	389,000	0	103,200	0	0	0	0	0	0
3	25.2	5	90.2	0.1	0	29	1,080	63,420	64,500	331,000	0	102,300	0	0	0	0	0	0
4	25.2	5	90.2	0	0	29	1,080	63,620	64,700	302,000	0	79,200	3,000	0	0	0	0	2,000
5	25.2	5	90.2	0	0	29	5,060	61,540	66,600	288,000	0	67,200	3,000	0	0	0	0	2,000
6	25.2	5	90.2	0	0	32	3,800	62,800	66,600	288,000	0	24,000	0	0	0	0	0	0
7	25.2	5	90.2	0	0	NR	*3,800*	*66,600*	70,400	NR	0	0	0	0	0	0	0	0
8	25.2	5	90.2	0	0	31.5	3,200	67,200	70,400	389,000	0	54,900	0	0	0	0	0	0
9	25.2	5	90.2	0	0	31	3,448	66,252	69,700	409,000	0	67,200	4,000	0	0	0	0	3,000
10	25.2	5	90.2	0	0	29.5	3,542	64,658	68,200	403,000	0	54,300	4,000	0	0	0	0	3,000
11	25.2	5	90.2	0	0	27	1,723	60,477	62,200	403,000	0	109,100	3,000	0	0	0	0	2,000
12	25.2	5	90.2	0	0	25.5	1,222	59,578	60,800	345,000	0	121,200	3,000	0	0	0	0	2,000
13	25.2	5	90.2	0	0	25.5	1,468	59,883	61,350	294,000	0	24,000	0	0	0	0	0	0
14	25.2	5	90.2	0	0	NR	*1,468*	*59,883*	61,350	NR	0	0	0	0	0	0	0	0
15	25.2	5	90.2	0	0	26	1,908	62,092	64,000	371,000	0	61,200	0	0	0	0	0	0
16	25.2	5	90.2	1.1	0	27	4,776	37,624	42,400	363,000	0	67,200	3,000	0	0	0	0	2,000
17	25.2	5	90.2	0.9	0	27	3,957	71,143	75,100	320,000	0	60,300	4,000	0	0	0	0	3,000
18	25.2	5	90.2	0	0	26.5	3,349	49,751	53,100	343,000	0	79,200	4,000	0	0	0	0	3,000
19	25.2	5	90.2	0	0	26.5	3,235	65,965	69,200	299,000	0	79,200	4,000	0	0	0	0	3,000
20	25.2	5	90.2	0	0	26	2,803	57,398	60,200	262,000	0	66,000	0	0	0	0	0	0
21	25.2	5	90.2	0	0	NR	*2,803*	*57,398*	60,200	NR	0	0	0	0	0	0	0	0
22	25.2	5	90.2	0	0	26	2,854	59,946	62,800	334,000	0	67,200	0	0	0	0	0	0
23	25.2	5	90.2	1.7	0	26	2,716	60,284	63,000	337,000	0	12,600	0	0	0	0	0	0
24	25.2	5	90.2	0	0	27	1,047	62,753	63,800	394,000	0	42,000	0	0	0	0	0	0
25	25.2	5	90.2	0.2	0	28	2,396	64,404	66,800	380,000	0	96,000	0	0	0	0	0	0
26	25.2	5	90.2	8.8	0	28	1,447	36,753	38,200	357,000	0	50,800	0	0	0	0	0	0
27	25.2	5	90.2	3.2	0	31	2,420	125,880	128,300	366,000	0	78,000	0	0	0	0	0	0
28	25.2	5	90.2	1.1	0	NR	*2,420*	*125,880*	128,300	NR	0	0	0	0	0	0	0	0
29	25.2	5	90.2	0	0	30	2,048	114,052	116,100	524,000	0	193,000	0	0	0	0	0	0
30	25.2	5	90.2	0	0	30.5	2,048	108,452	110,500	455,000	0	155,300	0	0	0	0	0	0
Total				17.5			75,276	2,045,724	2,121,000		0	1,914,600	35,000	0	0	0	0	25,000
Daily Average					0	28.1	2,500	68,200	70,700	358,000	0	76,600	3,500	0	0	0	0	3,000
Monthly Average					0	23.5	2,500	68,200	70,700	298,000	0	63,800	1,200	0	0	0	0	1,000

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VI, quantity from flow meter.
6. Column VII calculated by subtracting VI from flow meter reading.
7. Column VIII, quantity from flow meter.
8. Column IX, calculated from depth in 575,000 gal. leachate tank.
9. Columns X and XIV, quantities from flow meters.
10. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
11. Column XVII, 80.8% of the daily values from Columns XII, XIV and XV.
12. Values in italic are substitute for missing data and are based on averaged values.
13. Values in bold are estimated.
14. Daily average calculated by dividing the total by the active days in the month.
15. Monthly average calculated by dividing the total by the number of days of the month.

TABLE 2. FIELD DATA ENTRY FORM
SEPTEMBER 1997
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
									Leachate Hauled							Effluent Hauled		
Day	Active Area (ac.)	Piezometer Phase IV (in.)	Phase IV LCRS Cleanout (in.)	Phase III LCR Cleanout (in.)	Pump Sta. No. 4 (in.)	Pump Sta No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gal.)	Depth in 575K Tank (ft.)	Contractor (gal.)	County (gal.)	Leachate Dust Cont./ Evaporation (gal.)	Rainfall (in.)	Depth in Effl. Pond (in.)	Leachate Treated at LTRF (gal.)	Effluent Irrigation Evaporation (gal.)	Contractor (gal.)	County (gal.)	Effluent Dust Cont./ Evaporation (gal)
1	5	NR			NR	*109.2*	*48,702,833*	NR	0	0	0	0.4	0	0	0	0	0	0
2	5	29			NR	109.3	48,771,700	13.5	78,000	25,200	0	0.0	0	0	0	0	0	0
3	5	29			NR	109.4	48,836,900	11.5	96,000	6,300	0	0.1	0	0	0	0	0	0
4	5	29			NR	109.5	48,903,900	10.5	54,000	25,200	3,000	0.0	0	0	0	0	0	0
5	5	29			NR	1,040.0	48,968,400	10	42,000	25,200	3,000	0.0	0	0	0	0	0	0
6	5	32			NR	6,100.0	49,033,100	10	24,000	0	0	0.0	0	0	0	0	0	0
7	5	NR			NR	*9,900.0*	*49,099,700*	NR	0	0	0	0.0	0	0	0	0	0	0
8	5	31.5			56	13,700.0	49,166,300	13.5	36,000	18,900	0	0.0	0	0	0	0	0	0
9	5	31			55	16,900.0	49,236,700	14.2	42,000	25,200	4,000	0.0	0	0	0	0	0	0
10	5	29.5			NR	20,348.0	49,306,400	14	48,000	6,300	4,000	0.0	0	0	0	0	0	0
11	5	27			NR	23,890.0	49,374,600	14	83,900	25,200	3,000	0.0	0	0	0	0	0	0
12	5	25.5			NR	25,613.0	49,436,800	12	96,000	25,200	3,000	0.0	0	0	0	0	0	0
13	5	25.5			NR	26,835.0	49,497,600	10.2	24,000	0	0	0.0	0	0	0	0	0	0
14	5	NR			NR	*28,302.5*	*49,558,950*	NR	0	0	0	0.0	0	0	0	0	0	0
15	5	26			54	29,770.0	49,620,300	12.9	36,000	25,200	0	0.0	0	0	0	0	0	0
16	5	27			NR	31,678.0	49,684,300	12.6	42,000	25,200	3,000	1.1	0	0	0	0	0	0
17	5	27			NR	36,454.0	49,726,700	11.1	54,000	6,300	3,500	0.9	0	0	0	0	0	0
18	5	26.5			NR	40,411.0	49,801,800	11.9	54,000	25,200	3,500	0.0	0	0	0	0	0	0
19	5	26.5			NR	43,760.0	49,854,900	10.4	54,000	25,200	3,500	0.0	0	0	0	0	0	0
20	5	26			NR	46,995.0	49,924,100	9.1	66,000	0	0	0.0	0	0	0	0	0	0
21	5	NR			NR	*49,797.5*	*49,984,300*	NR	0	0	0	0.0	0	0	0	0	0	0
22	5	26			57	52,600.0	50,044,500	11.6	42,000	25,200	0	0.0	0	0	0	0	0	0
23	5	26			NR	55,454.0	50,107,300	11.7	0	12,600	0	1.7	0	0	0	0	0	0
24	5	27			NR	58,170.0	50,170,300	13.7	42,000	0	0	0.0	0	0	0	0	0	0
25	5	28			NR	59,217.0	50,234,100	13.2	96,000	0	0	0.2	0	0	0	0	0	0
26	5	28			NR	61,613.0	50,300,900	12.4	50,800	0	0	8.8	0	0	0	0	0	0
27	5	31			98	63,060.0	50,339,100	12.7	78,000	0	0	3.2	0	0	0	0	0	0
28	5	NR			NR	*65,480.0*	*50,467,400*	NR	0	0	0	1.1	0	0	0	0	0	0
29	5	30			82	67,900.0	50,595,700	18.2	167,800	25,200	0	0.0	0	0	0	0	0	0
30	5	30.5			NR	69,948.0	50,711,800	15.8	136,400	18,900	0	0.0	0	0	0	0	0	0
													0	0	0	0	0	0

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Notes:

1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column VIII, reading from flow meter.
5. Column XIII, Trace is less than 0.01 inches.
6. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
7. Column III, Phase IV piezometer began monitoring on 7/10/95.
8. Columns XV and XVI, quantities from flow meters.
9. Column IX, field measured.
10. Column VII, quantity from flow meter.

TABLE 3. 1997 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change In Storage For Month (gal.)
January	3.30	0	1,892,150	2,006,378	0	0	0	0	10,470	1,892,150	2,006,378	(114,228)
February	2.20	0	1,672,700	1,558,554	0	0	0	0	49,290	1,672,700	1,558,554	114,146
March	2.40	0	1,587,700	1,610,179	196,000	0	0	0	140,080	1,587,700	1,806,179	(218,479)
April	6.50	0	1,647,900	1,534,642	92,000	0	0	0	0	1,647,900	1,626,642	21,258
May	5.70	0	1,931,600	1,794,472	151,000	0	0	0	0	1,931,600	1,945,472	(13,872)
June	9.30	0	2,022,500	1,595,334	77,000	0	0	0	64,000	2,022,500	1,672,334	350,166
July	18.60	0	2,625,400	2,466,447	0	0	0	0	0	2,625,400	2,466,447	158,953
August	6.80	0	2,750,533	2,285,200	15,000	0	0	0	0	2,750,533	2,300,200	450,333
September	17.50	0	2,121,000	1,914,600	35,000	0	0	0	0	2,121,000	1,949,600	171,400
October										0	0	0
November										0	0	0
December										0	0	0
YTD Total	72.30	0	18,251,483	16,765,806	566,000	0	0	0	263,840	18,251,483	17,331,806	

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Note:

1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

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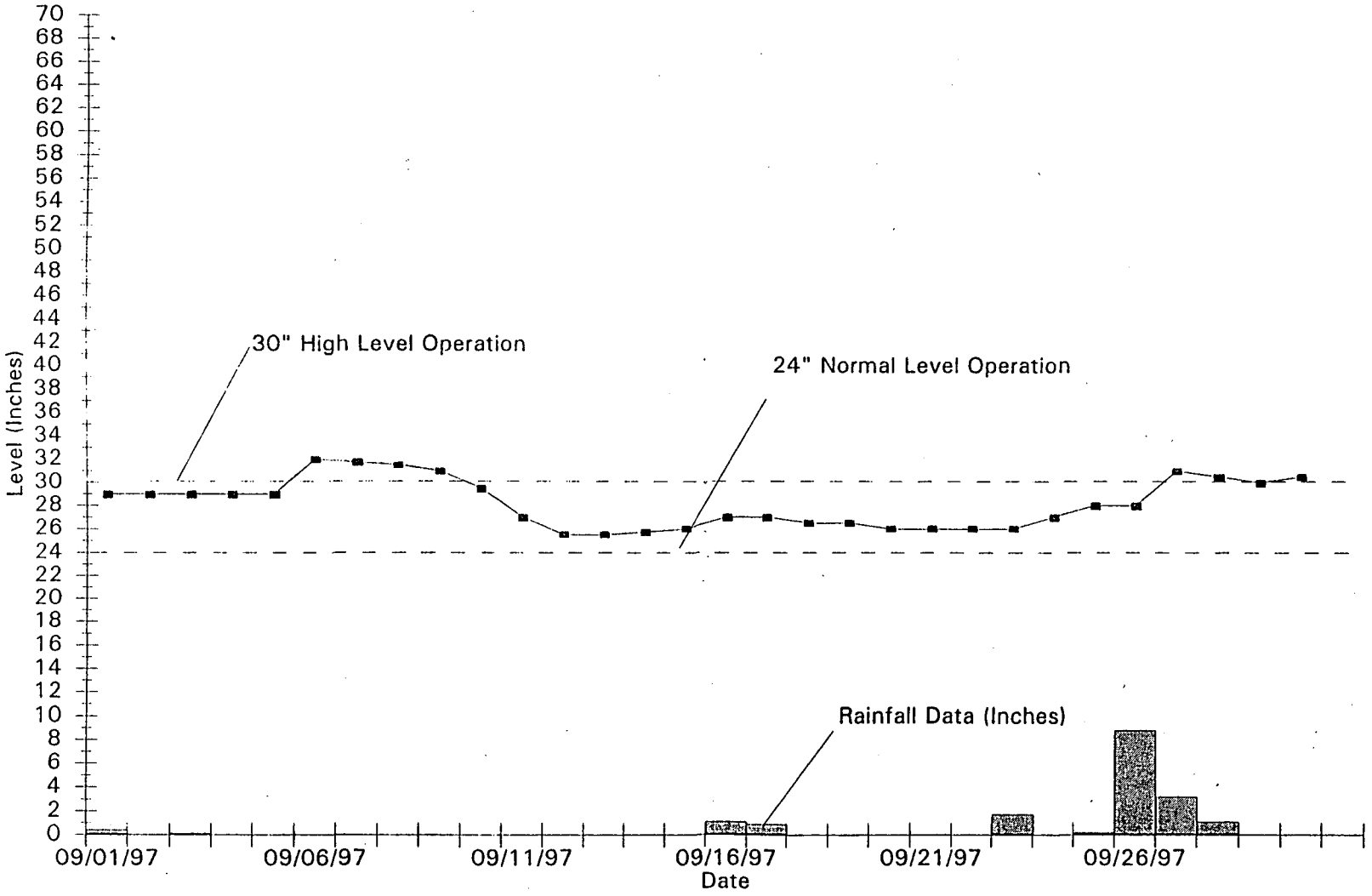
Figure 1.

Phase IV Piezometer



SCS ENGINEERS

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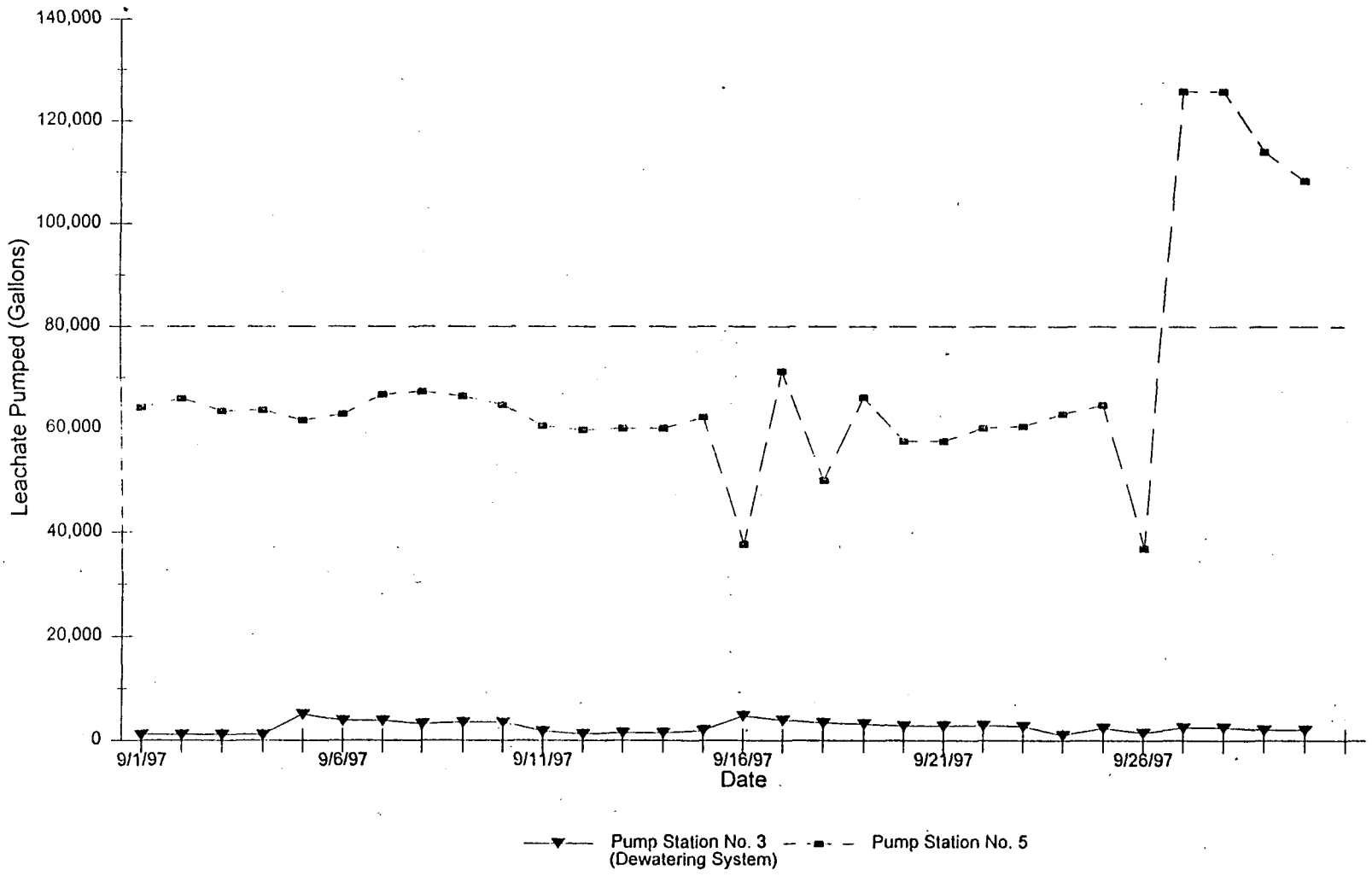
Figure 2.

Pump Station No. 3 and No. 5



SCS ENGINEERS

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Sept. 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		NR			NR	NR	NR	NR	Ø	Ø	Ø	.4
2		29			*P	109.3	48771700	13.5	78,000	25,200	Ø	Ø
3		29			*P	109.4	48836900	11.5	96,000	6,300	Ø	.1
4		29			*P	109.5	48903900	10.5	54000	25,200	3,000	Ø
5		29			*P	1,040	48968400	10	42,000	25,200	3,000	Ø
6		32			*P	6,100	49033100	10	24,000	Ø	Ø	Ø
7		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
8		31.5			56	13,700	49166300	13.5	36,000	18,900	Ø	Ø
9		31			55	16,900	49236700	14.2	42,000	25,200	4,000	Ø
10		29.5			*P	20,348	49306400	14	48,000	6,300	4,000	Ø
11		27			*P	23,890	49374600	14	83,900	25,200	3,000	Ø
12		25.5			*P	25,613	49436800	12	96,000	25,200	3,000	Ø
13		25.5			*P	26,835	49497600	10.2	24,000	Ø	Ø	Ø
14		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
15		26			54	29,770	49620300	12.9	36,000	25,200	Ø	Ø
16		27			*P	31,678	49684300	12.6	42,000	25,200	3,000	1.1

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: Sept. 1 - Holiday / *P = pumping
9-5 - Changed from Hr. dial reading to in line flow meter

Prepared by: [signature]

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Sept. 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		27			*P	36,454	49726700	11.1	54,000	6,300	3,500	.9
18		26.5			*P	40,411	49801800	11.9	54,000	25,200	3,500	Ø
19		26.5			*P	43,760	49854900	10.4	54,000	25,200	3,500	Ø
20		26			*P	46,995	49924100	9.10	66,000	Ø	Ø	Ø
21		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
22		26			57	52,600	50044500	11.6	42,000	25,200	Ø	Ø
23		26			*P	55,454	50107300	11.7	Ø	12,600	Ø	1.7
24		27			*P	58,170	50170300	13.7	42,000	Ø	Ø	Ø
25		28			*P	59,217	50234100	13.2	96,000	Ø	Ø	.2
26		28			*P	61,613	50300900	12.4	50,800	Ø	Ø	8.8
27		31			98	63,060	50339100	12.7	78,000	Ø	Ø	3.2
28		NR			NR	NR	NR	NR	Ø	Ø	Ø	.1
29		30			82	67900	50595700	18.2	167,800	25,200	Ø	Ø
30		30.5			*P	69,948	50711800	15.8	136,400	18,900	Ø	Ø
31												

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Leachate Hauled Month Total: _____

Prepared by: _____

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) Sept 97

Action	Date 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer Phase IV																
Low Level Operation, depth less than or equal to 12 inches.																
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.	NR						NR							NR		
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓
Sump No. 4 Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	NR	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTRF																
Normal Operation.	NR			✓	✓	✓	NR						✓	NR		
If level is greater than 11 feet, increase treatment, hauling , or recirculation.		✓	✓					✓	✓	✓	✓	✓			✓	✓
If level is less than 6 feet, decrease or stop hauling, recirculation.																
* Effluent Pond																
Normal Operation.																
If level is 6 inches or less, stop irrigation, recirculation, hauling.																
If level is greater than 4 feet, increase irrigation, recirculation, hauling.																
Observed runoff of effluent to stormwater basins?																
No.	NR	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.																

Runoff Type	To Basin
1 = Severe	A, B, C, D
2 = Moderate	
3 = Minor	

Comments/Remedial Action: * Effluent Pond empty for maintance

Prepared by: [signature]

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) Sept. 97

Action	Date 17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.					NR							NR			
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	
Sump No. 4 Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.			✓	✓	NR							NR			
If level is greater than 11 feet, increase treatment, hauling , or recirculation.	✓	✓				✓	✓	✓	✓	✓	✓		✓	✓	
If level is less than 6 feet, decrease or stop hauling, recirculation.															
Effluent Pond															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.															
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.															

Runoff Type — To Basin
1 = Severe — A, B, C, D
2 = Moderate
3 = Minor

Comments/Remedial Action: _____

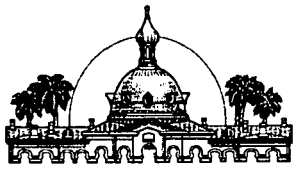
Prepared by: _____

HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS
Dottie Berger
Joe Chillura
Chris Hart
Jim Norman
Ed Turanchik
Jan Platt
Thomas Scott



Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimmie Keel

September 15, 1997

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SEP 17 1997
D E P

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of August 1997. In addition, the SWMD is providing the August 1997 field data forms for the Landfill, the daily leachate and collection system evaluation reports, the top of clay survey, and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for August 1997 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from TPS-5 and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of August 1997 was 29.2 inches, which is below the LMP 30 inch limit. The depth over the liner reached levels that exceeded the 30 inch limit during the period of August 4 through August 12. The SWMD and SCS believe that the elevated levels was due to the low leachate removal rate from the dewatering system during that time period.

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On August 18, 1997, the SWMD completed the redevelopment of the dewatering system wells to increase the leachate removal rate from the wellpoint system. As previously mentioned, the SWMD is also evaluating the replacement of the existing ball valves with more sensitive gate valves to better tune the system and the reduction of the drop pipe diameter in an effort to increase the leachate removal from the system. Also, the SWMD will be verifying the performance of the leachate collection system in-line flow meters to ensure their accuracy. The SWMD will keep the DEP informed of the impact of these maintenance activities on the performance of the system.

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

Environmental Consultants

3012 U.S. Highway 301 North
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

September 12, 1997
File No. 0995029.12

Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Department
P. O. Box 1110
Tampa, Florida 33601

Subject: August 1997, Leachate Water Balance Report Forms
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed operational data from the Southeast County Landfill (SCLF) for August 1997. Attached are the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), the 1997 updated summary (Table 3), and the Approximate Top of Clay Elevations (Table 4). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD).

SCS has summarized below the data included in the Leachate Water Balance Report Form as shown in Table 1. Where appropriate, SCS provides commentary on the monthly data and recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations.

Day (Column I)

This column presents the calender day for the month of August 1997.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the amount of daily rainfall in inches as measured in the field. Total rainfall at the SCLF for August 1997 was 6.8 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. The average depth for recorded days of effluent in the effluent pond for August 1997 was 0 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (in inches) at the bottom of the SCLF. This measurement is based on the daily piezometer measurements taken in the field and represents worst case condition since the piezometer is currently located within the sump area of the SCLF. The average depth of recorded days of leachate over the liner for August 1997 was 29.2 inches (see Figure 1). The depth over the liner reached levels that exceeded the Leachate Management Plan limit of 30 inches for the period of August 4 through August 12. SCS believes that the increased leachate depth over the liner was due to the low leachate removal rate from the dewatering system during the month of August. Between August 12 through August 18, the HCSWMD completed the redevelopment of the dewatering wells; therefore, SCS expects a decrease in the depth over the liner during the upcoming month.

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 3 (TPS-3) and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-3 is measured from an hour-meter and calculated based on an average pumping rate of 180 gallons per minute (gpm). However, based on field observations, it appears that TPS-3 is not performing at the rate of 180 gpm. In order to obtain leachate quantities that are representative of the leachate being removed from dewatering system, the HCSWMD will install a separate flow meter at the TPS-3. The average daily amount of leachate collected and pumped from TPS-3 for August 1997 was approximately 2,800 gallons (Figure 2).

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 5 (TPS-5) and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 currently is measured from the landfill flow meter minus the amount pumped from TPS-3. The average daily amount of leachate collected and pumped from TPS-5 for August 1997 was approximately 86,000 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped to the Leachate Treatment and Reclamation Facility (LTRF) for treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flowmeter near TPS-3. The average daily amount of leachate pumped from the landfill to the LTRF was 88,700 gallons (total of 2,750,533 gallons for the month).

Leachate in 575,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 575,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily gauge level reading. The average daily amount of leachate stored in the tank for August 1997, based on recorded days, was 286,000 gallons. Under normal operating conditions, the amount of leachate stored in the tank fluctuates based on the daily amount of leachate pumped to the LTRF, the daily amount of leachate treated, and the daily amount of leachate hauled from the tank. The change in storage based on tank gage readings between the first and last day of the month was approximately 155,000 gallons; however, the total difference between the total leachate collected and total leachate hauled offsite was approximately 450,000 gallons. Theoretically, the change in storage in the tank during a period of time should equal the net inflow minus net outflow during that same period. There appears to be a discrepancy of 295,000 gallons between the in-line flow meter readings and the change in storage observed in the leachate storage tank (See discussion at end of letter).

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for August 1997 was 0 gallons. The daily amount of leachate treated at the LTRF may increase or decrease depending on the influent loading/concentrations.

Note: The LTRF has not been operational since September 3, 1996 to allow for repairs to the treatment tanks. At this time it is unknown when the LTRF is anticipated to be back in operation.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. Leachate is pumped from the 575,000 gallon raw leachate tank and into a tanker truck for transport. During August 1997, a total of 2,285,200 gallons of leachate was hauled off site compared to a total of 2,466,447 gallons during the previous month. The HCSWMD should continue off site hauling of untreated leachate until the repairs to the LTRF are completed.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF and is measured from the flowmeter at the bypass loading arm. The average daily amount of leachate pumped from the 575,000 gallon leachate tank for use in dust control/evaporation, based on recorded days, was 3,000 gallons for August 1997 (total of 15,000 gallons for the month).

Weather permit, the HCSWMD should continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. The effluent pond was drained for maintenance in March 1997. The average daily amount of effluent stored in the effluent pond for August 1997 was 0 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flowmeter at the irrigation pump station. Since the LTRF is shut down for repairs, and the effluent pond is empty for maintenance, effluent was not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in August 1997 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During August 1997, the total amount of effluent used for dust control/evaporation was 0 gallons.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During August 1997, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill

evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site.

The total estimated amount of leachate/effluent evaporation for August 1997 was 11,000 gallons.

CONCLUSION

As mention under the discussion of the 575,000 gallon leachate storage tank above, there appears to be a discrepancy of 295,000 gallons between the in-line flow meter readings and the change in storage observed in the leachate storage tank. We brought this to the attention of the HCSWMD on September 11, 1997. We understand that HCSWMD personnel inspected the double-lined leachate force main and 575,000 leachate storage tank on September 11, 1997 and confirmed the integrity of these facilities. SCS and HCSWMD personnel met to discuss this issue on September 12, 1997. We evaluated the potential reasons for the discrepancy and concluded that it likely is due to potential calibration problems with the in-line flow meters.

Since the 575,000 storage tank and leachate force main seem to be operating properly, we recommend that the HCSWMD verify the performance of the in-line flow meters.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Senior Project Engineer

Robert B. Gardner, P.E.
Vice President
SCS ENGINEERS

RBG/LER:ler
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
AUGUST 1997
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in Effluent	Est. Depth Over	Pumped From	Pumped From	Leachate Pumped	Leachate in 575K	Leachate Treated	Total Leachate	Leachate Dust Cont./	Effluent Pond	Effluent Irrigation	Effluent Dust Cont./	Total Effluent	Landfill
Day	final	active	int.	Rainfall (in.)	Pond (in.)	Liner (in.)	Sta. No 3 (gal.)	Sta. No. 5 (gal.)	to LTRF (gal.)	Tank (gal.)	at LTRF (gal.)	Hauled (gal.)	Evaporation (gal.)	Storage (gal.)	Evaporation (gal.)	Evaporation (gal.)	Hauled (gal.)	Evaporation (gal.)
1	25.2	5	90.2	0.6	0	28.5	3,240	93,860	97,100	144,000	0	109,900	0	0	0	0	0	0
2	25.2	5	90.2	0.8	0	29.5	2,700	95,150	97,850	130,000	0	53,100	0	0	0	0	0	0
3	25.2	5	90.2	0.2	0	NR	2,700	95,150	97,850	NR	0	0	0	0	0	0	0	0
4	25.2	5	90.2	0.5	0	30.5	2,160	***104,540***	106,700	245,000	0	85,300	0	0	0	0	0	0
5	25.2	5	90.2	0.2	0	32	1,080	105,920	107,000	230,000	0	115,200	0	0	0	0	0	0
6	25.2	5	90.2	0	0	30.5	2,160	***96,440***	98,600	202,000	0	102,300	0	0	0	0	0	0
7	25.2	5	90.2	0.5	0	35	3,240	98,260	101,500	202,000	0	48,000	0	0	0	0	0	0
8	25.2	5	90.2	1.9	0	33	3,240	100,560	103,800	202,000	0	109,200	0	0	0	0	0	0
9	25.2	5	90.2	0.8	0	37	3,240	107,310	110,550	202,000	0	6,000	0	0	0	0	0	0
10	25.2	5	90.2	0.2	0	NR	3,240	107,310	110,550	NR	0	54,000	0	0	0	0	0	0
11	25.2	5	90.2	0.3	0	31.5	3,240	100,160	103,400	360,000	0	79,500	0	0	0	0	0	0
12	25.2	5	90.2	0	0	31	2,160	97,940	100,100	374,000	0	60,600	0	0	0	0	0	0
13	25.2	5	90.2	0	0	29.5	4,320	***94,280***	98,600	403,000	0	41,300	0	0	0	0	0	0
14	25.2	5	90.2	0	0	29	3,240	92,860	96,100	446,000	0	42,000	0	0	0	0	0	0
15	25.2	5	90.2	0	0	29	4,320	79,180	83,500	432,000	0	133,200	0	0	0	0	0	0
16	25.2	5	90.2	0	0	30	2,700	81,300	84,000	403,000	0	72,000	0	0	0	0	0	0
17	25.2	5	90.2	0	0	NR	2,700	81,300	84,000	NR	0	0	0	0	0	0	0	0
18	25.2	5	90.2	0	0	29	3,240	82,860	86,100	489,000	0	133,200	0	0	0	0	0	0
19	25.2	5	90.2	0	0	29.5	6,480	78,620	85,100	403,000	0	163,200	0	0	0	0	0	0
20	25.2	5	90.2	0.3	0	30	3,240	***76,260***	79,500	331,000	0	102,300	0	0	0	0	0	0
21	25.2	5	90.2	0.4	0	29	2,160	80,240	82,400	302,000	0	102,300	0	0	0	0	0	0
22	25.2	5	90.2	0.1	0	29.5	2,160	75,640	77,800	288,000	0	108,300	0	0	0	0	0	0
23	25.2	5	90.2	0	0	29.5	2,160	71,540	73,700	259,000	0	84,000	0	0	0	0	0	0
24	25.2	5	90.2	0	0	NR	2,160	71,540	73,700	NR	0	0	0	0	0	0	0	0
25	25.2	5	90.2	0	0	29	1,080	80,520	81,600	331,000	0	108,000	3,000	0	0	0	0	2,000
26	25.2	5	90.2	0	0	29	2,160	70,840	73,000	288,000	0	60,000	0	0	0	0	0	0
27	25.2	5	90.2	0	0	29	2,160	***71,940***	74,100	302,000	0	108,000	0	0	0	0	0	0
28	25.2	5	90.2	0	0	29	2,160	70,540	72,700	274,000	0	78,000	6,000	0	0	0	0	5,000
29	25.2	5	90.2	0	0	29.5	1,080	70,820	71,900	259,000	0	96,300	3,000	0	0	0	0	2,000
30	25.2	5	90.2	0	0	29.5	4,320	64,547	68,867	230,000	0	30,000	3,000	0	0	0	0	2,000
31	25.2	5	90.2	0	0	NR	1,080	67,787	68,867	NR	0	0	0	0	0	0	0	0
Total				6.8			85,320	2,665,213	2,750,533		0	2,285,200	15,000	0	0	0	0	11,000
Daily Average					0	29.2	2,800	86,000	88,700	286,000	0	81,600	3,000	0	0	0	0	2,000
Monthly Average					0	25.4	2,800	86,000	88,700	249,000	0	73,700	500	0	0	0	0	0

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VI calculated based on average 180 gpm and hour conversion.
6. Column VII calculated by subtracting VI from flow meter reading.
7. Column VIII, quantity from flow meter.
8. Column IX, calculated from depth in 575,000 gal. leachate tank.
9. Columns X and XIV, quantities from flow meters.
10. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
11. Column XVII, 80.8% of the daily values from Columns XII, XIV and XV.
12. Values in italic are substitute for missing data and are based on averaged values.
13. Values in bold are estimated.
14. Daily average calculated by dividing the total by the active days in the month.
15. Monthly average calculated by dividing the total by the number of days of the month.

TABLE 2. FIELD DATA ENTRY FORM
AUGUST 1997
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
									Leachate Hauled							Effluent Hauled		
Day	Active Area (ac.)	Piezometer Phase IV (in.)	Phase IV LCRS Cleanout (in.)	Phase III LCR Cleanout (in.)	Pump Sta. No. 4 (in.)	Pump Sta No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gal.)	Depth in 575K Tank (ft.)	Contractor (gal.)	County (gal.)	Leachate Dust Cont./ Evaporation (gal.)	Rainfall (in.)	Depth in Effl. Pond (in.)	Leachate Treated at LTRF (gal.)	Effluent Irrigation Evaporation (gal.)	Contractor (gal.)	County (gal.)	Effluent Dust Cont./ Evaporation (gal)
1	5	28.5	NR	NR	74	101.5	45,952,300	5	84,700	25,200	0	0.6	0	0	0	0	0	0
2	5	29.5	NR	NR	74	101.8	46,049,400	4.5	53,100	0	0	0.8	0	0	0	0	0	0
3	5	NR	NR	NR	NR	*102.05*	*46,147,250*	NR	0	0	0	0.2	0	0	0	0	0	0
4	5	30.5	NR	NR	74	102.3	46,245,100	8.5	60,100	25,200	0	0.5	0	0	0	0	0	0
5	5	32	NR	NR	74	102.5	46,351,800	8	90,000	25,200	0	0.2	0	0	0	0	0	0
6	5	30.5	NR	NR	71	102.6	46,458,800	7	96,000	6,300	0	0.0	0	0	0	0	0	0
7	5	35	NR	NR	NR	102.8	46,557,400	7	48,000	0	0	0.5	0	0	0	0	0	0
8	5	33	NR	NR	71.5	103.1	46,658,900	7	84,000	25,200	0	1.9	0	0	0	0	0	0
9	5	37	NR	NR	84	103.4	46,762,700	7	6,000	0	0	0.8	0	0	0	0	0	0
10	5	NR	NR	NR	NR	*103.7*	*46,873,250*	NR	54,000	0	0	0.2	0	0	0	0	0	0
11	5	31.5	NR	NR	74.5	104.0	46,983,800	12.5	54,000	25,500	0	0.3	0	0	0	0	0	0
12	5	31	NR	NR	NR	104.3	47,087,200	13	48,000	12,600	0	0.0	0	0	0	0	0	0
13	5	29.5	NR	NR	NR	104.5	47,187,300	14	41,300	0	0	0.0	0	0	0	0	0	0
14	5	29	NR	NR	NR	104.9	47,285,900	15.5	42,000	0	0	0.0	0	0	0	0	0	0
15	5	29	NR	NR	NR	105.2	47,382,000	15	108,000	25,200	0	0.0	0	0	0	0	0	0
16	5	30	NR	NR	NR	105.6	47,465,500	14	72,000	0	0	0.0	0	0	0	0	0	0
17	5	NR	NR	NR	NR	*105.85*	*47,549,500*	NR	0	0	0	0.0	0	0	0	0	0	0
18	5	29	NR	NR	65	106.1	47,633,500	17	108,000	25,200	0	0.0	0	0	0	0	0	0
19	5	29.5	NR	NR	NR	106.4	47,719,600	14	138,000	25,200	0	0.0	0	0	0	0	0	0
20	5	30	NR	NR	NR	107.0	47,804,700	11.5	96,000	6,300	0	0.3	0	0	0	0	0	0
21	5	29	NR	NR	NR	107.3	47,884,200	10.5	96,000	6,300	0	0.4	0	0	0	0	0	0
22	5	29.5	NR	NR	74	107.5	47,966,600	10	102,000	6,300	0	0.1	0	0	0	0	0	0
23	5	29.5	NR	NR	74	107.7	48,044,400	9	84,000	0	0	0.0	0	0	0	0	0	0
24	5	NR	NR	NR	NR	*107.9*	*48,118,100*	NR	0	0	0	0.0	0	0	0	0	0	0
25	5	29	NR	NR	62	108.1	48,191,800	11.5	108,000	0	3,000	0.0	0	0	0	0	0	0
26	5	29	NR	NR	NR	108.2	48,273,400	10	60,000	0	0	0.0	0	0	0	0	0	0
27	5	29	NR	NR	NR	108.4	48,346,400	10.5	96,000	12,000	0	0.0	0	0	0	0	0	0
28	5	29	NR	NR	NR	108.6	48,420,500	9.5	54,000	24,000	6,000	0.0	0	0	0	0	0	0
29	5	29.5	NR	NR	NR	108.8	48,493,200	9	78,000	18,300	3,000	0.0	0	0	0	0	0	0
30	5	29.5	NR	NR	NR	108.9	48,565,100	8	30,000	0	3,000	0.0	0	0	0	0	0	0
31	5	NR	NR	NR	NR	109.1	48,633,967	NR	0	0	0	0.0	0	0	0	0	0	0

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Notes:

1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column VIII, reading from flow meter.
5. Column XIII, Trace is less than 0.01 inches.
6. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
7. Column III, Phase IV piezometer began monitoring on 7/10/95.
8. Columns XV and XVI, quantities from flow meters.
9. Column IX, field measured.
10. ColumnVII, hour reading from TPS-3.

TABLE 3. 1997 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change in Storage For Month (gal.)
January	3.30	0	1,892,150	2,006,378	0	0	0	0	10,470	1,892,150	2,006,378	(114,228)
February	2.20	0	1,672,700	1,558,554	0	0	0	0	49,290	1,672,700	1,558,554	114,146
March	2.40	0	1,587,700	1,610,179	196,000	0	0	0	140,080	1,587,700	1,806,179	(218,479)
April	6.50	0	1,647,900	1,534,642	92,000	0	0	0	0	1,647,900	1,626,642	21,258
May	5.70	0	1,931,600	1,794,472	151,000	0	0	0	0	1,931,600	1,945,472	(13,872)
June	9.30	0	2,022,500	1,595,334	77,000	0	0	0	64,000	2,022,500	1,672,334	350,166
July	18.60	0	2,625,400	2,466,447	0	0	0	0	0	2,625,400	2,466,447	158,953
August	6.80	0	2,750,533	2,285,200	15,000	0	0	0	0	2,750,533	2,300,200	450,333
September										0	0	0
October										0	0	0
November										0	0	0
December										0	0	0
YTD Total	54.80	0	16,130,483	14,851,206	531,000	0	0	0	263,840	16,130,483	15,382,206	

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Note:

1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

INSIDE TANK INSPECTED WATER

TABLE 4. APPROXIMATE TOP OF CLAY ELEVATIONS
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FL

	PHASE III	PHASE IV			PHASE VI		
DATE	LCRS Cleanout	LCRS Cleanout	Piezometer	Pump Control Well	Pump Station No. 3	Pump Station No. 4	Settling Plate
28-Dec-93	NR	NR	NR	NR	118.97	NR	NR
05-Dec-94	NR	NR	NR	NR	118.76	NR	NR
26-Jan-95	NR	NR	NR	NR	118.59	122.01	NR
22-Feb-95	119.89	118.09	NR	NR	118.59	122.00	NR
13-Jul-95	NR	NR	NR	NR	118.50	121.98	NR
21-Nov-95	119.81	117.80	116.45	116.55	118.45	121.93	NR
07-Dec-95	NR	NR	NR	NR	NR	NR	117.35
06-Jun-96	119.75	117.69	116.20	116.26	118.35	121.87	116.96
02-Oct-96	119.80	117.66	116.14	116.21	118.15	121.97	116.95
20-Jan-97	119.70	117.54	115.97	116.00	118.04	121.88	116.85
02-May-97	119.68	117.43	115.92	115.94	118.04	121.88	116.79
01-Aug-97	119.70	117.50	115.88	115.89	118.04	121.88	116.81

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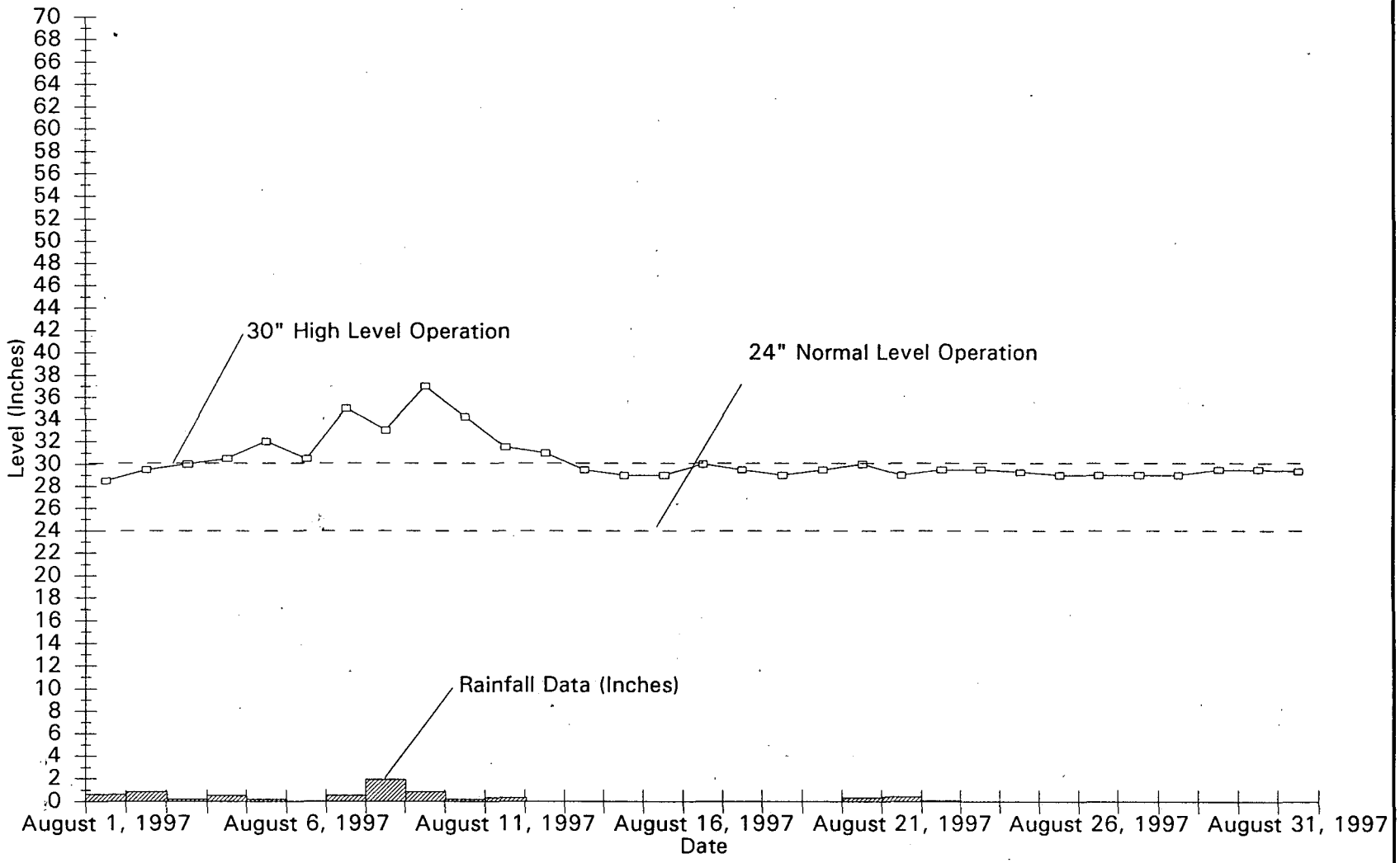
Figure 1.

Phase IV Piezometer



SCS ENGINEERS

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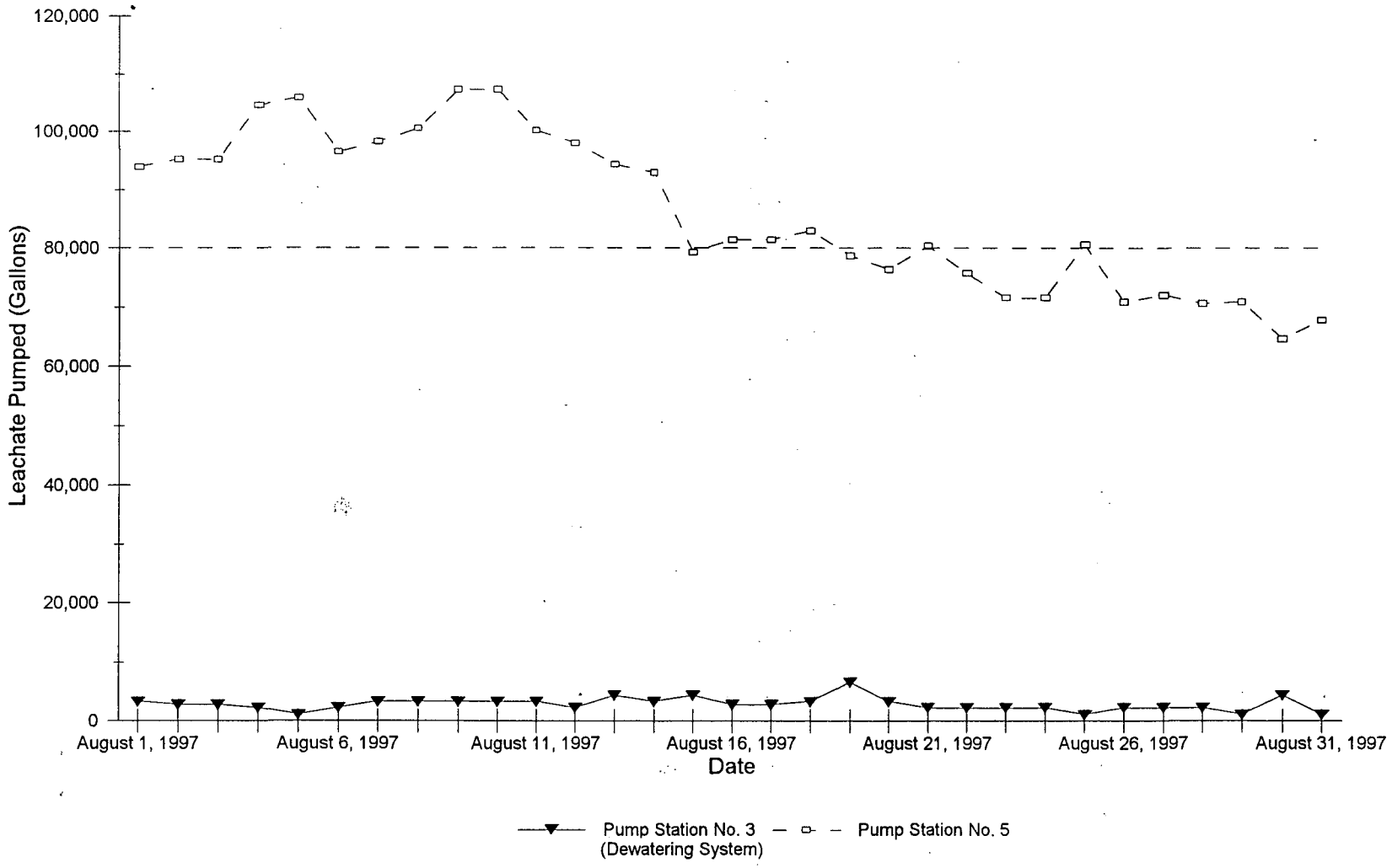
Figure 2.

Pump Station No. 3 and No. 5



SCS ENGINEERS

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Aug. 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		28.5			74	101.5	45952300	5	84,700	25,200	Ø	.6
2		29.5			74	101.8	46049400	4.5	53,100	Ø	Ø	.8
3		NR			NR	NR	NR	NR	Ø	Ø	Ø	.2
4		30.5			74	102.3	46245100	8.5	60,100	25,200	Ø	.5
5		32			74	102.5	46351800	8	90,000	25,200	Ø	.2
6		30.5			71	102.6	46458800	7	96,000	6,300	Ø	Ø
7		35			*P	102.8	46557400	7	48,000	Ø	Ø	.5
8		33			71.5	103.1	46658900	7	84,000	25,200	Ø	1.9
9		37			84	103.4	46762700	7	6,000	Ø	Ø	.8
10		NR			NR	NR	NR	NR	54,000	Ø	Ø	.2
11		31.5			74.5	104.0	46983800	12.5	54,000	25,500	Ø	.3
12		31			*P	104.3	47087200	13	48,000	12,600	Ø	Ø
13		29.5			*P	104.5	47187300	14	41,300	Ø	Ø	Ø
14		29			*P	104.9	47285900	15.5	42,000	Ø	Ø	Ø
15		29			*P	105.2	47382000	15	108,000	25,200	Ø	Ø
16		30			*P	105.6	47465500	14	72,000	Ø	Ø	Ø

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: *P= pumping

Prepared by: Jeff Matthews

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) Aug. 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
18		29			65	106.1	47633500	17	108,000	25,200	Ø	Ø
19		29.5			*P	106.4	47719600	14	138,000	25,200	Ø	Ø
20		30			*P	107.0	47804700	11.5	96,000	6,300	Ø	.3
21		29			*P	107.3	47884200	10.5	96,000	6,300	Ø	.4
22		29.5			74	107.5	47966600	10	102,000	6,300	Ø	.1
23		29.5			74	107.7	48044400	9	84,000	Ø	Ø	Ø
24		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
25		29			62	108.1	48198100	11.5	108,000	Ø	3,000	Ø
26		29			*P	108.2	48273400	10	60,000	Ø	Ø	Ø
27		29			*P	108.4	48346400	10.5	96,000	12,000	Ø	Ø
28		29			*P	108.6	48420500	9.5	54,000	24,000	6,000	Ø
29		29.5			*P	108.8	48493200	9	78,000	18,300	3,000	Ø
30		29.5			*P	108.9	48565100	8	30,000	Ø	3,000	Ø
31		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately; Complete Evaluation Report Form.

Comments: *P = pumping

Leachate Hauled Month Total: _____

Prepared by: [signature]

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Aug. 97

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
* 1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									

(1) If yes: Contact Supervisor Immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: * Treatment plant not in operation

Prepared by: M. Matthews

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) Aug. 97

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

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(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: _____

Prepared by: W. Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) Aug. 97

Action	Date 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer Phase IV																
Low Level Operation, depth less than or equal to 12 inches.																
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.			NR							NR						
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
Sump No. 4 Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTRF																
Normal Operation.			NR	✓	✓	✓	✓	✓	✓	NR						
If level is greater than 11 feet, increase treatment, hauling , or recirculation.											✓	✓	✓	✓	✓	✓
If level is less than 6 feet, decrease or stop hauling, recirculation.	✓	✓														
* Effluent Pond																
Normal Operation.																
If level is 6 inches or less, stop irrigation, recirculation, hauling.																
If level is greater than 4 feet, increase irrigation, recirculation, hauling.																
Observed runoff of effluent to stormwater basins?																
No.	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.																
Runoff Type: 1 = Severe, 2 = Moderate, 3 = Minor / To Basin: A, B, C, D																

Comments/Remedial Action: *Effluent Pond empty for maintance

Prepared by: [illegible]

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM EVALUATION REPORT SOUTHEAST COUNTY LANDFILL

(Month/Year) Aug. 97

Action	Date 17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.	NR							NR							NR
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. *Increase leachate removal and contact supervisor immediately.*		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	
Sump No. 4 Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.	NR				✓	✓	✓	NR		✓	✓	✓	✓	✓	NR
If level is greater than 11 feet, increase treatment, hauling , or recirculation.		✓	✓	✓					✓						
If level is less than 6 feet, decrease or stop hauling, recirculation.															
Effluent Pond															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.															
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken. Runoff Type: 1 = Severe, 2 = Moderate, 3 = Minor. To Basin: A, B, C, D															

Comments/Remedial Action: _____

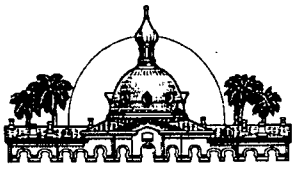
Prepared by M. Walker

HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS
Dottie Berger
Joe Chillura
Chris Hart
Jim Norman
Ed Turanchik
Jan Platt
Thomas Scott



Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimmie Keel

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AUG 21 1997
D E P

August 20, 1997

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of July 1997. In addition, the SWMD is providing the July 1997 field data forms for the Landfill, the daily leachate and collection system evaluation reports, ~~the top-of-clay survey~~, and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for July 1997 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from TPS-5 and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of July 1997 was 28.1 inches, which is below the LMP 30 inch limit with the exception of July 4,5,6,7, and 8, 1997. The SWMD and SCS believe that the elevated levels for the five days is a result of the low leachate removal rate from the dewatering system during the month of July.

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DEP

The SWMD has recently completed the redevelopment of the dewatering system wells to increase the leachate removal rate from the wellpoint system. In addition, the SWMD currently is proceeding with the balancing of the dewatering system to maximize the leachate removal rate. The SWMD is also planning to replace the existing ball valves with more sensitive gate valves to better tune the system and to reduce the drop pipe diameter in an effort to increase the leachate removal from the system. The SWMD will keep the DEP informed of the impact of these maintenance activities on the performance of the system.

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) July 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		29.5			73	88.0	43291800	14	84,945	25,371	Ø	.6
2		30			72	89.0	43367400	12.5	84,977	6,300	Ø	Ø
3		29.5			71	89.8	43443000	12	61,602	25,418	Ø	Ø
4		NR			NR	NR	NR	NR	Ø	Ø	Ø	1.4
5		32.5			76	91.6	43585800	14	30,000	Ø	Ø	.1
6		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
7		32			76	93.3	43728000	16.5	90,734	25,248	Ø	.2
8		32			75	93.5	43801900	14	96,612	25,290	Ø	Ø
9		28.5			70	94.1	43877800	12.5	84,962	6,300	Ø	1.8
10		30			78	95.0	43952600	11.5	79,271	25,293	Ø	.1
11		25			76	96.3	44027500	10.5	36,514	19,041	Ø	4.0
12		27.5			83	96.9	44097700	11.5	36,499	Ø	Ø	.1
13		NR			NR	NR	NR	NR	Ø	NR	Ø	Ø
14		25.5			75	97.3	44275800	15.5	60,917	19,066	Ø	2.0
15		26			84	97.5	44362400	15	48,323	19,034	Ø	.8
16		26.5			81.5	97.5	44461000	15.5	78,950	6,300	Ø	.2

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: 7-4 - No readings Holiday

Prepared by: M. Walther

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) July 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled Contractor (gallons)	Leachate Hauled County (gallons)	Leachate Recirculation (gallons)	Rainfall (inches)
17		25.5			84	97.5	44562100	15	78,687	19,100	Ø	.2
18		26			74	97.5	44662200	15	42,430	19,005	Ø	Ø
19		26			72	98.2	44754400	16	42,244	Ø	Ø	1.7
20		NR			NR	NR	NR	NR	78000	Ø	Ø	.8
21		27			74	98.7	44939800	16	90,462	12,600	Ø	.5
22		27.5			75	99.0	45031900	15	96,609	Ø	Ø	.2
23		27.5			75	99.1	45128700	13.5	90,740	12,600	Ø	.4
24		27.5			74	99.5	45227400	13.5	60,897	12,770	Ø	.3
25		27			74	99.8	45318400	14	66,847	19,081	Ø	Ø
26		27			69.5	99.9	45408900	13.5	79,601	Ø	Ø	.8
27		NR			NR	NR	NR	NR	Ø	Ø	Ø	.6
28		29.5			74	100.4	45585700	15.5	108,078	19,086	Ø	.3
29		28			70	100.8	45674700	13.5	133,347	25,200	Ø	.3
30		28.5			72	101.0	45763300	10.5	149,140	6,300	Ø	.8
31		29			76	101.4	45854900	7.5	150,000	18,900	Ø	Ø

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Leachate Hauled Month Total: _____

Prepared by: W. Walton

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) July 97

Action	Date															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer Phase IV																
Low Level Operation, depth less than or equal to 12 inches.														1		
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.				NR		NR							NR			
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓		✓	✓	✓
Sump No. 4 Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	✓	✓	NR	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTRF																
Normal Operation.				NR		NR					✓		NR			
If level is greater than 11 feet, increase treatment, hauling , or recirculation.	✓	✓	✓		✓		✓	✓	✓	✓		✓		✓	✓	✓
If level is less than 6 feet, decrease or stop hauling, recirculation.																
* Effluent Pond																
Normal Operation.																
If level is 6 inches or less, stop irrigation, recirculation, hauling.																
If level is greater than 4 feet, increase irrigation, recirculation, hauling.																
Observed runoff of effluent to stormwater basins?																
No.	✓	✓	✓	NR	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.																
Runoff Type / To Basin																
1 = Severe / A, B, C, D																
2 = Moderate																
3 = Minor																

Comments/Remedial Action: No readings 7-4-97 Holiday

* Effluent pond empty for maintance

Prepared by: [signature]

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year)_____

Action	Date														
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.				NR							NR				
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
Sump No. 4 Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.				NR							NR			✓	✓
If level is greater than 11 feet, increase treatment, hauling , or recirculation.	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓		
If level is less than 6 feet, decrease or stop hauling, recirculation.															
Effluent Pond															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.															
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.															
Runoff Type: 1 = Severe; 2 = Moderate; 3 = Minor — To Basin: A, B, C, D															

Comments/Remedial Action: _____

Prepared by: M. Matthews

Environmental Consultants

3012 U.S. Highway 301 North
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

August 19, 1997
File No. 0995029.12

Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Department
P. O. Box 1110
Tampa, Florida 33601

Subject: July 1997, Leachate Water Balance Report Forms
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed operational data from the Southeast County Landfill (SCLF) for July 1997. Attached are the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 1997 updated summary (Table 3). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD).

SCS has summarized below the data included in the Leachate Water Balance Report Form as shown in Table 1. Where appropriate, SCS provides commentary on the monthly data and recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations.

Day (Column I)

This column presents the calender day for the month of July 1997.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the amount of daily rainfall in inches as measured in the field. Total rainfall at the SCLF for July 1997 was 18.6 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. The average depth for recorded days of effluent in the effluent pond for July 1997 was 0 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (in inches) at the bottom of the SCLF. This measurement is based on the daily piezometer measurements taken in the field and represents worst case condition since the piezometer is currently located within the sump area of the SCLF. The average depth of recorded days of leachate over the liner for July 1997 was 28.1 inches (see Figure 1). On July 4,5,6,7, and 8, the depth over the liner reached levels exceeding the Leachate Management Plan limit of 30 inches. SCS believes that the high leachate depth over the liner is due to the low leachate removal rate from the dewatering system during the month of July. Between August 12 through August 18, the HCSWMD completed the redevelopment of wells to increase the leachate removal from the dewatering system. The HCSWMD currently is proceeding with balancing the dewatering system to maximize the leachate removal of the system.

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 3 (TPS-3) and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-3 is measured from an hour-meter and calculated based on an average pumping rate of 180 gallons per minute (gpm). However, based on field observations, it appears that TPS-3 is not performing at the rate of 180 gpm. In order to obtain leachate quantities that are representative of the leachate being removed from dewatering system, the HCSWMD will install a separate flow meter at the TPS-3. The average daily amount of leachate collected and pumped from TPS-3 for July 1997 was approximately 2,300 gallons (Figure 2).

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 5 (TPS-5) and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 currently is measured from the landfill flow meter minus the amount pumped from TPS-3. The average daily amount of leachate collected and pumped from TPS-5 for July 1997 was approximately 82,600 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped to the Leachate Treatment and Reclamation Facility (LTRF) for treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flowmeter near TPS-3. The average daily amount of leachate pumped from the landfill to the LTRF was 84,700 gallons (total of 2,625,400 gallons).

Leachate in 575,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 575,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily gauge level reading. The average daily amount of leachate stored in the tank for July 1997, based on recorded days, was 391,000 gallons. Under normal operating conditions, the amount of leachate stored in the tank fluctuates based on the daily amount of leachate pumped to the LTRF, the daily amount of leachate treated, and the daily amount of leachate hauled from the tank.

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for July 1997 was 0 gallons. The daily amount of leachate treated at the LTRF may increase or decrease depending on the influent loading/concentrations.

Note: The LTRF has not been operational since September 3, 1996 to allow for repairs to the treatment tanks. At this time it is unknown when the LTRF is anticipated to be back in operation.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. Leachate is pumped from the 575,000 gallon raw leachate tank and into a tanker truck for transport. During July 1997, a total of 2,466,447 gallons of leachate was hauled off site compared to a total of 1,595,334 gallons during the previous month. The HCSWMD should continue off site hauling of untreated leachate until the repairs to the LTRF are completed.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF and is measured from the flowmeter at the bypass loading arm. The daily average amount of leachate pumped from the 575,000 gallon leachate tank at the Leachate Treatment and Reclamation Facility (LTRF) for use in dust control/evaporation was 0 gallons for July 1997. Weather permit, the HCSWMD should continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. The effluent pond was drained for maintenance in March 1997. The average daily amount of effluent stored in the effluent pond for July 1997 was 0 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flowmeter at the irrigation pump station. Since the LTRF is shut down for repairs, and the effluent pond is empty for maintenance, effluent was not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in July 1997 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During July 1997, the total amount of effluent used for dust control/evaporation was 0 gallons.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During July 1997, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site.

The total estimated amount of leachate/effluent evaporation for July 1997 was 0 gallons.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Senior Project Engineer

Raymond J. Dever, P.E.
Solid Waste Division Director
SCS ENGINEERS

RJD/LER:ler
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
JULY 1997
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in	Est. Depth	Pumped	Pumped	Leachate	Leachate	Leachate	Total	Leachate	Effluent	Effluent	Effluent	Total	
				Rainfall	Effluent	Over	From	From	Pumped	in 575K	Treated	Leachate	Dust Cont./	Pond	Irrigation	Dust Cont./	Effluent	Landfill
Day	final	active	int.	(in.)	Pond (in.)	Liner (in.)	Sta. No 3 (gal.)	Sta. No. 5 (gal.)	to LTRF (gal.)	Tank (gal.)	at LTRF (gal.)	Hauled (gal.)	Evaporation (gal.)	Storage (gal.)	Evaporation (gal.)	Evaporation (gal.)	Hauled (gal.)	Evaporation (gal.)
1	25.2	5	90.2	0.6	0	29.5	1,125	74,475	75,600	403,000	0	110,316	0	0	0	0	0	0
2	25.2	5	90.2	0	0	30	4,500	71,100	75,600	360,000	0	91,277	0	0	0	0	0	0
3	25.2	5	90.2	0	0	29.5	3,750	67,650	71,400	345,000	0	87,020	0	0	0	0	0	0
4	25.2	5	90.2	1.4	0	NR	NR	***71,400***	***71,400***	NR	0	0	0	0	0	0	0	0
5	25.2	5	90.2	0.7	0	32.5	8,250	62,850	71,100	403,000	0	30,000	0	0	0	0	0	0
6	25.2	5	90.2	0	0	NR	NR	***71,100***	***71,100***	NR	0	0	0	0	0	0	0	0
7	25.2	5	90.2	0.2	0	32	7,875	66,025	73,900	475,000	0	115,982	0	0	0	0	0	0
8	25.2	5	90.2	0	0	32	1,125	74,775	75,900	403,000	0	121,902	0	0	0	0	0	0
9	25.2	5	90.2	1.8	0	28.5	3,000	71,800	74,800	360,000	0	91,262	0	0	0	0	0	0
10	25.2	5	90.2	0.1	0	30	4,125	70,775	74,900	331,000	0	104,564	0	0	0	0	0	0
11	25.2	5	90.2	4	0	25	6,000	64,200	70,200	302,000	0	55,555	0	0	0	0	0	0
12	25.2	5	90.2	0.1	0	27.5	2,850	72,050	74,900	331,000	0	36,499	0	0	0	0	0	0
13	25.2	5	90.2	0	0	NR	NR	***70,200***	***70,200***	NR	0	0	0	0	0	0	0	0
14	25.2	5	90.2	2	0	25.5	1,875	87,175	89,050	446,000	0	79,983	0	0	0	0	0	0
15	25.2	5	90.2	0.8	0	26	1,125	87,925	89,050	432,000	0	67,357	0	0	0	0	0	0
16	25.2	5	90.2	0	0	26.5	0	86,600	86,600	446,000	0	85,250	0	0	0	0	0	0
17	25.2	5	90.2	0.2	0	25.5	0	98,600	98,600	432,000	0	97,787	0	0	0	0	0	0
18	25.2	5	90.2	0	0	26	0	101,100	101,100	432,000	0	61,435	0	0	0	0	0	0
19	25.2	5	90.2	1.7	0	26	3,300	96,800	100,100	461,000	0	0	0	0	0	0	0	0
20	25.2	5	90.2	0.8	0	NR	NR	***92,200***	***92,200***	NR	0	78,000	0	0	0	0	0	0
21	25.2	5	90.2	0.5	0	27	2,625	90,075	92,700	461,000	0	103,062	0	0	0	0	0	0
22	25.2	5	90.2	0.2	0	27.5	1,500	91,200	92,700	432,000	0	96,609	0	0	0	0	0	0
23	25.2	5	90.2	0.4	0	27.5	750	91,350	92,100	389,000	0	103,340	0	0	0	0	0	0
24	25.2	5	90.2	0.3	0	27.5	1,875	94,925	96,800	389,000	0	73,667	0	0	0	0	0	0
25	25.2	5	90.2	0	0	27	1,500	97,200	98,700	403,000	0	85,928	0	0	0	0	0	0
26	25.2	5	90.2	0.8	0	27	600	90,400	91,000	389,000	0	79,601	0	0	0	0	0	0
27	25.2	5	90.2	0.6	0	NR	NR	***90,500***	***90,500***	NR	0	0	0	0	0	0	0	0
28	25.2	5	90.2	0.3	0	29.5	2,625	85,775	88,400	446,000	0	127,164	0	0	0	0	0	0
29	25.2	5	90.2	0.3	0	28	1,875	86,525	88,400	389,000	0	158,547	0	0	0	0	0	0
30	25.2	5	90.2	0.8	0	28.5	1,125	87,875	89,000	302,000	0	155,440	0	0	0	0	0	0
31	25.2	5	90.2	0	0	29	1,875	95,525	97,400	216,000	0	168,900	0	0	0	0	0	0
Total				18.6			65,250	2,560,150	2,625,400		0	2,466,447	0	0	0	0	0	0
Daily Average					0	28.1	2,300	82,600	84,700	391,000	0	94,900	0	0	0	0	0	0
Monthly Average					0	23.6	2,100	82,600	84,700	328,000	0	79,600	0	0	0	0	0	0

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VI calculated based on average 180 gpm and hour conversion.
6. Column VII calculated by subtracting VI from flow meter reading.
7. Column VIII, quantity from flow meter.
8. Column IX, calculated from depth in 575,000 gal. leachate tank.
9. Columns X and XIV, quantities from flow meters.
10. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
11. Column XVII, 80.8% of the daily values from Columns XII, XIV and XV.
12. Values in italic are substitute for missing data and are based on averaged values.
13. Values in bold are estimated.
14. Daily average calculated by dividing the total by the active days in the month.
15. Monthly average calculated by dividing the total by the number of days of the month.

TABLE 2. FIELD DATA ENTRY FORM
JULY 1997
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
									Leachate Hauled							Effluent Hauled		
Day	Active Area (ac.)	Piezometer Phase IV (in.)	Phase IV LCRS Cleanout (in.)	Phase III LCR Cleanout (in.)	Pump Sta. No. 4 (in.)	Pump Sta No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gal.)	Depth in 575K Tank (ft.)	Contractor (gal.)	County (gal.)	Leachate Dust Cont./ Evaporation (gal.)	Rainfall (in.)	Depth in Effl. Pond (in.)	Leachate Treated at LTRF (gal.)	Effluent Irrigation Evaporation (gal.)	Contractor (gal.)	County (gal.)	Effluent Dust Cont./ Evaporation (gal)
1	5	29.5	NR	NR	73	88.0	43,291,800	14	84,945	25,371	0	0.6	0	0	0	0	0	0
2	5	30	NR	NR	72	89.0	43,367,400	12.5	84,977	6,300	0	0.0	0	0	0	0	0	0
3	5	29.5	NR	NR	71	89.8	43,443,000	12	61,602	25,418	0	0.0	0	0	0	0	0	0
4	5	NR	NR	NR	NR	NR	***43,514,400***	NR	0	0	0	1.4	0	0	0	0	0	0
5	5	32.5	NR	NR	76	91.6	43,585,800	14	30,000	0	0	0.7	0	0	0	0	0	0
6	5	NR	NR	NR	NR	NR	***43,656,900***	NR	0	0	0	0.0	0	0	0	0	0	0
7	5	32	NR	NR	76	93.3	43,728,000	16.5	90,734	25,248	0	0.2	0	0	0	0	0	0
8	5	32	NR	NR	75	93.5	43,801,900	14	96,612	25,290	0	0.0	0	0	0	0	0	0
9	5	28.5	NR	NR	70	94.1	43,877,800	12.5	84,962	6,300	0	1.8	0	0	0	0	0	0
10	5	30	NR	NR	78	95.0	43,952,600	11.5	79,271	25,293	0	0.1	0	0	0	0	0	0
11	5	25	NR	NR	76	96.3	44,027,500	10.5	36,514	19,041	0	4.0	0	0	0	0	0	0
12	5	27.5	NR	NR	83	96.9	44,097,700	11.5	36,499	0	0	0.1	0	0	0	0	0	0
13	5	NR	NR	NR	NR	NR	***44,186,750***	NR	0	0	0	0.0	0	0	0	0	0	0
14	5	25.5	NR	NR	75	97.3	44,275,800	15.5	60,917	19,066	0	2.0	0	0	0	0	0	0
15	5	26	NR	NR	84	97.5	44,362,400	15	48,323	19,034	0	0.8	0	0	0	0	0	0
16	5	26.5	NR	NR	81.5	97.5	44,461,000	15.5	78,950	6,300	0	0.0	0	0	0	0	0	0
17	5	25.5	NR	NR	84	97.5	44,562,100	15	78,687	19,100	0	0.2	0	0	0	0	0	0
18	5	26	NR	NR	74	97.5	44,662,200	15	42,430	19,005	0	0.0	0	0	0	0	0	0
19	5	26	NR	NR	72	98.2	44,754,400	16	42,244	0	0	1.7	0	0	0	0	0	0
20	5	NR	NR	NR	NR	NR	***44,847,100***	NR	78,000	0	0	0.8	0	0	0	0	0	0
21	5	27	NR	NR	74	98.7	44,939,800	16	90,462	12,600	0	0.5	0	0	0	0	0	0
22	5	27.5	NR	NR	75	99.0	45,031,900	15	96,609	0	0	0.2	0	0	0	0	0	0
23	5	27.5	NR	NR	75	99.1	45,128,700	13.5	90,740	12,600	0	0.4	0	0	0	0	0	0
24	5	27.5	NR	NR	74	99.5	45,227,400	13.5	60,897	12,770	0	0.3	0	0	0	0	0	0
25	5	27	NR	NR	74	99.8	45,318,400	14	66,847	19,081	0	0.0	0	0	0	0	0	0
26	5	27	NR	NR	69.5	99.9	45,408,900	13.5	79,601	0	0	0.8	0	0	0	0	0	0
27	5	NR	NR	NR	NR	NR	***45,497,300***	NR	0	0	0	0.6	0	0	0	0	0	0
28	5	29.5	NR	NR	74	100.4	45,585,700	15.5	108,078	19,086	0	0.3	0	0	0	0	0	0
29	5	28	NR	NR	70	100.8	45,674,700	13.5	133,347	25,200	0	0.3	0	0	0	0	0	0
30	5	28.5	NR	NR	72	101.0	45,763,300	10.5	149,140	6,300	0	0.8	0	0	0	0	0	0
31	5	29	NR	NR	76	101.4	45,854,900	7.5	150,000	18,900	0	0.0	0	0	0	0	0	0

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Notes:

1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column VIII, reading from flow meter.
5. Column XIII, Trace is less than 0.01 inches.
6. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
7. Column III, Phase IV piezometer began monitoring on 7/10/95.
8. Columns XV and XVI, quantities from flow meters.
9. Column IX, field measured.
10. ColumnVII, hour reading from TPS-3.

TABLE 3. 1997 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change in Storage For Month (gal.)
January	3.30	0	1,892,150	2,006,378	0	0	0	0	10,470	1,892,150	2,006,378	(114,228)
February	2.20	0	1,672,700	1,558,554	0	0	0	0	49,290	1,672,700	1,558,554	114,146
March	2.40	0	1,587,700	1,610,179	196,000	0	0	0	140,080	1,587,700	1,806,179	(218,479)
April	6.50	0	1,647,900	1,534,642	92,000	0	0	0	0	1,647,900	1,626,642	21,258
May	5.70	0	1,931,600	1,794,472	151,000	0	0	0	0	1,931,600	1,945,472	(13,872)
June	9.30	0	2,022,500	1,595,334	77,000	0	0	0	64,000	2,022,500	1,672,334	350,166
July	18.60	0	2,625,400	2,466,447	0	0	0	0	0	2,625,400	2,466,447	158,953
August										0	0	0
September										0	0	0
October										0	0	0
November										0	0	0
December										0	0	0
YTD Total	48.00	0	13,379,950	12,566,006	516,000	0	0	0	263,840	13,379,950	13,082,006	

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Note:

1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

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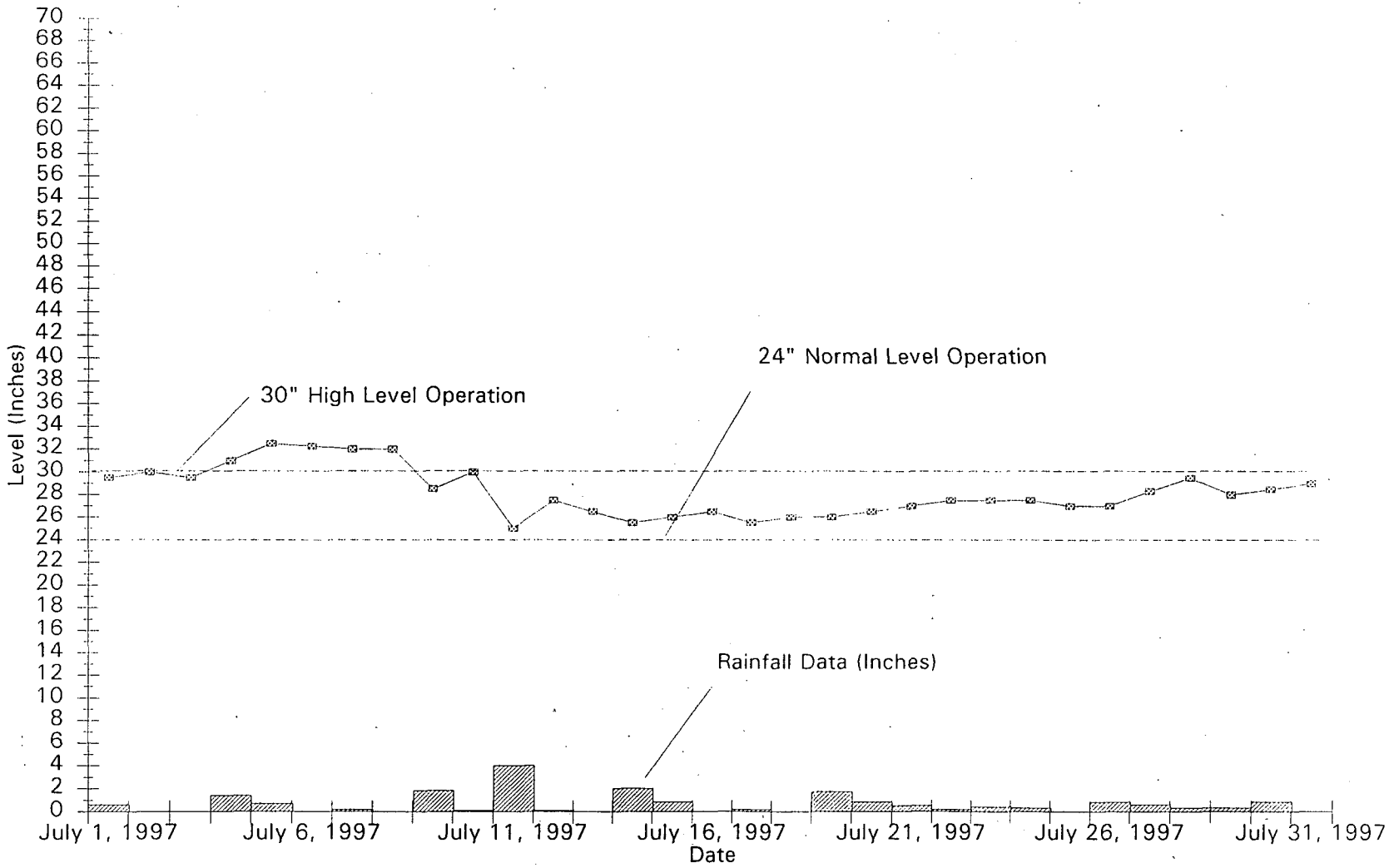
Figure 1.

Phase IV Piezometer



SCS ENGINEERS

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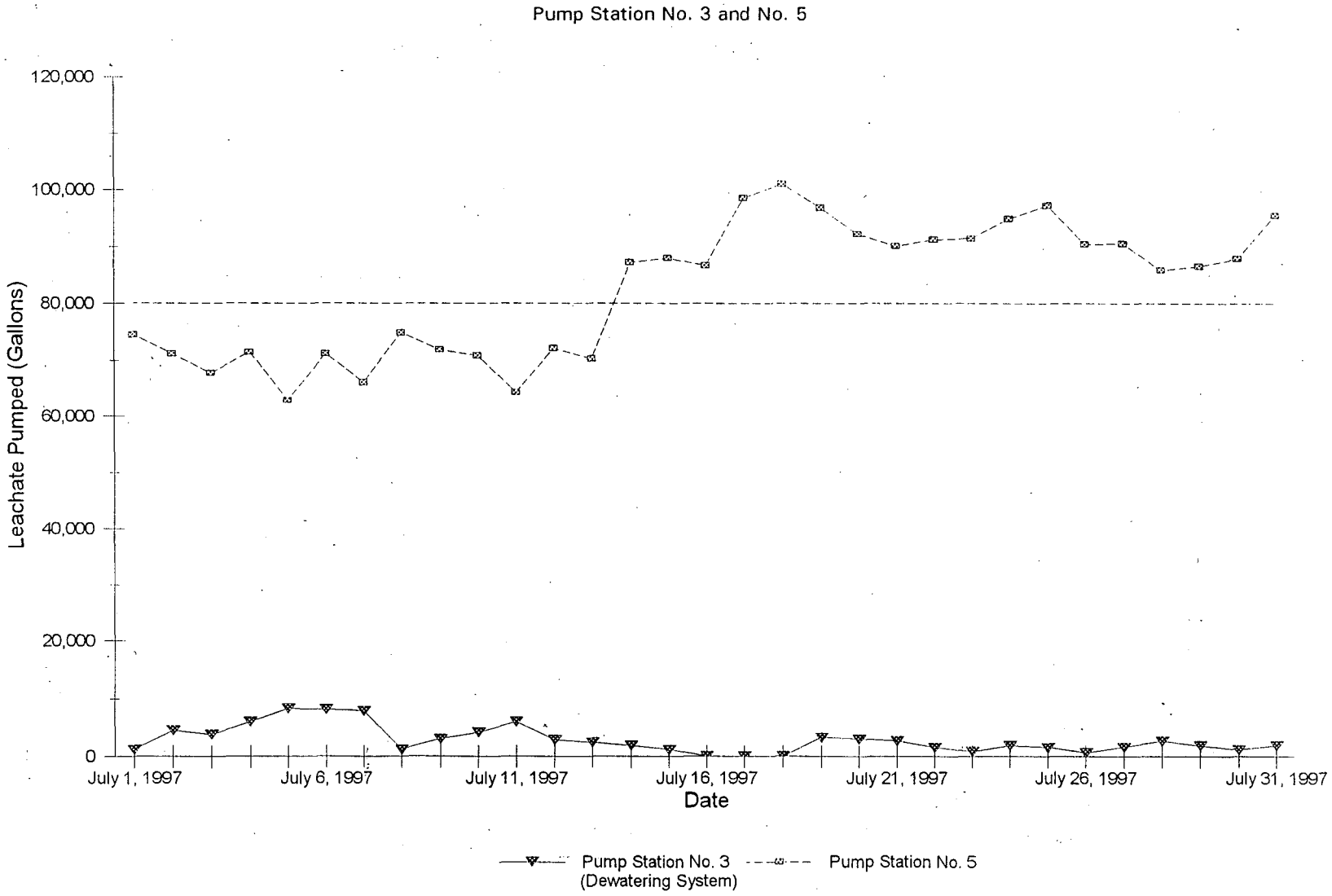
Figure 2.



HILLSBOROUGH COUNTY

Florida

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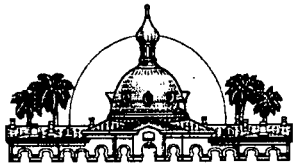
JUL 16 1997
D E P

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS
Dottie Berger
Joe Chillura
Chris Hart
Jim Norman
Ed Turanchik
Jan Platt
Thomas Scott



Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimmie Keel

July 15, 1997

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of June 1997. In addition, the SWMD is providing the June 1997 field data forms for the Landfill, the daily leachate and collection system evaluation reports, the top of clay survey, and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for June 1997 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from TPS-5 and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of June 1997 was 26.7 inches, which is below the LMP 30 inch limit with the exception of June 28, 1997 when the depth reached 30.5 inches.

The SWMD and SCS believe that the increase in depth is due to the increase in rainfall and the reduced leachate removal rate from the wellpoint dewatering system. The SWMD has retained a contractor to redevelop the dewatering system wells in an attempt to increase the leachate removal rate from the wellpoint system. The SWMD will keep the DEP informed of the impact of the maintenance activity on the performance of the system.

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

Environmental Consultants

3012 U.S. Highway 301 North
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

July 14, 1997
File No. 0995029.12

RECEIVED
JUL 15 1997
by Solid Waste Management

Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Department
P. O. Box 1110
Tampa, Florida 33601

Subject: June 1997, Leachate Water Balance Report Forms
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed operational data from the Southeast County Landfill (SCLF) for June 1997. Attached is the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), the 1997 updated summary (Table 3), and the top of clay survey (Table 4). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD).

SCS has summarized below the data included in the Leachate Water Balance Report Form as shown in Table 1. Where appropriate, SCS provides commentary on the monthly data and recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations.

Day (Column I)

This column presents the calender day for the month of June 1997.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the amount of daily rainfall in inches as measured in the field. Total rainfall at the SCLF for June 1997 was 9.3 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation

frequency/duration and effluent hauled from the pond. The average depth for recorded days of effluent in the effluent pond for June 1997 was 0 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (in inches) at the bottom of the SCLF. This measurement is based on the daily piezometer measurements taken in the field and represents worst case condition since the piezometer is currently located within the sump area of the SCLF. The average depth of recorded days of leachate over the liner for June 1997 was 26.7 inches (see Figure 1). On June 28, the depth over the liner reached 30.5 inches thereby exceeding the Leachate Management Plan limit of 30 inches. SCS believes that the increase in leachate depth over the liner, as compared to May 1997, is due to the increase in rainfall and the current low leachate removal rate from the dewatering system. In an attempt to increase the leachate removal from the dewatering system, the HCSWMD has retained an outside contractor to redevelop the dewatering system wells.

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 3 (TPS-3) and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-3 is measured from an hour-meter and calculated based on an average pumping rate of 180 gallons per minute (gpm). However, based on field observations, it appears that TPS-3 is not performing at the rate of 180 gpm; therefore an average removal amount was used for the month of June. The average daily amount of leachate collected and pumped from TPS-3 for June 1997 was approximately 4,200 gallons (Figure 2). This amount is representative of the leachate being removed from the dewatering system.

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 5 (TPS-5) and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 is measured from the landfill flow meter minus the amount pumped from TPS-3. TPS-5 was not operational for a period on several days including: June 3, 4, and 20. The average daily amount of leachate collected and pumped from TPS-5 for June 1997 was approximately 63,400 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped to the Leachate Treatment and Reclamation Facility (LTRF) for treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flowmeter near TPS-3. The average daily amount of leachate pumped from the landfill to the LTRF was 67,400 gallons (total of 2,022,500 gallons).

Leachate in 575,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 575,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily gauge level reading. The average daily amount of leachate stored in the tank for June 1997, based on recorded days, was 342,000 gallons. Under normal operating conditions, the amount of leachate stored in the tank fluctuates based on the daily amount of leachate pumped to the LTRF, the daily amount of leachate treated, and the daily amount of leachate hauled from the tank.

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for June 1997 was 0 gallons. The daily amount of leachate treated at the LTRF may increase or decrease depending on the influent loading/concentrations.

Note: The LTRF has not been operational since September 3, 1996 to allow for repairs to the treatment tanks. At this time it is unknown when the LTRF is anticipated to be back in operation.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. Leachate is pumped from the 575,000 gallon raw leachate tank and into a tanker truck for transport. During June 1997, a total of 1,595,334 gallons of leachate was hauled off site compared to a total of 1,794,472 gallons during the previous month. The HCSWMD should continue off site hauling of untreated leachate until the repairs to the LTRF are completed.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF and is measured from the flowmeter at the bypass loading arm. The daily average amount of leachate pumped from the 575,000 gallon leachate tank at the Leachate Treatment and Reclamation Facility (LTRF) for use in dust control/evaporation was 8,600 gallons for June 1997, compared to 8,000 gallons during the previous month. A total of 77,000 gallons was used for dust control/evaporation in June 1997. HCSWMD should continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. As indicated above, the effluent pond was drained for maintenance in March 1997. The average daily amount of effluent stored in the effluent pond for June 1997 was 0 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flowmeter at the irrigation pump station. Since the LTRF is shut down for repairs, and the effluent pond is empty for maintenance, effluent was not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in June 1997 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During June 1997, the total amount of effluent used for dust control/evaporation was 0 gallons, as was the case the previous month.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site is measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During June 1997, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site.

The total estimated amount of leachate/effluent evaporation for June 1997 was 64,000 gallons, compared to 127,000 gallons during the previous month. This reduction was due to the reduction of leachate dust control/evaporation.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Senior Project Engineer

Robert B. Gardner, P.E.
Vice President
SCS ENGINEERS

RBG/LER:ler
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
JUNE 1997
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in	Est. Depth	Pumped	Pumped	Leachate	Leachate	Leachate	Total	Leachate	Effluent	Effluent	Effluent	Total	
					Effluent	Over	From	From	Pumped	in 575K	Treated	Leachate	Dust Cont./	Pond	Irrigation	Dust Cont./	Effluent	Landfill
Day	final	active	int.	Rainfall (in.)	Pond (in.)	Liner (in.)	Sta. No 3 (gal.)	Sta. No. 5 (gal.)	to LTRF (gal.)	Tank (gal.)	at LTRF (gal.)	Hauled (gal.)	Evaporation (gal.)	Storage (gal.)	Evaporation (gal.)	Evaporation (gal.)	Hauled (gal.)	Evaporation (gal.)
1	25.2	5	90.2	0	0	NR	***3,000***	***61,200***	***64,200***	NR	0	0	0	0	0	0	0	0
2	25.2	5	90.2	0	0	26	2,700	59,000	61,700	331,000	0	84,594	7,000	0	0	0	0	6,000
3	25.2	5	90.2	0	0	25.5	0	37,400	37,400	302,000	0	85,961	7,000	0	0	0	0	6,000
4	25.2	5	90.2	0	0	25	3,500	81,500	85,000	259,000	0	18,600	7,000	0	0	0	0	6,000
5	25.2	5	90.2	0	0	24.5	***4,000***	66,800	70,800	302,000	0	104,005	7,000	0	0	0	0	6,000
6	25.2	5	90.2	0	0	23.5	***4,000***	63,200	67,200	259,000	0	85,910	7,000	0	0	0	0	6,000
7	25.2	5	90.2	0	0	23.5	***4,000***	43,150	47,150	245,000	0	55,720	0	0	0	0	0	0
8	25.2	5	90.2	0	0	NR	***3,000***	***44,150***	***47,150***	NR	0	0	0	0	0	0	0	0
9	25.2	5	90.2	0	0	24	***3,000***	62,500	65,500	274,000	0	61,558	0	0	0	0	0	0
10	25.2	5	90.2	0	0	25	3,600	61,600	65,200	230,000	0	62,373	0	0	0	0	0	0
11	25.2	5	90.2	2.5	0	25	***4,000***	58,200	62,200	259,000	0	54,080	0	0	0	0	0	0
12	25.2	5	90.2	0	0	27	3,600	60,600	64,200	274,000	0	43,518	0	0	0	0	0	0
13	25.2	5	90.2	2.7	0	26	***4,000***	61,900	65,900	288,000	0	55,382	0	0	0	0	0	0
14	25.2	5	90.2	0.3	0	29	3,600	77,450	81,050	302,000	0	24,353	0	0	0	0	0	0
15	25.2	5	90.2	0	0	NR	***3,000***	***78,050***	***81,050***	NR	0	0	0	0	0	0	0	0
16	25.2	5	90.2	0	0	26.5	***3,000***	79,000	82,000	403,000	0	50,020	0	0	0	0	0	0
17	25.2	5	90.2	0.2	0	26.5	***4,000***	74,300	78,300	403,000	0	98,275	0	0	0	0	0	0
18	25.2	5	90.2	0	0	28	***4,000***	67,100	71,100	403,000	0	36,674	0	0	0	0	0	0
19	25.2	5	90.2	0	0	27	5,760	58,140	63,900	403,000	0	103,134	0	0	0	0	0	0
20	25.2	5	90.2	0	0	27	4,680	67,120	71,800	374,000	0	61,742	14,000	0	0	0	0	11,000
21	25.2	5	90.2	0	0	27	15,120	52,630	67,750	374,000	0	18,060	7,000	0	0	0	0	6,000
22	25.2	5	90.2	0	0	NR	***5,400***	***62,350***	***67,750***	NR	0	0	0	0	0	0	0	0
23	25.2	5	90.2	0	0	28	***5,400***	61,500	66,900	475,000	0	66,744	14,000	0	0	0	0	11,000
24	25.2	5	90.2	1	0	28	***4,000***	59,100	63,100	403,000	0	114,477	0	0	0	0	0	0
25	25.2	5	90.2	0.3	0	28	3,375	58,525	61,900	389,000	0	72,765	0	0	0	0	0	0
26	25.2	5	90.2	2.3	0	28.5	1,875	62,525	64,400	360,000	0	60,538	0	0	0	0	0	0
27	25.2	5	90.2	0	0	29.5	1,875	73,125	75,000	389,000	0	24,196	0	0	0	0	0	0
28	25.2	5	90.2	0	0	30.5	6,300	68,600	74,900	389,000	0	42,215	0	0	0	0	0	0
29	25.2	5	90.2	0	0	NR	***3,937***	***70,963***	***74,900***	NR	0	0	0	0	0	0	0	0
30	25.2	5	90.2	0	0	29.5	***3,938***	69,162	73,100	461,000	0	110,440	7,000	0	0	0	0	6,000
Total				9.3			121,660	1,900,840	2,022,500		0	1,595,334	77,000	0	0	0	0	64,000
Daily Average					0	26.7	4,200	63,400	67,400	342,000	0	63,800	8,600	0	0	0	0	7,000
Monthly Average					0	22.3	4,100	63,400	67,400	285,000	0	53,200	2,600	0	0	0	0	2,000

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VI calculated based on average 180 gpm and hour conversion.
6. Column VII calculated by subtracting VI from flow meter reading.
7. Column VIII, quantity from flow meter.
8. Column IX, calculated from depth in 575,000 gal. leachate tank.
9. Columns X and XIV, quantities from flow meters.
10. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
11. Column XVII, 80.8% of the daily values from Columns XII, XIV and XV.
12. Values in italic are substitute for missing data and are based on averaged values.
13. Values in bold are estimated.
14. Daily average calculated by dividing the total by the active days in the month.
15. Monthly average calculated by dividing the total by the number of days of the month.

TABLE 2. FIELD DATA ENTRY FORM
JUNE 1997
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
							Landfill Flow		Leachate Hauled		Leachate			Leachate	Effluent	Effluent Hauled		Effluent
Day	Active Area (ac.)	Piezometer Phase IV (in.)	Phase IV LCRS Cleanout (in.)	Phase III LCR Cleanout (in.)	Pump Sta. No. 4 (in.)	Pump Sta No. 3 Reading (hours)	Meter Pump Sta. No. 5 (gal.)	Depth in 575K Tank (ft.)	Contractor (gal.)	County (gal.)	Dust Cont./ Evaporation (gal.)	Rainfall (in.)	Depth in Effl. Pond (in.)	Treated at LTRF (gal.)	Irrigation Evaporation (gal.)	Contractor (gal.)	County (gal.)	Dust Cont./ Evaporation (gal)
1	5	NR	NR	NR	NR	***51.6***	***41,269,300***	NR	0	0	0	0.0	0	0	0	0	0	0
2	5	26	NR	NR	71	51.7	41,333,500	11.5	84,594	0	7,000	0.0	0	0	0	0	0	0
3	5	25.5	NR	NR	71	51.7	41,395,200	10.5	60,719	25,242	7,000	0.0	0	0	0	0	0	0
4	5	25	NR	NR	70	54.6	41,432,600	9	6,000	12,600	7,000	0.0	0	0	0	0	0	0
5	5	24.5	NR	NR	69.5	57.5	41,517,600	10.5	85,105	18,900	7,000	0.0	0	0	0	0	0	0
6	5	23.5	NR	NR	67	61.5	41,588,400	9	60,576	25,334	7,000	0.0	0	0	0	0	0	0
7	5	23.5	NR	NR	65	66.3	41,655,600	8.5	30,424	25,296	0	0.0	0	0	0	0	0	0
8	5	NR	NR	NR	NR	***68.2***	***41,702,750***	NR	0	0	0	0.0	0	0	0	0	0	0
9	5	24	NR	NR	64	70.1	41,749,900	9.5	36,358	25,200	0	0.0	0	0	0	0	0	0
10	5	25	NR	NR	63	70.4	41,815,400	8	36,763	25,610	0	0.0	0	0	0	0	0	0
11	5	25	NR	NR	63	72.9	41,880,600	9	41,480	12,600	0	2.5	0	0	0	0	0	0
12	5	27	NR	NR	74	73.2	41,942,800	9.5	24,516	19,002	0	0.0	0	0	0	0	0	0
13	5	26	NR	NR	73	74.4	42,007,000	10	36,482	18,900	0	2.7	0	0	0	0	0	0
14	5	29	NR	NR	84.5	74.7	42,072,900	10.5	24,353	0	0	0.3	0	0	0	0	0	0
15	5	NR	NR	NR	NR	***75.9***	***42,153,950***	NR	0	0	0	0.0	0	0	0	0	0	0
16	5	26.5	NR	NR	78.5	77.1	42,235,000	14	24,629	25,391	0	0.0	0	0	0	0	0	0
17	5	26.5	NR	NR	76	77.9	42,317,000	14	72,965	25,310	0	0.2	0	0	0	0	0	0
18	5	28	NR	NR	75	78.7	42,395,300	14	30,374	6,300	0	0.0	0	0	0	0	0	0
19	5	27	NR	NR	75	79.2	42,466,400	14	77,934	25,200	0	0.0	0	0	0	0	0	0
20	5	27	NR	NR	73	79.6	42,530,300	13	36,542	25,200	14,000	0.0	0	0	0	0	0	0
21	5	27	NR	NR	73	81.0	42,602,100	13	18,060	0	7,000	0.0	0	0	0	0	0	0
22	5	NR	NR	NR	NR	***81.5***	***42,669,850***	NR	0	0	0	0.0	0	0	0	0	0	0
23	5	28	NR	NR	71	82.0	42,737,600	16.5	41,529	25,215	14,000	0.0	0	0	0	0	0	0
24	5	28	NR	NR	71	83.2	42,804,500	14	89,277	25,200	0	1.0	0	0	0	0	0	0
25	5	28	NR	NR	71	83.9	42,867,600	13.5	66,465	6,300	0	0.3	0	0	0	0	0	0
26	5	28.5	NR	NR	71.5	84.3	42,929,500	12.5	60,538	0	0	2.3	0	0	0	0	0	0
27	5	29.5	NR	NR	82	84.7	42,993,900	13.5	24,196	0	0	0.0	0	0	0	0	0	0
28	5	30.5	NR	NR	79	86.1	43,068,900	13.5	42,215	0	0	0.0	0	0	0	0	0	0
29	5	NR	NR	NR	NR	***87.0***	***43,143,800***	NR	0	0	0	0.0	0	0	0	0	0	0
30	5	29.5	NR	NR	75	87.8	43,218,700	16	84,949	25,491	7,000	0.0	0	0	0	0	0	0

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Notes:

1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column VIII, reading from flow meter.
5. Column XIII, Trace is less than 0.01 inches.
6. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
7. Column III, Phase IV piezometer began monitoring on 7/10/95.
8. Columns XV and XVI, quantities from flow meters.
9. Column IX, field measured.
10. ColumnVII, hour reading from TPS-3.

TABLE 3. 1997 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change in Storage For Month (gal.)
January	3.30	0	1,892,150	2,006,378	0	0	0	0	10,470	1,892,150	2,006,378	(114,228)
February	2.20	0	1,672,700	1,558,554	0	0	0	0	49,290	1,672,700	1,558,554	114,146
March	2.40	0	1,587,700	1,610,179	196,000	0	0	0	140,080	1,587,700	1,806,179	(218,479)
April	6.50	0	1,647,900	1,534,642	92,000	0	0	0	0	1,647,900	1,626,642	21,258
May	5.70	0	1,931,600	1,794,472	151,000	0	0	0	0	1,931,600	1,945,472	(13,872)
June	9.30	0	2,022,500	1,595,334	77,000	0	0	0	64,000	2,022,500	1,672,334	350,166
July										0	0	0
August										0	0	0
September										0	0	0
October										0	0	0
November										0	0	0
December										0	0	0
YTD Total	29.40	0	10,754,550	10,099,559	516,000	0	0	0	263,840	10,754,550	10,615,559	

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Note:

1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

TABLE 4. APPROXIMATE TOP OF CLAY ELEVATIONS
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FL

	PHASE III	PHASE IV			PHASE VI		
DATE	LCRS Cleanout	LCRS Cleanout	Piezometer	Pump Control Well	Pump Station No. 3	Pump Station No. 4	Settling Plate
28-Dec-93	NR	NR	NR	NR	118.97	NR	NR
05-Dec-94	NR	NR	NR	NR	118.76	NR	NR
26-Jan-95	NR	NR	NR	NR	118.59	122.01	NR
22-Feb-95	119.89	118.09	NR	NR	118.59	122.00	NR
13-Jul-95	NR	NR	NR	NR	118.50	121.98	NR
21-Nov-95	119.81	117.80	116.45	116.55	118.45	121.93	NR
07-Dec-95	NR	NR	NR	NR	NR	NR	117.35
06-Jun-96	119.75	117.69	116.20	116.26	118.35	121.87	116.96
02-Oct-96	119.80	117.66	116.14	116.21	118.15	121.97	116.95
20-Jan-97	119.70	117.54	115.97	116.00	118.04	121.88	116.85
02-May-97	119.68	117.43	115.92	115.94	118.04	121.88	116.79

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Figure 1.

Phase IV Piezometer

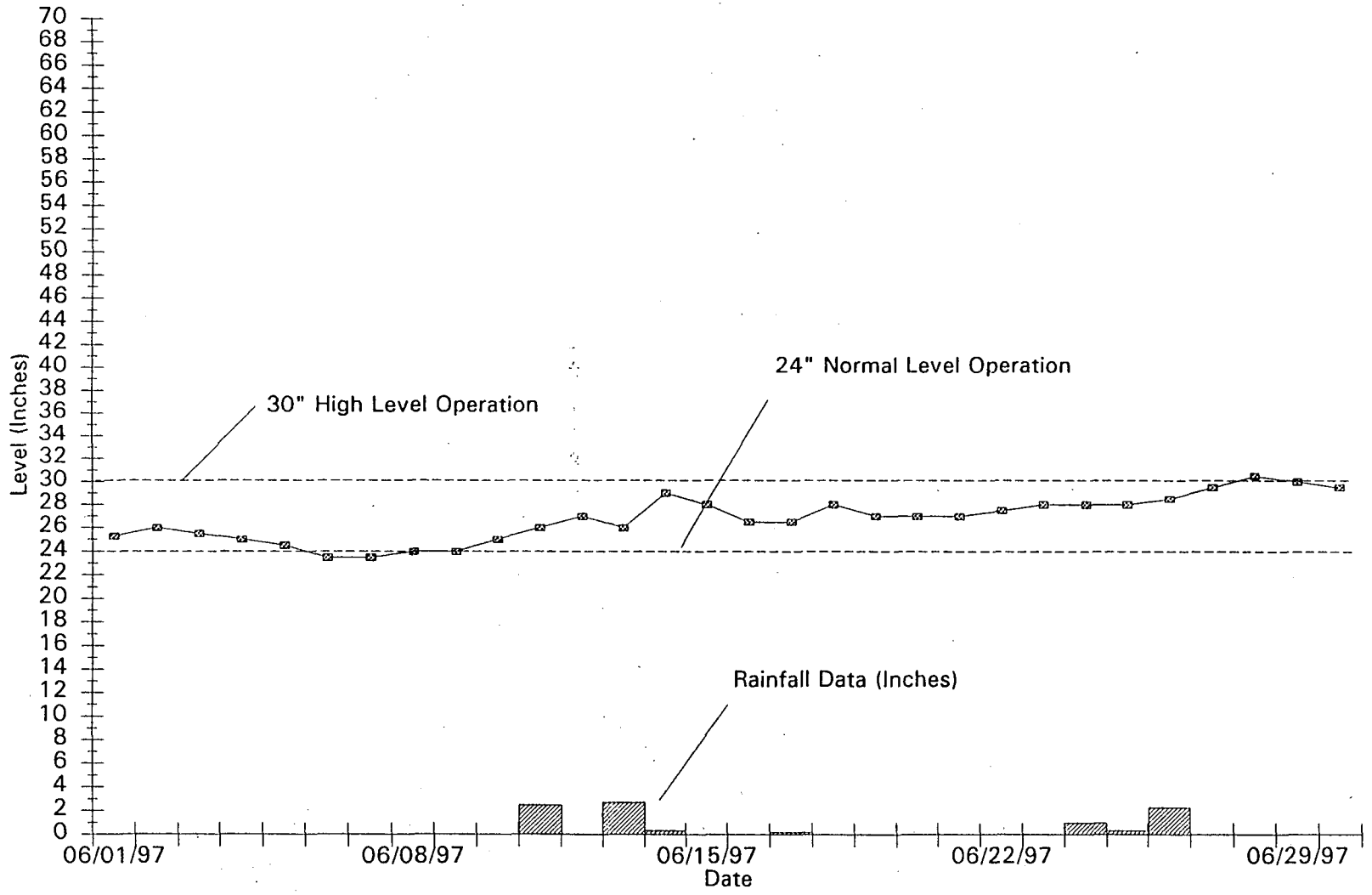

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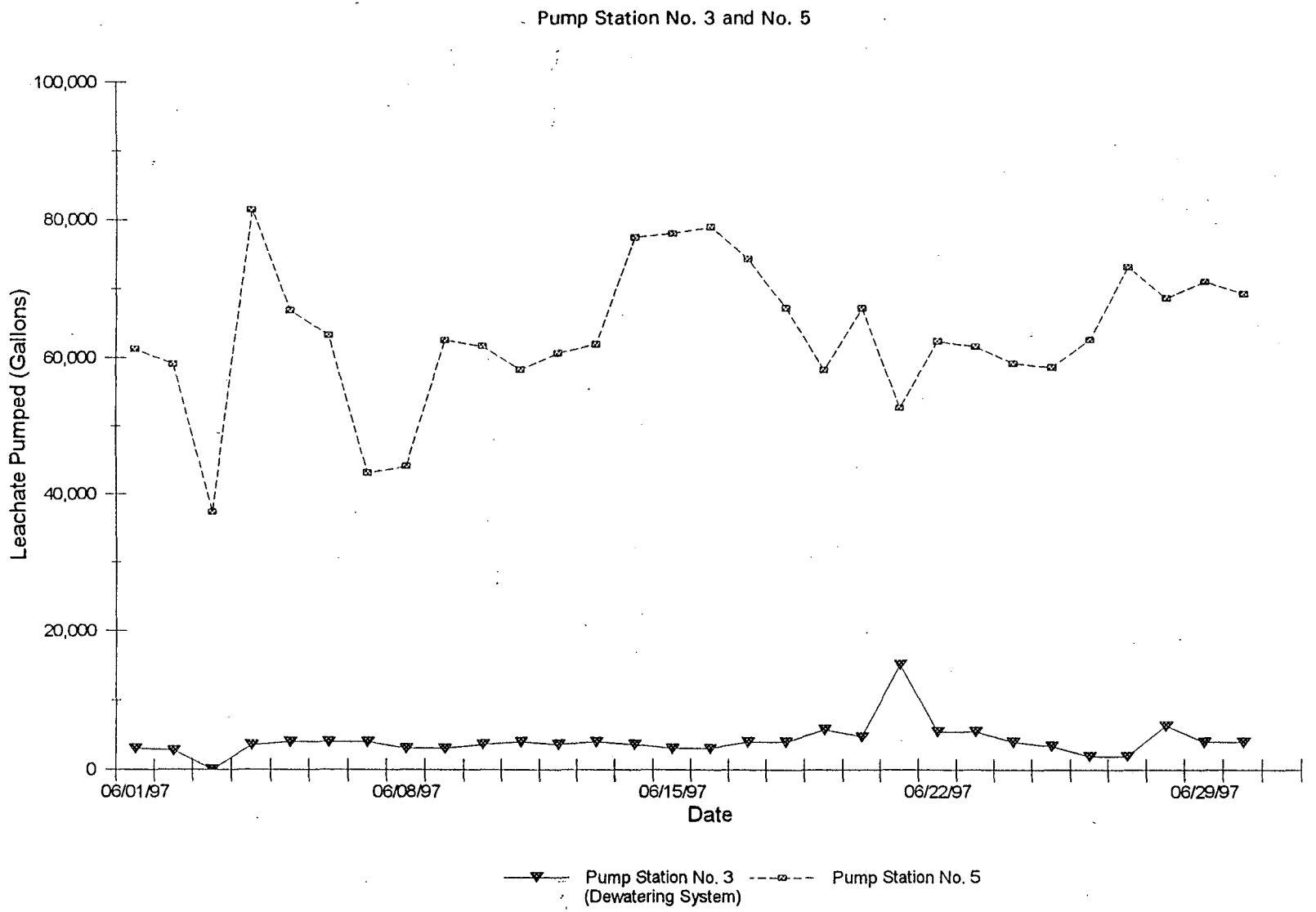
Figure 2.



SCS ENGINEERS

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) June 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		NR			NR	NR	NR	NR	Ø	Ø		
2		26			71	51.7	41333500	11.5	84,594	Ø	7,000	Ø
3		25.5			71	51.7	41395200	10.5	60,719	25,242	7,000	Ø
4		25			70	54.6	41432600	9	6,000	12,600	7,000	Ø
5		24.5			69.5	57.5	41517600	10.5	85,105	18,900	7,000	Ø
6		23.5			67	61.5	41588400	9	60,576	25,334	7,000	Ø
7		23.5			65	66.3	41655600	8.5	30,424	25,296	Ø	Ø
8		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
9		24			64	70.1	41749900	9.5	36,358	25,200	Ø	Ø
10		25			63	70.4	41815400	8	36,763	25,610	Ø	Ø
11		25			63	72.9	41880600	9	41,480	12,600	Ø	2.5
12		27			74	73.2	41942800	9.5	24,516	19,002	Ø	Ø
13		26			73	74.4	42007000	10	36,482	18,900	Ø	2.7
14		29			84.5	74.7	42072900	10.5	24,353	Ø	Ø	.3
15		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
16		26.5			78.5	77.1	42235000	14	24,629	25,391	Ø	Ø

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Prepared by: M. Walther

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) June 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		26.5			76	77.9	42317000	14	72,965	25,310	Ø	.2
18		28			75	78.7	42395300	14	30,374	6,300	Ø	Ø
19		27			75	79.2	42466400	14	77,934	25,200	Ø	Ø
20		27			73	79.6	42530300	13	36,542	25,200	14,000	Ø
21		27			73	81.0	42602100	13	18,060	Ø	7,000	Ø
22		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
23		28			71	82.0	42737600	16.5	41,529	25,215	14,000	Ø
24		28			71	83.2	42804500	14	89,277	25,200	Ø	1.0
25		28			71	83.9	42867600	13.5	66,465	6,300	Ø	.3
26		28.5			71.5	84.3	42929500	12.5	60,538	Ø	Ø	2.3
27		29.5			82	84.7	42993900	13.5	24,196	Ø	Ø	Ø
28		30.5			79	86.1	43068900	13.5	42,215	Ø	Ø	Ø
29		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
30		29.5			75	87.8	43218700	16	84,949	25,491	7,000	Ø
31												

f:\project\0995029.11\leachate\leachqua.wb2

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Leachate Hauled Month Total: _____

Prepared by: W. Wallace

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) June 97

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									

(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: Treatment plant not in operation -
Effluent pond empty for maintance

Prepared by: M. Walters

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) June 97

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: _____

Prepared by: W. Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) June 97

Action	Date 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer Phase IV																
Low Level Operation, depth less than or equal to 12 inches.																
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.	NR					✓	✓	NR	✓						NR	
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.		✓	✓	✓	✓					✓	✓	✓	✓	✓		✓
Sump No. 4 Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTRF																
Normal Operation.	NR		✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	
If level is greater than 11 feet, increase treatment, hauling , or recirculation.		✓														✓
If level is less than 6 feet, decrease or stop hauling, recirculation.																
* Effluent Pond																
Normal Operation.																
If level is 6 inches or less, stop irrigation, recirculation, hauling.																
If level is greater than 4 feet, increase irrigation, recirculation, hauling.																
Observed runoff of effluent to stormwater basins?																
No.	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.																

Runoff Type	To Basin
1 = Severe	A, B, C, D
2 = Moderate	
3 = Minor	

Comments/Remedial Action: Effluent pond empty for maintance

Prepared by: M. Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) June 97

Action	Date														
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.						NR							NR		
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	
Sump No. 4 Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.						NR							NR		
If level is greater than 11 feet, increase treatment, hauling , or recirculation.	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	
If level is less than 6 feet, decrease or stop hauling, recirculation.															
✳ Effluent Pond															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.															
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.															
Runoff Type / To Basin 1 = Severe 2 = Moderate 3 = Minor A, B, C, D															

Comments/Remedial Action: Effluent pond empty for maintance

Prepared by M. Mathews

Bob RD
WHAT ABT 3½" "REPORTER" DISCUSSED?
WHAT ABT LEVEL? HOW LONG?

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 7/10/97 Subject SE LF LEACHATE

Time 9:15 Permit No.

County Hills

M Larry Ruiz Telephone No. 621 0080

Representing SCS

[ ] Phoned Me [✓] Was Called [ ] Scheduled Meeting [ ] Unscheduled Meeting

Other Individuals Involved in Conversation/Meeting

Summary of Conversation/Meeting

I DISCUSSED LEACHATE REPORTS:

1. GOAL OF 27" MAY BE TOO HIGH, LR SAID HYDROGRAPH IS USED FOR GOAL. I SAID USE 24" FOR DRY MONTHS.
2. AVERAGE "DAILY" AMOUNTS TOO HIGH, MUST USE TOTAL # DAY/MONTH FOR AVERAGE NOT JUST DAYS OF PUMPING. Columns #VI, XI, XVI
3. LARRY R SAID DEWATERING IN PHASE IV TO BE CLEANED TO INCREASE PRODUCTION (WAS 9000 GPD NOW IS 3000 GPD)
4. LARRY R SAID TANK REPAIR NOT SCHEDULED YET
5. SETTLEMENT DATA REQUESTED, LARRY R WILL SEND IN WITH NEXT REPORT (SUMP IS NOT OBVIOUSLY SHIFTING TO PHASE VI AS MUCH AS HOPED)
6. I EXPRESSED CONCERN THAT LEACHATE REMOVAL IN 1997 IS DOWN BY 200,000 GPM FROM 1996

(continue on another sheet, if necessary)

Signature

Title

PA-01
1/96
pap

HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS
Dottie Berger
Joe Chillura
Chris Hart
Jim Norman
Ed Turanchik
Jan Platt
Thomas Scott

Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimmie Keel

June 12, 1997

RECEIVED
JUN 16 1997
D E P

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of May 1997. In addition, the SWMD is providing the May 1997 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 (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for May 1997 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from TPS-5 and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of May 1997 was 25.5 inches, which is within the LMP goal for May 1997 of approximately 25 inches.

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

Environmental Consultants

3012 U.S. Highway 301 N
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

June 10, 1997
File No. 0995029.12

Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Department
P. O. Box 1110
Tampa, Florida 33601

Subject: May 1997, Leachate Water Balance Report Forms
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed operational data from the Southeast County Landfill (SCLF) for May 1997. Attached is the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 1997 updated summary (Table 3). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD).

SCS has summarized below the data included in the Leachate Water Balance Report Form as shown in Table 1. Where appropriate, SCS provides commentary on the monthly data and recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations.

Day (Column I)

This column presents the calender day for the month of May 1997.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the amount of daily rainfall in inches as measured in field. Total rainfall at the SCLF for May 1997 was 5.7 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. The average depth for recorded days of effluent in the effluent pond for May 1997 was 0 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (in inches) at the bottom of the SCLF. This measurement is based on the daily piezometer measurements taken in the field and represents worst case condition since the piezometer is currently located within the sump area of the SCLF. The average depth of recorded days of leachate over the liner for May 1997 was 25.5 inches (see Figure 1). The Leachate Management Plan (LMP) leachate depth goal for May 1997 is 25 inches.

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 3 (TPS-3) and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-3 is measured from an hour-meter and calculated based on an average pumping rate of 180 gallons per minute. The average daily amount of leachate collected and pumped from TPS-3 for May 1997 was approximately 3,000 gallons (Figure 2).

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 5 (TPS-5) and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 is measured from the landfill flow meter minus the amount pumped from TPS-3. TPS-5 was not operational for a period on several days including: May 2 , May 20 for one half day, May 22 and 23, and for an unknown period of time on May 24. The average daily amount of leachate collected and pumped from TPS-5 for May 1997 was approximately 59,000 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped to the Leachate Treatment and Reclamation Facility (LTRF) for treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flowmeter near TPS-3. The average daily amount of leachate pumped from the landfill to the LTRF was 62,000 gallons (total of 1,931,600 gallons).

Leachate in 500,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 500,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily gauge level reading. The average daily amount of leachate stored in the tank for May 1997, based on recorded days, was 263,000 gallons. Under normal operating conditions, the amount of leachate stored in the tank fluctuates based on the daily amount of leachate pumped to the LTRF, the daily amount of leachate treated, and the daily amount of leachate hauled from the tank.

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for May 1997 was 0 gallons. The daily amount of leachate treated at the LTRF may increase or decrease depending on the influent loading/concentrations.

Note: The LTRF has not been operational since September 3, 1996 to allow for repairs to the treatment tanks. The LTRF is anticipated to be back in operation in August 1997.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. Leachate is pumped from the 500,000 gallon raw leachate tank and into a tanker truck for transport. During May 1997, a total of 1,794,472 gallons of leachate was hauled off site compared to a total of 1,534,642 gallons during the previous month. The HCSWMD should continue off site hauling of untreated leachate until the repairs to the LTRF are completed.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF is measured from the flowmeter at the bypass loading arm. The daily average amount of leachate pumped from the 500,000 gallon leachate tank at the Leachate Treatment and Reclamation Facility (LTRF) for use in dust control/evaporation was 8,000 gallons for May 1997, compared to 3,000 gallons during the previous month. A total of 151,000 gallons was used for dust control/evaporation in May 1997. HCSWMD should continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. As indicated above, the effluent pond was drained for maintenance in March. The average daily amount of effluent stored in the effluent pond for May 1997 was 0 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flowmeter at the irrigation pump station. Since the LTRF is shut down for repairs, and the effluent pond is empty for maintenance, effluent was not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in May 1997 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During May 1997, the total amount of effluent used for dust control/evaporation was 0 gallons, as was the case the previous month.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site is measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During May 1997, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site.

The total estimated amount of leachate/effluent evaporation for May 1997 was 127,000 gallons, compared to 76,000 gallons during the previous month. This increase was mainly due to increase of leachate dust control/evaporation.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Senior Project Engineer

Raymond J. Dever, P.E.
Solid Waste Division Director
SCS ENGINEERS

RJD/LER:blj
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
MAY 1997
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in	Est. Depth	Pumped	Pumped	Leachate	Leachate	Leachate	Total	Leachate	Effluent	Effluent	Effluent	Total	Landfill
				Rainfall	Effluent	Over	From	From	Pumped	in 500K	Treated	Leachate	Dust Cont./	Pond	Irrigation	Dust Cont /	Effluent	Evaporation
Day	final	active	int.	(in.)	Pond (in.)	Liner (in.)	Sta. No 3 (gal.)	Sta. No. 5 (gal.)	to LTRF (gal.)	Tank (gal.)	at LTRF (gal.)	Hauled (gal.)	Evaporation (gal.)	Storage (gal.)	Evaporation (gal.)	Evaporation (gal.)	Hauled (gal.)	(gal.)
1	25.2	7	88.2	0	0	29.5	3,240	9,160	12,400	360,000	0	72,937	0	0	0	0	0	0
2	25.2	7	88.2	0	0	29	4,320	87,980	92,300	317,000	0	42,100	7,000	0	0	0	0	6,000
3	25.2	7	88.2	0	0	28	3,780	69,220	73,000	345,000	0	60,579	0	0	0	0	0	0
4	25.2	7	88.2	0	NR	NR	*3,780*	69,220	*73,000*	NR	0	0	0	NR	0	0	0	0
5	25.2	7	88.2	0	0	28	9,720	63,280	73,000	417,000	0	92,048	7,000	0	0	0	0	6,000
6	25.2	7	88.2	0	0	27	8,640	62,260	70,900	389,000	0	86,205	14,000	0	0	0	0	11,000
7	25.2	7	88.2	0	0	26	3,240	62,560	65,800	345,000	0	97,615	14,000	0	0	0	0	11,000
8	25.2	7	88.2	0	0	26	3,240	62,360	65,600	317,000	0	55,495	7,000	0	0	0	0	6,000
9	25.2	7	88.2	0	0	26	4,320	62,680	67,000	331,000	0	79,651	7,000	0	0	0	0	6,000
10	25.2	7	88.2	0	0	26.5	3,240	58,460	61,700	288,000	0	66,573	7,000	0	0	0	0	6,000
11	25.2	7	88.2	0.3	NR	NR	*3,240*	58,460	*61,700*	NR	0	0	0	NR	0	0	0	0
12	25.2	7	88.2	1	0	26.5	4,320	67,680	72,000	317,000	0	78,713	0	0	0	0	0	0
13	25.2	7	88.2	0	0	27.5	3,240	58,360	61,600	302,000	0	104,228	0	0	0	0	0	
14	25.2	7	88.2	0	0	26.5	3,240	53,860	57,100	274,000	0	91,387	0	0	0	0	0	
15	25.2	7	88.2	0	0	27	1,080	57,220	58,300	230,000	0	79,895	7,000	0	0	0	0	6,000
16	25.2	7	88.2	0	0	27	1,080	55,520	56,600	187,000	0	67,365	7,000	0	0	0	0	6,000
17	25.2	7	88.2	0	0	27	2,160	54,640	56,800	187,000	0	25,200	7,000	0	0	0	0	6,000
18	25.2	7	88.2	0	NR	NR	*2,160*	54,640	*56,800*	NR	0	0	0	NR	0	0	0	0
19	25.2	7	88.2	0	0	27.5	2,160	56,040	58,200	259,000	0	104,595	7,000	0	0	0	0	6,000
20	25.2	7	88.2	0	0	28	3,240	7,360	10,600	173,000	0	98,094	7,000	0	0	0	0	6,000
21	25.2	7	88.2	0	0	24.5	3,240	47,260	50,500	130,000	0	43,123	7,000	0	0	0	0	6,000
22	25.2	7	88.2	0.3	0	23	2,160	64,440	66,600	115,000	0	55,502	7,000	0	0	0	0	6,000
23	25.2	7	88.2	3.8	0	21.5	3,240	25,760	29,000	115,000	0	55,430	7,000	0	0	0	0	6,000
24	25.2	7	88.2	0	0	22.5	3,780	61,870	65,650	130,000	0	0	0	0	0	0	0	0
25	25.2	7	88.2	0	NR	NR	*3,780*	61,870	*65,650*	NR	0	0	0	NR	0	0	0	0
26	25.2	7	88.2	0	0	23	4,320	33,080	37,400	245,000	0	42,379	0	0	0	0	0	0
27	25.2	7	88.2	0	0	22	1,080	91,620	92,700	230,000	0	67,759	7,000	0	0	0	0	6,000
28	25.2	7	88.2	0.2	0	22	3,240	61,960	65,200	259,000	0	37,204	7,000	0	0	0	0	6,000
29	25.2	7	88.2	0	0	21	3,240	60,860	64,100	288,000	0	67,735	7,000	0	0	0	0	6,000
30	25.2	7	88.2	0	0	22	1,080	60,920	62,000	274,000	0	67,855	7,000	0	0	0	0	6,000
31	25.2	7	88.2	0.1	0	24.5	2,160	126,240	128,400	274,000	0	54,805	4,000	0	0	0	0	3,000
Total				5.7			104,760	1,826,840	1,931,600		0	1,794,472	151,000	0	0	0	0	127,000
Average					0	25.5	3,000	59,000	62,000	263,000	0	69,000	8,000	0	0	0	0	6,000

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VI calculated based on average 180 gpm and hour conversion.
6. Column VII calculated by subtracting VI from flow meter reading.
7. Column VIII, quantity from flow meter.
8. Column IX, calculated from depth in 500,000 gal. leachate tank.
9. Columns X and XIV, quantities from flow meters.
10. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
11. Column XVII, 80% of the daily values from Columns XII, XIV and XV.
12. Values in italic are substitute for missing data and are based on averaged values.
13. Averages were calculated by dividing the total by the active days in the month.
14. Values in bold are estimated.

TABLE 2. FIELD DATA ENTRY FORM
May 1997
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
	Active	Piezometer	Phase IV	Phase III	Pump Sta.	Pump Sta	Landfill Flow Meter Pump	Depth in	Leachate Hauled		Leachate Dust Cont./		Depth in	Leachate Treated	Effluent Irrigation	Effluent Hauled		Effluent Dust Cont./
Day	Area (ac.)	Phase IV (in.)	LCRS Cleanout (in.)	LCR Cleanout (in.)	No. 4 (in.)	No. 3 Reading (hours)	Sta. No. 5 (gal.)	500K Tank (ft.)	Contractor (gal.)	County (gal.)	Evaporation (gal.)	Rainfall (in.)	Effl. Pond (in.)	at LTRF (gal.)	Evaporation (gal.)	Contractor (gal.)	County (gal.)	Evaporation (gal)
1	7	29.5			79	42.0	39,401,900	12.5	66,637	6,300	0	0.0	0	0	0	0	0	0
2	7	29			77	42.3	39,414,300	11	42,100	0	7,000	0.0	0	0	0	0	0	0
3	7	28			77	42.7	39,506,600	12	60,579	0	0	0.0	0	0	0	0	0	0
4	7	NR			NR	*43.05*	*39,579,600*	NR	0	0	0	0.0	NR	0	0	0	0	0
5	7	28			75	43.4	39,652,600	14.5	79,448	12,600	7,000	0.0	0	0	0	0	0	0
6	7	27			74	44.3	39,725,600	13.5	60,855	25,350	14,000	0.0	0	0	0	0	0	0
7	7	26			74	45.1	39,796,500	12	85,015	12,600	14,000	0.0	0	0	0	0	0	0
8	7	26			73	45.4	39,862,300	11	30,295	25,200	7,000	0.0	0	0	0	0	0	0
9	7	26			72.5	45.7	39,927,900	11.5	54,300	25,351	7,000	0.0	0	0	0	0	0	0
10	7	26.5			72	46.1	39,994,900	10	66,573	0	7,000	0.0	0	0	0	0	0	0
11	7	NR			NR	*46.4*	*40,056,600*	NR	0	0	0	0.3	NR	0	0	0	0	0
12	7	26.5			72	46.7	40,118,300	11	78,713	0	0	1.0	0	0	0	0	0	0
13	7	27.5			76	47.1	40,190,300	10.5	78,851	25,377	0	0.0	0	0	0	0	0	0
14	7	26.5			74	47.4	40,251,900	9.5	78,787	12,600	0	0.0	0	0	0	0	0	0
15	7	27			73.5	47.7	40,309,000	8	54,580	25,315	7,000	0.0	0	0	0	0	0	0
16	7	27			73	47.8	40,367,300	6.5	42,419	24,946	7,000	0.0	0	0	0	0	0	0
17	7	27			73	47.9	40,423,900	6.5	0	25,200	7,000	0.0	0	0	0	0	0	0
18	7	NR			NR	*48.1*	*40,480,700*	NR	0	0	0	0.0	NR	0	0	0	0	0
19	7	27.5			71.5	48.3	40,537,500	9	79,256	25,339	7,000	0.0	0	0	0	0	0	0
20	7	28			70	48.5	40,595,700	6	72,894	25,200	7,000	0.0	0	0	0	0	0	0
21	7	24.5			70	48.8	40,606,300	4.5	30,523	12,600	7,000	0.0	0	0	0	0	0	0
22	7	23			69	49.1	40,656,800	4	30,346	25,156	7,000	0.3	0	0	0	0	0	0
23	7	21.5			68	49.3	40,723,400	4	30,230	25,200	7,000	3.8	0	0	0	0	0	0
24	7	22.5			72	49.6	40,752,400	4.5	0	0	0	0.0	0	0	0	0	0	0
25	7	NR			NR	*49.95*	*40,818,050*	NR	0	0	0	0.0	NR	0	0	0	0	0
26	7	23			78	50.3	40,883,700	8.5	42,379	0	0	0.0	0	0	0	0	0	0
27	7	22			75	50.7	40,921,100	8	42,559	25,200	7,000	0.0	0	0	0	0	0	0
28	7	22			72	50.8	41,013,800	9	24,604	12,600	7,000	0.2	0	0	0	0	0	0
29	7	21			71	51.1	41,079,000	10	42,535	25,200	7,000	0.0	0	0	0	0	0	0
30	7	22			71	51.4	41,143,100	9.5	42,485	25,370	7,000	0.0	0	0	0	0	0	0
31	7	24.5			70	51.5	41,205,100	9.5	54,805	0	3,500	0.1	0	0	0	0	0	0

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Notes:

1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column VIII, reading from flow meter.
5. Column XIII, Trace is less than 0.01 inches.
6. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
7. Column III, Phase IV piezometer began monitoring on 7/10/95.
8. Columns XV and XVI, quantities from flow meters.
9. Column IX, field measured.
10. ColumnVII, hour reading from TPS-3.

TABLE 3. 1997 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change in Storage For Month (gal.)
January	3.30	0	1,892,150	2,006,378	0	0	0	0	10,470	1,892,150	2,006,378	(114,228)
February	2.20	0	1,672,700	1,558,554	0	0	0	0	49,290	1,672,700	1,558,554	114,146
March	2.40	0	1,587,700	1,610,179	196,000	0	0	0	140,080	1,587,700	1,806,179	(218,479)
April	6.50	0	1,647,900	1,534,642	92,000	0	0	0	0	1,647,900	1,626,642	21,258
May	5.70	0	1,931,600	1,794,472	151,000	0	0	0	0	1,931,600	1,945,472	(13,872)
June										0	0	0
July										0	0	0
August										0	0	0
September										0	0	0
October										0	0	0
November										0	0	0
December										0	0	0
YTD Total	20.10	0	8,732,050	8,504,225	439,000	0	0	0	199,840	8,732,050	8,943,225	

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Note:

1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

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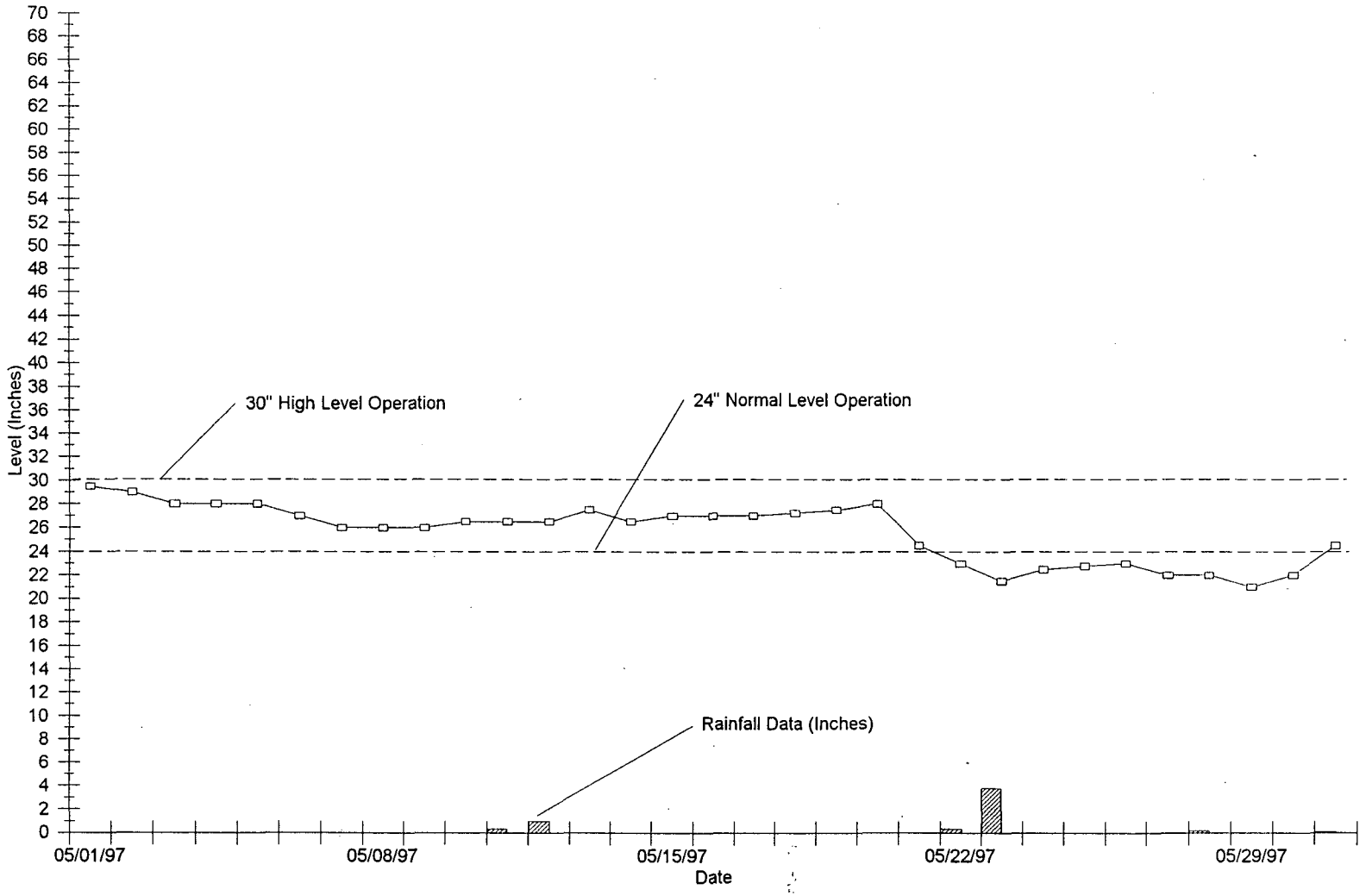
Figure 1.

Phase IV Piezometer



SCS ENGINEERS

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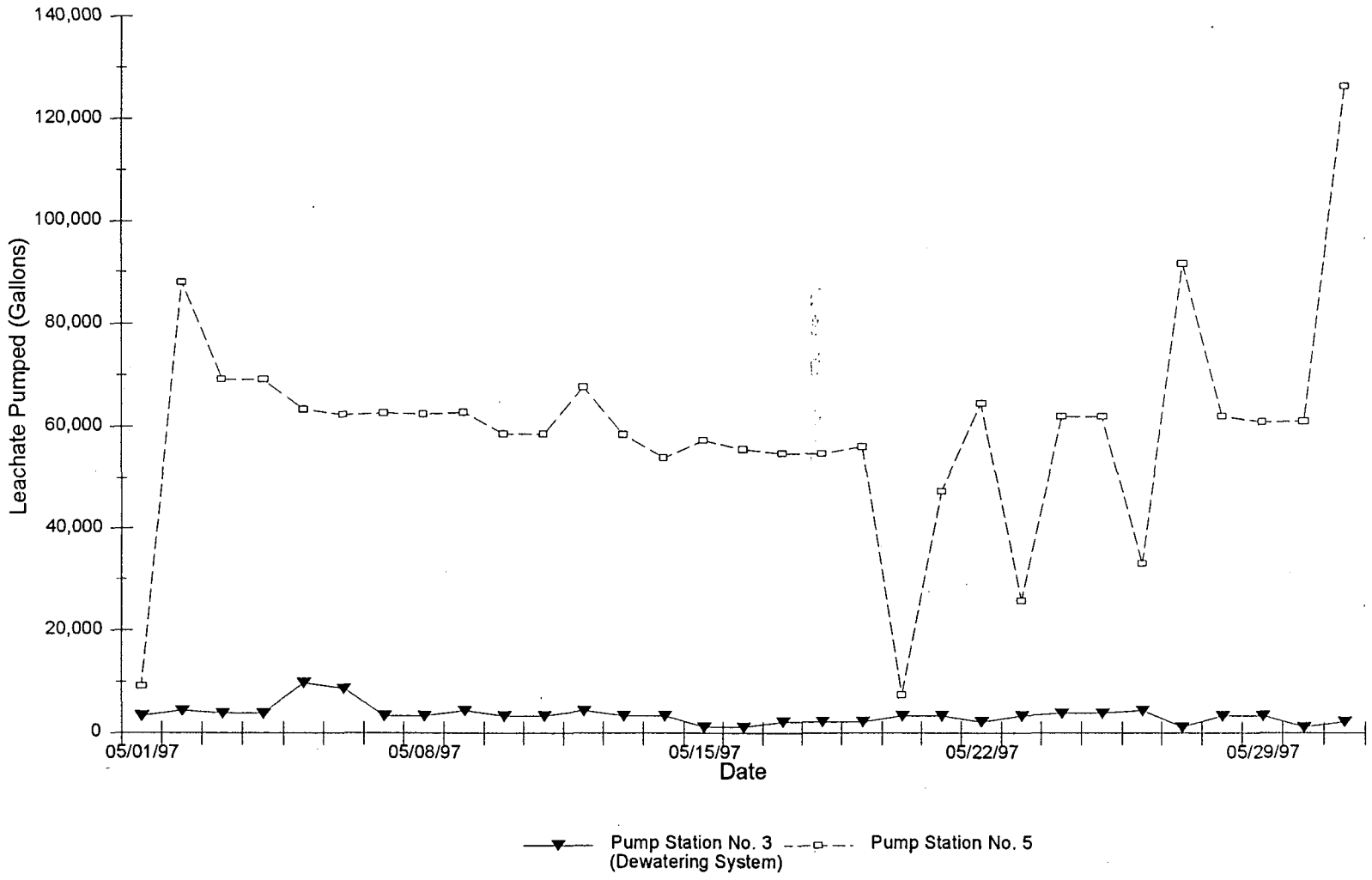
Figure 2.

Pump Station No. 3 and No. 5



SCS ENGINEERS

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) May 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		29.5			79	42.0	39401900	12.5	66,637	6,300	Ø	Ø
2		29			77	42.3	39414300	11	42,100	Ø	7,000	Ø
3		28			77	42.7	39506600	12	60,579	Ø	Ø	Ø
4		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
5		28			75	43.4	39652600	14.5	79,448	12,600	7,000	Ø
6		27			74	44.3	39725600	13.5	60,855	25,350	14,000	Ø
7		26			74	45.1	39796500	12	85,015	12,600	14,000	Ø
8		26			73	45.4	39862300	11	30,295	25,200	7,000	Ø
9		26			72.5	45.7	39927900	11.5	54,300	25,351	7,000	Ø
10		26.5			72	46.1	39994900	10	66,573	Ø	7,000	Ø
11		NR			NR	NR	NR	NR	Ø	Ø	Ø	.3
12		26.5			72	46.7	40118300	11	78,713	Ø	Ø	1.0
13		27.5			76	47.1	40190300	10.5	78,851	25,377	Ø	Ø
14		26.5			74	47.4	40251900	9.5	78,787	12,600	Ø	Ø
15		27			73.5	47.7	40309000	8	54,580	25,315	7,000	Ø
16		27			73	47.8	40367300	6.5	42,419	24,946	7,000	Ø

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Prepared by M. Matthews

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) May 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth In 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		27			73	47.9	40423900	6.5	Ø	25,200	7,000	Ø
18		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
19		27.5			71.5	48.3	40537500	9	79,256	25,339	7,000	Ø
20		28			70	48.5	40595700	6	72,894	25,200	7,000	Ø
21		24.5			70	48.8	40606300	4.5	30,523	12,600	7,000	Ø
22		23			69	49.1	40656800	4	30,346	25,156	7,000	.3
23		21.5			68	49.3	40723400	4	30,230	25,200	7,000	3.8
24		22.5			72	49.6	40752400	4.5	Ø	Ø	Ø	Ø
25		NR			NR	NR	NR	NR	Ø	Ø	Ø	Ø
26		23			78	50.3	40883700	8.5	42,379	Ø	Ø	Ø
27		22			75	50.7	40921100	8	42,559	25,200	7,000	Ø
28		22			72	50.8	41013800	9	24,604	12,600	7,000	.2
29		21			71	51.1	41079000	10	42,535	25,200	7,000	Ø
30		22			71	51.4	41143100	9.5	42,485	25,370	7,000	Ø
31		24.5			70	51.5	41205100	9.5	54,805	Ø	3,500	.1

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Leachate Hauled Month Total: _____

Prepared by W. Matthews

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) May 97

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
1	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
2	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
3	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
4	NR	Ø	Ø	Ø	Ø	Ø	Ø	—	N
5	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
6	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
7	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
8	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
9	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
10	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
11	NR	Ø	Ø	Ø	Ø	Ø	Ø	—	N
12	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
13	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
14	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
15	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
16	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N

(1) If yes: Contact Supervisor Immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: Effluent pond empty for maintance

Prepared by: M. Mathews

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) May 97

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
17	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
18	NR	Ø	Ø	Ø	Ø	Ø	Ø	—	N
19	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
20	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
21	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
22	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
23	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
24	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
25	NR	Ø	Ø	Ø	Ø	Ø	Ø	—	N
26	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
27	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
28	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
29	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
30	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N
31	Ø	Ø	Ø	Ø	Ø	Ø	Ø	—	N

(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: _____

Prepared by: M. Walther

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) May/97

Action	Date 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer Phase IV																
Low Level Operation, depth less than or equal to 12 inches.																
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.				NR							NR					
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Sump No. 4 Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTRF																
Normal Operation.				NR						✓	NR		✓	✓	✓	✓
If level is greater than 11 feet, increase treatment, hauling , or recirculation.	✓	✓	✓		✓	✓	✓	✓	✓			✓				
If level is less than 6 feet, decrease or stop hauling, recirculation.																
Effluent Pond																
Normal Operation.																
If level is 6 inches or less, stop irrigation, recirculation, hauling.																
If level is greater than 4 feet, increase irrigation, recirculation, hauling.																
Observed runoff of effluent to stormwater basins?																
No.	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.																
Runoff Type / To Basin																
1 = Severe / A, B, C, D																
2 = Moderate																
3 = Minor																

Comments/Remedial Action: _____

Prepared by M. Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) May 97

Action	Date														
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.		NR				✓	✓	✓	NR	✓	✓	✓	✓	✓	
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓		✓	✓	✓										✓
Sump No. 4 Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.	✓	NR	✓	✓											
If level is greater than 11 feet, increase treatment, hauling , or recirculation.									NR	✓	✓	✓	✓	✓	✓
If level is less than 6 feet, decrease or stop hauling, recirculation.					✓	✓	✓	✓							
* **Effluent Pond**															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.															
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.															
Runoff Type: 1 = Severe; 2 = Moderate; 3 = Minor — To Basin: A, B, C, D															

Comments/Remedial Action: *Effluent pond empty for maintance

Prepared by: M Mathis

HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS
Dottie Berger
Joe Chillura
Chris Hart
Jim Norman
Jan Platt
Thomas Scott
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Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimmie Keel

D.E.P.
MAY 21 1997
SOUTHWEST DISTRICT
TAMPA

May 16, 1997

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of April 1997. In addition, the SWMD is providing the April 1997 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 (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for April 1997 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from TPS-5 and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of April 1997 was 27.4 inches, which is above the LMP goal for April 1997 of approximately 24 inches. Although leachate levels were above the LMP goal, levels still remain within the LMP operating range of 24 to 30 inches. On April 29, 1997, the level was recorded at 31.5 inches, but dropped the following day to 28.5. It is likely that this one-time elevated reading was a result of the 4 inches of rain received at the Landfill the previous 3 days.

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

Environmental Consultants

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SCS ENGINEERS

May 16, 1997
File No. 0995029.12

Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Department
P. O. Box 1110
Tampa, Florida 33601

Subject: March 1997, Leachate Water Balance Report Forms
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed operational data from the Southeast County Landfill (SCLF) for April 1997. Attached is the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 1997 updated summary (Table 3). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD).

SCS has summarized below the data included in the Leachate Water Balance Report Form as shown in Table 1. Where appropriate, SCS provides commentary on the monthly data and recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations.

Day (Column I)

This column presents the calender day for the month of April 1997.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the amount of daily rainfall in inches as measured in field. Total rainfall at the SCLF for April 1997 was 6.5 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. In March, the effluent pond was drained to remove silts, sand, and miscellaneous debris that has accumulated over the last two years. The average depth for recorded days of effluent in the effluent pond for April 1997 was 0 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (in inches) at the bottom of the SCLF. This measurement is based on the daily piezometer measurements taken in the field and represents worst case condition since the piezometer is currently located within the sump area of the SCLF. The average depth of recorded days of leachate over the liner for April 1997 was 27.4 inches (see Figure 1). The Leachate Management Plan (LMP) leachate depth goal for April 1997 is approximately 24 inches. Although leachate depths were above the LMP goal, mainly due to the Phase IV dewatering system being down for the first half of April, depths still remain within the LMP operating range of 24 to 30 inches except for one day during the month (i.e., April 29), which coincided with nearly 4 inches of rain the previous 3 days. The Leachate depth on the following day was within the LMP operating range (i.e., 28.5).

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 3 (TPS-3) and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-3 is measured from an hour-meter and calculated based on an average pumping rate of 180 gallons per minute. The Phase IV dewatering system, which pumps into TPS-3, was down to change pumps and for repairs from April 1 through April 16. The plug in TPS-3 for the leachate collection and removal system (LCRS) was removed on the April 1 and replaced on April 16 when the Phase IV dewatering system resumed pumping to allow leachate flow in TPS-3. The average daily amount of leachate collected and pumped from TPS-3 for April 1997 was approximately 15,000 gallons (Figure 2).

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at Temporary Pump Station No. 5 (TPS-5) and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 is measured from the landfill flow meter minus the amount pumped from TPS-3. TPS-5 was not operational on April 5 for an unknown period of time and for one half day on April 24.

The average daily amount of leachate collected and pumped from TPS-5 for April 1997 was approximately 50,000 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped to the Leachate Treatment and Reclamation Facility (LTRF) for treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flowmeter near TPS-3. The average daily amount of leachate pumped from the landfill to the LTRF was 55,000 gallons (total of 1,647,900 gallons).

Leachate in 500,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 500,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily gauge level reading. The average daily amount of leachate stored in the tank for April 1997, based on recorded days, was 251,000 gallons. Under normal operating conditions, the amount of leachate stored in the tank fluctuates based on the daily amount of leachate pumped to the LTRF, the daily amount of leachate treated, and the daily amount of leachate hauled from the tank.

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for April 1997 was 0 gallons. The daily amount of leachate treated at the LTRF may increase or decrease depending on the influent loading/concentrations.

Note: The LTRF has not been operational since September 3, 1996 to allow for repairs to the treatment tanks. The LTRF is anticipated to be back in operation in July 1997.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. Leachate is pumped from the 500,000 gallon raw leachate tank and into a tanker truck for transport. During April 1997, a total of 1,534,642 gallons of leachate was hauled off site compared to a total of 1,610,179 gallons during the previous month. The HCSWMD should continue off site hauling of untreated leachate until the repairs to the LTRF are completed.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF is measured from the flowmeter at the

bypass loading arm. The daily average amount of leachate pumped from the 500,000 gallon leachate tank at the Leachate Treatment and Reclamation Facility (LTRF) for use in dust control/evaporation was 3,000 gallons for April 1997, compared to 6,000 gallons during the previous month. A total of 92,000 gallons was used for dust control/evaporation in April 1997. HCSWMD should continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. As indicated above, the effluent pond was drained for maintenance in March. The average daily amount of effluent stored in the effluent pond for April 1997 was 0 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF.

Effluent Irrigation/Evaporation (Column XIV)

This column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flowmeter at the irrigation pump station. Since the LTRF is shut down for repairs, and the effluent pond is empty for maintenance, effluent was not available for irrigation. The total amount of effluent used for effluent irrigation/evaporation in April 1997 was 0 gallons.

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During April 1997, the total amount of effluent used for dust control/evaporation was 0 gallons, as was the case the previous month.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site is measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During April 1997, the total amount of effluent hauled off site was 0 gallons.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site.

The total estimated amount of leachate/effluent evaporation for April 1997 was 76,000 gallons, compared to 271,000 gallons during the previous month. This decrease was mainly due to lack of effluent for irrigation and dust control evaporation.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Senior Project Engineer

R. B. Gardner

Robert B. Gardner, P.E.
Vice President
SCS ENGINEERS

RBG/LER:blj
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
APRIL 1997
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in Effluent	Est. Depth Over	Pumped From	Pumped From	Leachate Pumped	Leachate in 500K	Leachate Treated	Total Leachate	Leachate Dust Cont./	Effluent Pond	Effluent Irrigation	Effluent Dust Cont./	Total Effluent	Landfill
Day	final	active	int.	Rainfall (in.)	Pond (in.)	Liner (in.)	Sta. No 3 (gal.)	Sta. No. 5 (gal.)	to LTRF (gal.)	Tank (gal.)	at LTRF (gal.)	Hauled (gal.)	Evaporation (gal.)	Storage (gal.)	Evaporation (gal.)	Evaporation (gal.)	Hauled (gal.)	Evaporation (gal.)
1	25.2	5	90.2	0	0	25	**0**	14,200	14,200	302,000	0	85,767	7,000	0	0	0	0	6,000
2	25.2	5	90.2	0	0	25.5	**0**	31,300	31,300	216,000	0	90,782	7,000	0	0	0	0	6,000
3	25.2	5	90.2	0	0	26	**0**	33,600	33,600	173,000	0	61,464	7,000	0	0	0	0	6,000
4	25.2	5	90.2	0	0	27	**0**	85,500	85,500	144,000	0	61,953	4,000	0	0	0	0	3,000
5	25.2	5	90.2	0	0	27	0	59,550	59,550	187,000	0	0	7,000	0	0	0	0	6,000
6	25.2	5	90.2	0	NR	NR	*0*	59,550	*59,550*	NR	0	0	0	NR	0	0	0	0
7	25.2	5	90.2	0	0	28.5	0	54,500	54,500	274,000	0	61,574	4,000	0	0	0	0	3,000
8	25.2	5	90.2	0	0	28.5	0	53,200	53,200	259,000	0	61,546	0	0	0	0	0	0
9	25.2	5	90.2	0	0	29	0	54,500	54,500	259,000	0	54,998	0	0	0	0	0	0
10	25.2	5	90.2	0	0	29	0	49,700	49,700	274,000	0	61,640	14,000	0	0	0	0	11,000
11	25.2	5	90.2	0	0	29.5	0	56,600	56,600	245,000	0	48,931	0	0	0	0	0	0
12	25.2	5	90.2	0.5	0	30	0	53,950	53,950	259,000	0	0	0	0	0	0	0	0
13	25.2	5	90.2	0.1	NR	NR	*0*	53,950	*53,950*	NR	0	0	0	NR	0	0	0	0
14	25.2	5	90.2	1.1	0	30	0	50,600	50,600	345,000	0	104,203	0	0	0	0	0	0
15	25.2	5	90.2	0.1	0	30	0	50,400	50,400	288,000	0	67,651	0	0	0	0	0	0
16	25.2	5	90.2	0	0	30	0	55,500	55,500	259,000	0	97,425	7,000	0	0	0	0	6,000
17	25.2	5	90.2	0	0	30	14,040	25,260	39,300	230,000	0	67,765	7,000	0	0	0	0	6,000
18	25.2	5	90.2	0	0	27	15,120	29,280	44,400	216,000	0	67,791	7,000	0	0	0	0	6,000
19	25.2	5	90.2	0	0	26.5	15,120	16,130	31,250	187,000	0	36,269	0	0	0	0	0	0
20	25.2	5	90.2	0	NR	NR	*15,120*	16,130	*31,250*	NR	0	0	0	NR	0	0	0	0
21	25.2	5	90.2	0	0	25	28,080	53,120	81,200	216,000	0	55,325	7,000	0	0	0	0	6,000
22	25.2	5	90.2	0	0	25	41,040	34,060	75,100	216,000	0	67,808	14,000	0	0	0	0	11,000
23	25.2	5	90.2	0.7	0	25	7,560	27,440	35,000	216,000	0	30,670	0	0	0	0	0	0
24	25.2	5	90.2	0	0	24	4,320	64,780	69,100	216,000	0	61,697	0	0	0	0	0	0
25	25.2	5	90.2	0	0	24.5	3,240	57,360	60,600	230,000	0	61,614	0	0	0	0	0	0
26	25.2	5	90.2	2.9	0	24.5	0	65,850	65,850	245,000	0	12,106	0	0	0	0	0	0
27	25.2	5	90.2	0	NR	NR	*0*	65,850	*65,850*	NR	0	0	0	NR	0	0	0	0
28	25.2	5	90.2	1.1	0	26.5	5,400	71,000	76,400	345,000	0	38,182	0	0	0	0	0	0
29	25.2	5	90.2	0	0	31.5	5,400	69,800	75,200	374,000	0	92,368	0	0	0	0	0	0
30	25.2	5	90.2	0	0	28.5	5,400	75,400	80,800	360,000	0	85,113	0	0	0	0	0	0
Total				6.5			159,840	1,488,060	1,647,900		0	1,534,642	92,000	0	0	0	0	76,000
Average					0	27.4	15,000	50,000	55,000	251,000	0	67,000	3,000	0	0	0	0	7,000

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VI calculated based on average 180 gpm and hour conversion.
6. Column VII calculated by subtracting VI from flow meter reading.
7. Column VIII, quantity from flow meter.
8. Column IX, calculated from depth in 500,000 gal. leachate tank.
9. Columns X and XIV, quantities from flow meters.
10. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
11. Column XVII, 80.8% of the daily values from Columns XII, XIV and XV.
12. Values in italic are substitute for missing data and are based on averaged values.
13. Averages were calculated by dividing the total by the active days in the month.
14. Values in bold are estimated.

TABLE 2. FIELD DATA ENTRY FORM
APRIL 1997
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
	Active	Piezometer	Phase IV	Phase III	Pump Sta.	Pump Sta	Landfill Flow Meter Pump	Depth in	Leachate Hauled		Leachate Dust Cont./		Depth in	Leachate	Effluent	Effluent Hauled		Effluent Dust Cont./
Day	Area (ac.)	Phase IV (in.)	LCRS Cleanout (in.)	LCR Cleanout (in.)	No. 4 (in.)	No. 3 Reading (hours)	Sta. No. 5 (gal.)	500K Tank (ft.)	Contractor (gal.)	County (gal.)	Evaporation (gal.)	Rainfall (in.)	Effl. Pond (in.)	Treated at LTRF (gal.)	Irrigation Evaporation (gal.)	Contractor (gal.)	County (gal.)	Evaporation (gal)
1	5	25	20	3	69	19.0	37,754,000	10.5	60,567	25,200	7,000	0.0	0	0	0	0	0	0
2	5	25.5	18.5	3	67	21.1	37,768,200	7.5	78,182	12,600	7,000	0.0	0	0	0	0	0	0
3	5	26	19	3	67	24.0	37,799,500	6	36,195	25,269	7,000	0.0	0	0	0	0	0	0
4	5	27	18	3	66.5	27.1	37,833,100	5	36,648	25,305	3,500	0.0	0	0	0	0	0	0
5	5	27	11	3	65	27.2	37,918,600	6.5	0	0	7,000	0.0	0	0	0	0	0	0
6	5	NR	NR	NR	NR	***27.2***	***37,978,150***	NR	0	0	0	0.0	NR	0	0	0	0	0
7	5	28.5	12	3.5	64.5	27.2	38,037,700	9.5	36,272	25,302	3,500	0.0	0	0	0	0	0	0
8	5	28.5	11	3	65.5	27.2	38,092,200	9	36,328	25,218	0	0.0	0	0	0	0	0	0
9	5	29	11	3	64	27.2	38,145,400	9	42,398	12,600	0	0.0	0	0	0	0	0	0
10	5	29	11	3	63.5	27.2	38,199,900	9.5	36,392	25,248	14,000	0.0	0	0	0	0	0	0
11	5	29.5	11	3	63	27.2	38,249,600	8.5	36,331	12,600	0	0.0	0	0	0	0	0	0
12	5	30	11	3	66	27.2	38,306,200	9	0	0	0	0.5	0	0	0	0	0	0
13	5	NR	NR	NR	NR	***27.2***	***38,360,150***	NR	0	0	0	0.1	NR	0	0	0	0	0
14	5	30	11	3	64	27.2	38,414,100	12	78,867	25,336	0	1.1	0	0	0	0	0	0
15	5	30	12	3	69	27.2	38,464,700	10	42,358	25,293	0	0.1	0	0	0	0	0	0
16	5	30	11	3	69	27.2	38,515,100	9	84,825	12,600	7,000	0.0	0	0	0	0	0	0
17	5	30	12	3	69	27.2	38,570,600	8	42,429	25,336	7,000	0.0	0	0	0	0	0	0
18	5	27	18.5	3	68	28.5	38,609,900	7.5	42,562	25,229	7,000	0.0	0	0	0	0	0	0
19	5	26.5	15	3	67	29.9	38,654,300	6.5	36,269	0	0	0.0	0	0	0	0	0	0
20	5	NR	NR	NR	NR	***31.3***	***38,685,550***	NR	0	0	0	0.0	NR	0	0	0	0	0
21	5	25	23	3	67	32.7	38,716,800	7.5	36,378	18,947	7,000	0.0	0	0	0	0	0	0
22	5	25	12	3	66.5	35.3	38,798,000	7.5	42,608	25,200	14,000	0.0	0	0	0	0	0	0
23	5	25	16	3	67	39.1	38,873,100	7.5	18,070	12,600	0	0.7	0	0	0	0	0	0
24	5	24	17.5	3	66	39.8	38,908,100	7.5	36,461	25,236	0	0.0	0	0	0	0	0	0
25	5	24.5	11	3	69.5	40.2	38,977,200	8	36,393	25,221	0	0.0	0	0	0	0	0	0
26	5	24.5	11	3	67.5	40.5	39,037,800	8.5	12,106	0	0	2.9	0	0	0	0	0	0
27	5	NR	NR	NR	NR	***40.5***	***39,103,650***	NR	0	0	0	0.0	NR	0	0	0	0	0
28	5	26.5	11.5	3.5	79	40.5	39,169,500	12	19,263	18,919	0	1.1	0	0	0	0	0	0
29	5	31.5	12	3.5	83	41.0	39,245,900	13	67,070	25,298	0	0.0	0	0	0	0	0	0
30	5	28.5	11	3.5	81	41.5	39,321,100	12.5	72,513	12,600	0	0.0	0	0	0	0	0	0

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Notes:

1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column VIII, reading from flow meter.
5. Column XIII, Trace is less than 0.01 inches.
6. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
7. Column III, Phase IV piezometer began monitoring on 7/10/95.
8. Columns XV and XVI, quantities from flow meters.
9. Column IX, field measured.
10. ColumnVII, hour reading from TPS-3.

TABLE 3. 1997 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Net Change in Storage For Month (gal.)
January	3.30	0	1,892,150	2,006,378	0	0	0	0	10,470	1,892,150	2,006,378	(114,228)
February	2.20	0	1,672,700	1,558,554	0	0	0	0	49,290	1,672,700	1,558,554	114,146
March	2.40	0	1,587,700	1,610,179	196,000	0	0	0	140,080	1,587,700	1,806,179	(218,479)
April	6.50	0	1,647,900	1,534,642	92,000	0	0	0	0	1,647,900	1,626,642	21,258
May										0	0	0
June										0	0	0
July										0	0	0
August										0	0	0
September										0	0	0
October										0	0	0
November										0	0	0
December										0	0	0
YTD Total	14.40	0	6,800,450	6,709,753	288,000	0	0	0	199,840	6,800,450	6,997,753	

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Note:

1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

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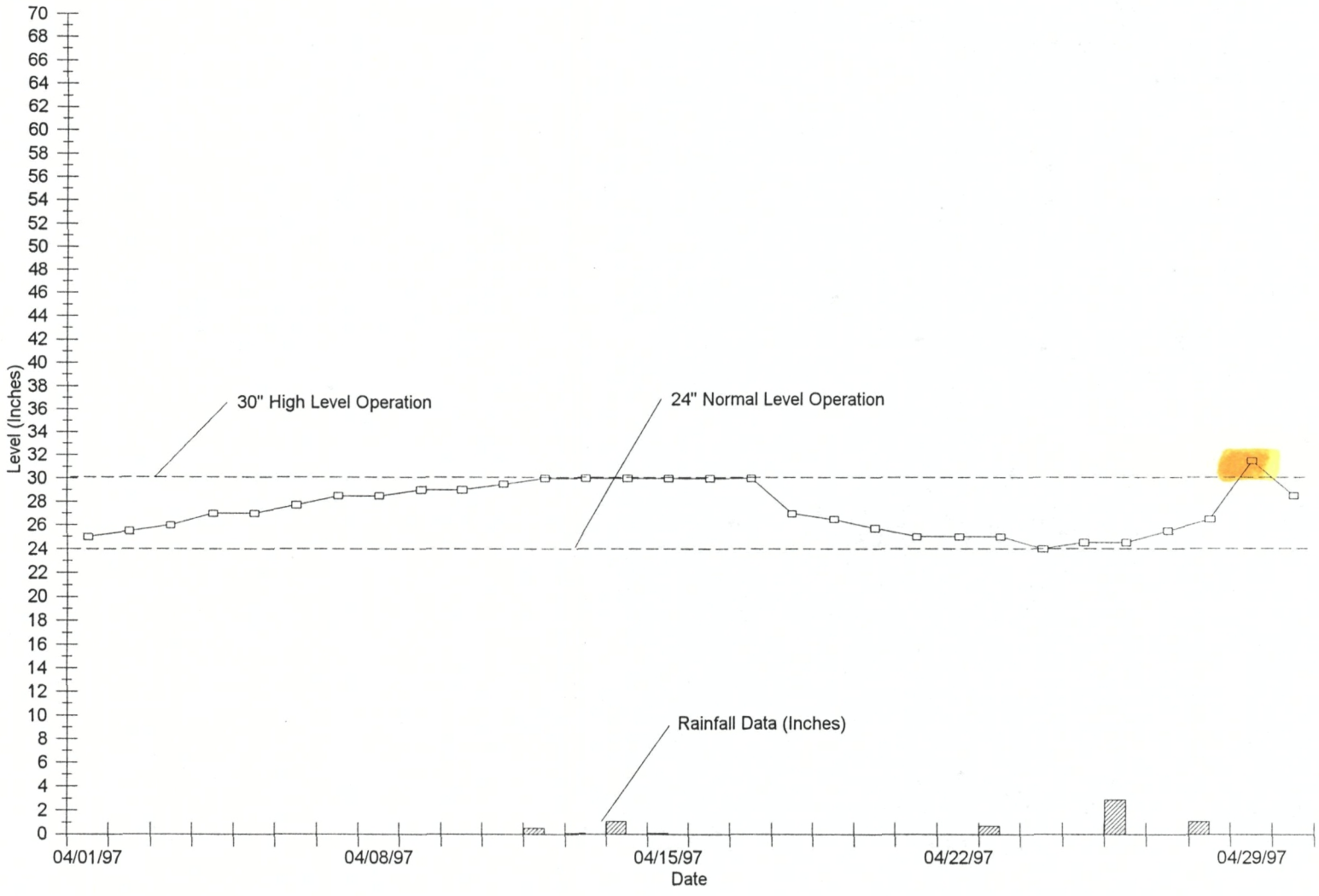
Figure 1.

Phase IV Piezometer



SCS ENGINEERS

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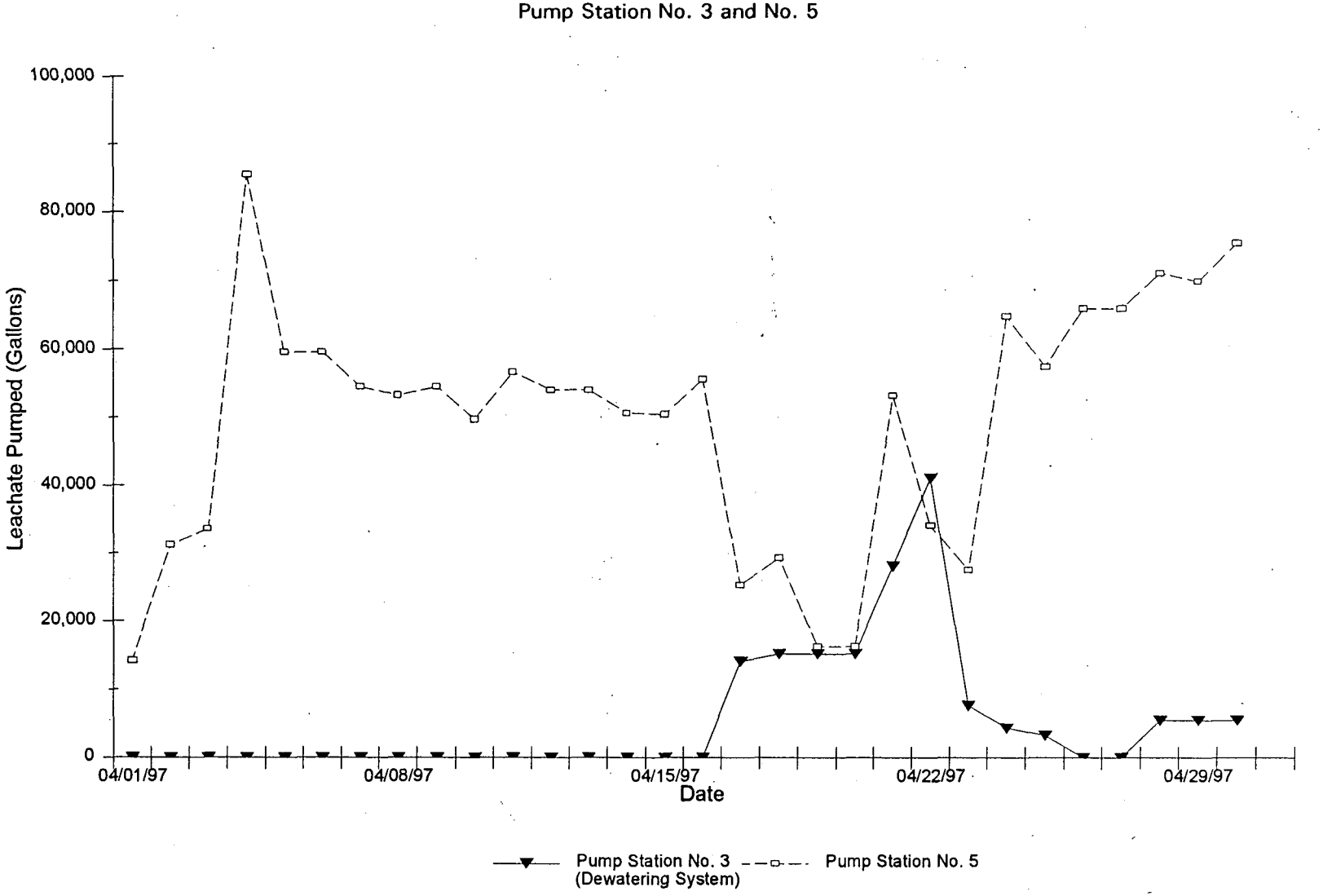
Figure 2.



SCS ENGINEERS

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) April 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		25	20	3	69	19.0	37754000	10.5	69,567	25,200	7,000	Ø
2		25.5	18.5	3	67	21.1	37768200	7.5	78,182	12,600	7,000	Ø
3		26	19	3	67	24.0	37799500	6	36,195	25,269	7,000	Ø
4		27	18	3	66.5	27.1	37833100	5	36,648	25,305	3,500	Ø
5		27	11	3	65	27.2	37918600	6.5	Ø	Ø	7,000	Ø
6		NR	NR	NR	NR	NR	NR	NR	Ø	Ø	Ø	Ø
7		28.5	12	3.5	64.5	27.2	38037700	9.5	36,272	25,302	3,500	Ø
8		28.5	11	3	65.5	27.2	38092200	9	36,328	25,218	Ø	Ø
9		29	11	3	64	27.2	38145400	9	42,398	12,600	Ø	Ø
10		29	11	3	63.5	27.2	38199900	9.5	36,392	25,248	14,000	Ø
11		29.5	11	3	63	27.2	38249600	8.5	36,331	12,600	Ø	Ø
12		30	11	3	66	27.2	38306200	9	Ø	Ø	Ø	.5
13		NR	NR	NR	NR	NR	NR	NR	Ø	Ø	Ø	.1
14		30	11	3	64	27.2	38414100	12	78,867	25,336	Ø	1.1
15		30	12	3	69	27.2	38464700	10	42,358	25,293	Ø	.1
16		30	11	3	69	27.2	38515100	9	84,825	12,600	7,000	Ø

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: 4/1 thru 4/17 well point pumpdown, opened sump #3 - 4/5 sump #5 pump back on line
4/16 - well point pump back in service, not pumping, needs cooling tank - 4/17 well point pump on line 1:00 p.m.
4/19 thru 4/21 sump pump down, repaired 5:00 p.m. on 4/21 - 4/24 sump #5 pump down ½ day
4/29 - well point pump not pumping at 7:00 a.m.

Prepared by: M. Matthews

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) April 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		30	12	3	69	27.2	38570600	8	42,429	25,336	7,000	Ø
18		27	18.5	3	68	28.5	38609900	7.5	42,562	25,229	7,000	Ø
19		26.5	15	3	67	29.9	38654300	6.5	36,269	Ø	Ø	Ø
20		NR	NR	NR	NR	NR	NR	NR	Ø	Ø	Ø	Ø
21		25	23	3	67	32.7	38716800	7.5	36,378	18,947	7,000	Ø
22		25	12	3	66.5	35.3	38798000	7.5	42,608	25,200	14,000	Ø
23		25	16	3	67	39.1	38873100	7.5	18,070	12,600	Ø	.7
24		24	17.5	3	66	39.8	38908100	7.5	36,461	25,236	Ø	Ø
25		24.5	11	3	69.5	40.2	38977200	8	36,393	25,221	Ø	Ø
26		24.5	11	3	67.5	40.5	39037800	8.5	12,106	Ø	Ø	2.9
27		NR	NR	NR	NR	NR	NR	NR	Ø	Ø	Ø	Ø
28		26.5	11.5	3.5	79	40.5	39169500	12	19,263	18,919	Ø	1.1
29		31.5	12	3.5	83	41.0	39245900	13	67,070	25,298	Ø	Ø
30		28.5	11	3.5	81	41.5	39321100	12.5	72,513	12,600	Ø	Ø
31												

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Leachate Hauled Month Total: _____

Prepared by: W. Matchen

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) April 97

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Random	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
1	Ø	Ø	Ø	Ø	Ø	Ø	Ø	–	N
2	Ø	Ø	Ø	Ø	Ø	Ø	Ø	–	N
3	Ø	Ø	Ø	Ø	Ø	Ø	Ø	–	N
4	Ø	Ø	Ø	Ø	Ø	Ø	Ø	–	N
5	Ø	Ø	Ø	Ø	Ø	Ø	Ø	–	N
6	NR	Ø	Ø	Ø	Ø	Ø	Ø	–	N
7	Ø	Ø	Ø	Ø	Ø	Ø	Ø	–	N
8	Ø	Ø	Ø	Ø	Ø	Ø	Ø	–	N
9	Ø	Ø	Ø	Ø	Ø	Ø	Ø	–	N
10	Ø	Ø	Ø	Ø	Ø	Ø	Ø	–	N
11	Ø	Ø	Ø	Ø	Ø	Ø	Ø	–	N
12	Ø	Ø	Ø	Ø	Ø	Ø	Ø	–	N
13	NR	Ø	Ø	Ø	Ø	Ø	Ø	–	N
14	Ø	Ø	Ø	Ø	Ø	Ø	Ø	–	N
15	Ø	Ø	Ø	Ø	Ø	Ø	Ø	–	N
16	Ø	Ø	Ø	Ø	Ø	Ø	Ø	–	N

(1) If yes: Contact Supervisor Immediately and stop spray Irrigation. Complete Evaluation Report Form.

Comments: Effluent pond empty for maintance

Prepared by: M. Matthews

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) Apr. 97

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
17	0	0	0	0	0	0	0	—	N
18	0	0	0	0	0	0	0	—	N
19	0	0	0	0	0	0	0	—	N
20	NR	0	0	0	0	0	0	—	N
21	0	0	0	0	0	0	0	—	N
22	0	0	0	0	0	0	0	—	N
23	0	0	0	0	0	0	0	—	N
24	0	0	0	0	0	0	0	—	N
25	0	0	0	0	0	0	0	—	N
26	0	0	0	0	0	0	0	—	N
27	NR	0	0	0	0	0	0	—	N
28	0	0	0	0	0	0	0	—	N
29	0	0	0	0	0	0	0	—	N
30	0	0	0	0	0	0	0	—	N
31									

(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: _____

Prepared by: H. Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM EVALUATION REPORT SOUTHEAST COUNTY LANDFILL

(Month/Year) April 97

Action	Date 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer Phase IV																
Low Level Operation, depth less than or equal to 12 inches.																
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.						NR							NR			
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓
Sump No. 4 Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTRF																
Normal Operation.	✓	✓	✓		✓	NR	✓	✓	✓	✓	✓	✓	NR		✓	✓
If level is greater than 11 feet, increase treatment, hauling , or recirculation.														✓		
If level is less than 6 feet, decrease or stop hauling, recirculation.				✓												
Effluent Pond																
Normal Operation.						NR							NR			
If level is 6 inches or less, stop irrigation, recirculation, hauling.	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓
If level is greater than 4 feet, increase irrigation, recirculation, hauling.																
Observed runoff of effluent to stormwater basins?																
No.	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.																
Runoff Type / To Basin																
1 = Severe / A, B, C, D																
2 = Moderate																
3 = Minor																

Comments/Remedial Action: Effluent pond empty for maintance

Prepared by: M. Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) April 97

Action	Date														
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.				NR				✓			NR				
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓		✓	✓	✓		✓	✓		✓	✓	✓	
Sump No. 4 Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.	✓	✓	✓		✓	✓	✓	✓	✓	✓					
If level is greater than 11 feet, increase treatment, hauling , or recirculation.				NR							NR	✓	✓	✓	
If level is less than 6 feet, decrease or stop hauling, recirculation.															
Effluent Pond															
Normal Operation.															
If level is 6 inches or less, stop irrigation, recirculation, hauling.	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remodial Action taken. Runoff Type: 1 = Severe, 2 = Moderate, 3 = Minor To Basin: A, B, C, D															

Comments/Remedial Action: _____

Prepared by M. Matthews

HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS
Dottie Berger
Joe Chillura
Chris Hart
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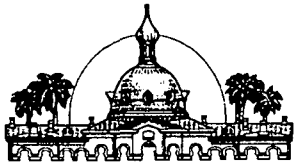


Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimmie Keel

April 15, 1997

RECEIVED
APR 17 1997
D E P

Mr. Kim Ford, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Southeast County Landfill - Leachate Data

Dear Mr. Ford:

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 Form for the month of March 1997. In addition, the SWMD is providing the March 1997 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 (DEP) and the Hillsborough County Environmental Protection Commission as a monthly status report on the Landfill's leachate management efforts in accordance with Permit No. SO29-256427, Specific Condition No. 17.

As initiated with the April 1996 report, the Landfill leachate information for March 1997 includes an evaluation by SCS Engineers (SCS) of the monthly data. The report also includes figures depicting the status of the level in the piezometer and the average amount of leachate collected and pumped from TPS-5 and Pump Station No. 3.

The average depth of leachate in the Phase IV piezometer for the month of March 1997 was 18.65 inches, which is below the LMP goal for February 1997 of 27.0 inches. However, due to the decrease in leachate pumping from TPS-5, as well as the Phase IV dewatering system pump being down during part of March, the depth of leachate over the liner increased to 26 inches by March 31, 1997.

why did the ... ? This will impact the volume of leachate that may be stored on the liner during the ... will result in ... Should respond with concern for future buildup

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

Sincerely,

Patricia V. Berry
Landfill Services Section Manager
Solid Waste Management Department

Attachments

xc: Matt Matthews, SWMD
Larry Ruiz, SCS
Paul Schipfer, EPC

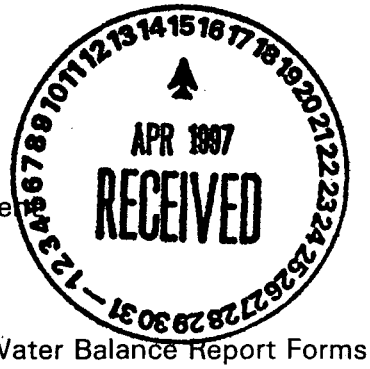
Environmental Consultants

3012 U.S. Highway 301 North
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

April 15, 1997
File No. 0995029.12



Ms. Patricia V. Berry
Hillsborough County
Solid Waste Management Departme
P. O. Box 1110
Tampa, Florida 33601

Subject: March 1997, Leachate Water Balance Report Forms
Southeast County Landfill, Hillsborough County, Florida

Dear Patty:

SCS Engineers (SCS) has compiled and reviewed operational data from the Southeast County Landfill (SCLF) for March 1997. Attached is the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 1997 updated summary (Table 3). The leachate water balance forms were compiled from data provided by Mr. Matt Matthews from the Hillsborough County Solid Waste Management Department (HCSWMD).

SCS has summarized below the data included in the Leachate Water Balance Report Form as shown in Table 1. Where appropriate, SCS provides commentary on the monthly data and recommendations for modifications to the leachate pumping, treatment and disposal system for the SCLF operations.

Day (Column I)

This column presents the calender day for the month of March 1997.

Area (Column II)

This column presents the approximate size of areas (acres) on the SCLF that have received final cover (final), are currently receiving refuse or have daily cover (active), and that have received intermediate cover (int.)

Rainfall (Column III)

This column presents the amount of daily rainfall in inches as measured in field. Total rainfall at the SCLF for March 1997 was 2.4 inches.

Depth in Effluent Pond (Column IV)

This column presents the daily depth (inches) of effluent stored in the effluent pond. The daily effluent depth in the effluent pond varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. In March, the effluent pond was drained to remove silts, sand, and miscellaneous debris that has accumulated over the last two years. The average depth for recorded days of effluent in the effluent pond for March 1997 was 20 inches.

Estimated Depth Over Liner (Column V)

This column presents the estimated depth of leachate over the clay liner (in inches) at the bottom of the SCLF. This measurement is based on the daily piezometer measurements taken in the field and represents worst case condition since the piezometer is currently located within the sump area of the SCLF. The average depth of recorded days of leachate above the liner for March 1997 was 18.65 inches (see Figure 1). The Leachate Management Plan (LMP) leachate depth goal for March 1997 is approximately 27 inches; therefore, the leachate depth at the SCLF was maintained below the LMP goal. However, due to the decrease in leachate pumping from Temporary Pump Station No. 5 (TPS-5) beginning mid-March, as well as the Phase IV dewatering system being down part of the month of March, the depth of leachate over the liner increased to 26 inches by March 31.

Pumped From Station No. 3 (Column VI)

This column presents the daily amount (gallons) of leachate collected from the SCLF at TPS-3 and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-3 is measured from an hour-meter and calculated based on an average pumping rate of 180 gallons per minute. TPS-3, as well as the Phase IV dewatering system, were down for repairs during the month of March. The average daily amount of leachate collected and pumped from TPS-3 for March 1997 was approximately 9,000 gallons (Figure 2).

Pumped From Station No. 5 (Column VII)

This column presents the daily amount (gallons) of leachate collected from the SCLF at TPS-5 and pumped to the Main Leachate Pump Station for subsequent treatment. The daily amount of leachate pumped from TPS-5 is measured from the landfill flow meter minus the amount pumped from TPS-3. TPS-5 was not operational on March 11 and for unknown periods during the evenings of March 25 through 28. The average daily amount of leachate collected and pumped from TPS-5 for March 1997 was approximately 46,000 gallons.

Leachate Pumped to LTRF (Column VIII)

This column presents the daily amount of leachate (gallons) collected from TPS-3 and TPS-5 then pumped to the Leachate Treatment and Reclamation Facility (LTRF) for treatment. The daily amount of leachate pumped to the LTRF is measured from the landfill flowmeter near TPS-3. The average daily amount of leachate pumped from TPS-5 to the LTRF was 51,000 gallons (total of 1,587,700 gallons).

Leachate in 500,000 Gallon Tank (Column IX)

This column presents the daily amount (gallons) of leachate stored in the 500,000 gallon leachate holding tank at the LTRF. The leachate stored in the tank is calculated based on the circumference of the tank and the daily gauge level reading. The average daily amount of leachate stored in the tank for March 1997, based on recorded days, was 320,000 gallons. Under normal operating conditions, the amount of leachate stored in the tank fluctuates based on the daily amount of leachate pumped to the LTRF, the daily amount of leachate treated, and the daily amount of leachate hauled from the tank.

Leachate Treated at LTRF (Column X)

This column presents the daily amount (gallons) of leachate treated at the LTRF. The average daily amount of leachate treated at the LTRF for March 1997 was 0 gallons. The daily amount of leachate treated at the LTRF may increase or decrease depending on the influent loading/concentrations.

Note: The LTRF has not been operational since September 3, 1996 to allow for repairs to the treatment tanks. The LTRF is anticipated to be back in operation in June 1997.

Total Leachate Hauled (Column XI)

This column presents the daily amount (gallons) of leachate hauled off site. Leachate is pumped from the 500,000 gallon raw leachate tank and into a tanker truck for transport. During March 1997, a total of 1,610,179 gallons of leachate was hauled off site compared to a total of 1,558,554 gallons during the previous month.

The HCSWMD should continue off site hauling of untreated leachate to achieve the LMP goals until the repairs to the LTRF are completed.

Leachate Dust Control/Evaporation (Column XII)

This column presents the daily amount (gallons) of leachate used for dust control/evaporation in the active area of the SCLF is measured from the flowmeter at the bypass loading arm. The daily average amount of leachate pumped from the 500,000

gallon leachate tank at the Leachate Treatment and Reclamation Facility (LTRF) for use in dust control/evaporation was 6,000 gallons for March 1997, compared to 0 gallons during the previous month. A total of 196,000 gallons was used for dust control/evaporation in March 1997. HCSWMD should continue to maximize the amount of leachate used for dust control/evaporation.

Effluent Pond Storage (Column XIII)

This column presents the daily amount (gallons) of effluent stored in the effluent pond. The daily amount stored in the effluent pond is calculated by multiplying the daily depth of effluent in the effluent holding pond (Column IV) by the cross-sectional area of the pond. As indicated above, the effluent pond was drained for maintenance on March 27, 1997. The average daily amount of effluent stored in the effluent pond for March 1997 was 61,000 gallons. Under normal operating conditions, the daily amount of effluent stored in the effluent pond varies depending upon the daily amount of leachate treated at the LTRF, daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation on the SCLF.

Effluent Irrigation/Evaporation (Column XIV)

This column presents this column presents the daily amount (gallons) of effluent used for irrigation on top of the SCLF. The daily amount of effluent irrigation/evaporation on the SCLF is measured from the flowmeter at the irrigation pump station. The total amount of effluent used for effluent irrigation/evaporation in March 1997 was 140,080 gallons (i.e., to empty the effluent pond for maintenance).

Effluent Dust Control/Evaporation (Column XV)

This column presents the daily amount (gallons) of effluent used for dust control/evaporation in the active area of the SCLF. The daily amount of effluent used for dust control/evaporation is measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During March 1997, the total amount of effluent used for dust control/evaporation was 0 gallons, as was the case the previous month.

Total Effluent Hauled (Column XVI)

This column presents the daily amount (gallons) of effluent hauled off site is measured from the flowmeter at the bypass loading arm. Since the LTRF is shut down for repairs, effluent was not available for disposal. During March 1997, the total amount of effluent hauled off site was 0 gallons, as was the case the previous month.

Landfill Evaporation (Column XVII)

This column presents the daily amount (gallons) of leachate and effluent that will not be returned to the SCLF and/or require treatment because of evaporation. The landfill evaporation rate is calculated by multiplying the total of columns XII, XIV, and XV by an assumed evaporation rate of 80 percent, which was selected based on the HELP model water balance analysis for the site. (Note: Previous monthly reports used an evaporation rate of 80.8 percent. An 80 percent rate was used for the March calculations, and this assumed evaporation rate will be used on all future calculations).

The total estimated amount of leachate/effluent evaporation for March 1997 was 273,000 gallons, compared to 40,000 gallons during the previous month.

If you have any questions, please do not hesitate to call.

Very truly yours,

Larry E. Ruiz
Senior Project Engineer

for Robert B. Gardner, P.E.
Vice President
SCS ENGINEERS

RBG/LER:blj
Attachments

cc: Matt Matthews

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
MARCH 1997
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	Area (acres)				Depth in Effluent	Est. Depth Over	Pumped From	Pumped From	Leachate Pumped	Leachate in 500K	Leachate Treated	Total Leachate	Leachate Dust Cont./	Effluent Pond	Effluent Irrigation	Effluent Dust Cont./	Total Effluent	Landfill
Day	final	active	int.	Rainfall (in.)	Pond (in.)	Liner (in.)	Sta. No 3 (gal.)	Sta. No. 5 (gal.)	to LTRF (gal.)	Tank (gal.)	at LTRF (gal.)	Hauled (gal.)	Evaporation (gal.)	Storage (gal.)	Evaporation (gal.)	Evaporation (gal.)	Hauled (gal.)	Evaporation (gal.)
1	25.2	5	90.2	0	36	16	8,100	51,500	59,600	374,000	0	42,645	14,000	116,000	0	0	0	11,000
2	25.2	5	90.2	0	NR	NR	***8,100***	***51,500***	59,600	NR	0	0	0	NR	0	0	0	0
3	25.2	5	90.2	0	35	16	9,720	49,080	58,800	432,000	0	66,228	14,000	113,000	0	0	0	11,000
4	25.2	5	90.2	0	35	15	9,720	45,280	55,000	403,000	0	99,357	7,000	113,000	0	0	0	6,000
5	25.2	5	90.2	0	38	16	9,720	47,280	57,000	345,000	0	98,065	14,000	124,000	0	0	0	11,000
6	25.2	5	90.2	0	30	16	10,800	45,700	56,500	317,000	0	104,295	7,000	95,000	31,510	0	0	31,000
7	25.2	5	90.2	0	27	15.5	9,720	41,980	51,700	288,000	0	67,689	7,000	85,000	27,540	0	0	28,000
8	25.2	5	90.2	0	26	15	8,640	43,910	52,550	274,000	0	34,919	14,000	81,000	0	0	0	11,000
9	25.2	5	90.2	0	NR	NR	***8,640***	***43,910***	52,550	NR	0	0	0	NR	0	0	0	0
10	25.2	5	90.2	0	23	17	5,400	37,100	42,500	317,000	0	68,208	14,000	71,000	0	0	0	11,000
11	25.2	5	90.2	0	23	18	8,640	56,360	65,000	274,000	0	67,793	14,000	71,000	0	0	0	11,000
12	25.2	5	90.2	0	26	17	10,800	49,700	60,500	274,000	0	55,826	0	81,000	0	0	0	0
13	25.2	5	90.2	0	26	17	9,720	51,580	61,300	274,000	0	62,044	14,000	81,000	36,430	0	0	40,000
14	25.2	5	90.2	0.9	18	17.5	9,720	48,780	58,500	274,000	0	37,594	0	55,000	0	0	0	0
15	25.2	5	90.2	0	18	16.5	8,640	41,860	50,500	302,000	0	61,637	0	55,000	0	0	0	0
16	25.2	5	90.2	0	NR	NR	***8,640***	***41,860***	50,500	NR	0	0	0	NR	0	0	0	0
17	25.2	5	90.2	0	18	16	8,640	43,460	52,100	345,000	0	62,663	7,000	55,000	0	0	0	6,000
18	25.2	5	90.2	0	18	16	1,080	120	1,200	345,000	0	68,569	7,000	55,000	0	0	0	6,000
19	25.2	5	90.2	0	18	17.5	0	87,600	87,600	288,000	0	67,435	7,000	55,000	18,240	0	0	20,000
20	25.2	5	90.2	0.7	16	19	0	60,600	60,600	302,000	0	61,869	7,000	49,000	0	0	0	6,000
21	25.2	5	90.2	0.5	16	20	0	60,000	60,000	302,000	0	67,858	0	49,000	0	0	0	0
22	25.2	5	90.2	0	16	20.5	0	52,400	52,400	317,000	0	36,534	0	49,000	0	0	0	0
23	25.2	5	90.2	0	NR	NR	0	***52,400***	52,400	NR	0	0	0	NR	0	0	0	0
24	25.2	5	90.2	0	16	21.5	0	41,200	41,200	374,000	0	54,904	7,000	49,000	0	0	0	6,000
25	25.2	5	90.2	0	14	22	0	33,600	33,600	345,000	0	67,635	7,000	42,000	0	0	0	6,000
26	25.2	5	90.2	0	14	22.5	0	37,400	37,400	317,000	0	54,947	14,000	42,000	26,360	0	0	32,000
27	25.2	5	90.2	0	0	23	0	38,600	38,600	317,000	0	54,298	7,000	0	0	0	0	6,000
28	25.2	5	90.2	0	0	24	0	67,000	67,000	288,000	0	55,610	7,000	0	0	0	0	6,000
29	25.2	5	90.2	0	0	24.5	0	44,050	44,050	302,000	0	24,137	7,000	0	0	0	0	6,000
30	25.2	5	90.2	0	NR	NR	0	***44,050***	44,050	NR	0	0	0	NR	0	0	0	0
31	25.2	5	90.2	0.3	0	26	0	23,400	23,400	331,000	0	67,420	0	0	0	0	0	0
Total				2.4			154,440	1,433,260	1,587,700	8,321,000	0	1,610,179	196,000	1,586,000	140,080	0	0	271,000
Average					19.5	18.7	9,000	46,000	51,000	320,000	0	62,000	6,000	61,000	28,000	0	0	14,000

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Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, measured from depth in Phase IV Piezometer.
5. Column VI calculated based on average 180 gpm and hour conversion.
6. Column VII calculated by subtracting VI from flow meter reading.
7. Column VIII, quantity from flow meter.
8. Column IX, calculated from depth in 500,000 gal. leachate tank.
9. Columns X and XIV, quantities from flow meters.
10. Columns XI, XII, XV, and XVI, quantities calculated from truck weight and flow meter.
11. Column XVII, 80.8% of the daily values from Columns XII, XIV and XV.
12. Values in italic are substitute for missing data and are based on averaged values.
13. Averages were calculated by dividing the total by the active days in the month.
14. Values in bold are estimated

TABLE 2. FIELD DATA ENTRY FORM
MARCH 1997
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
	Active	Piezometer	Phase IV	Phase III	Pump Sta.	Pump Sta	Landfill Flow Meter Pump	Depth in	Leachate Hauled		Leachate Dust Cont./		Depth in	Leachate Treated	Effluent Irrigation	Effluent Hauled		Effluent Dust Cont./
Day	Area (ac.)	Phase IV (in.)	LCRS Cleanout (in.)	LCR Cleanout (in.)	No. 4 (in.)	No. 3 Reading (hours)	Sta. No. 5 (gal.)	500K Tank (ft.)	Contractor (gal.)	County (gal.)	Evaporation (gal.)	Rainfall (in.)	Effl. Pond (in.)	at LTRF (gal.)	Evaporation (gal.)	Contractor (gal.)	County (gal.)	Evaporation (gal)
1	5	16	11.5	3	70	**4.5**	36,166,300	13	42,645	0	14,000	0.0	36	0	0	0	0	0
2	5	NR	NR	NR	NR	***5.3***	***36,225,900***	NR	0	0	0	0.0	NR	0	0	0	0	0
3	5	16	13	3	69	**6.0**	36,285,500	15	42,619	23,609	14,000	0.0	35	0	0	0	0	0
4	5	15	11	3	69	**6.9**	36,344,300	14	73,738	25,619	7,000	0.0	35	0	0	0	0	0
5	5	16	12	3	69	**7.8**	36,399,300	12	85,465	12,600	14,000	0.0	38	0	0	0	0	0
6	5	16	12	4	69	**8.7**	36,456,300	11	79,112	25,183	7,000	0.0	30	0	31,510	0	0	0
7	5	15.5	11	4	68	**9.7**	36,512,800	10	42,592	25,097	7,000	0.0	27	0	27,540	0	0	0
8	5	15	11	3.5	68	**10.6**	36,564,500	9.5	34,919	0	14,000	0.0	26	0	0	0	0	0
9	5	NR	NR	NR	NR	***11.4***	***36,617,050***	NR	0	0	0	0.0	NR	0	0	0	0	0
10	5	17	12	3	69	**12.2**	36,669,600	11	42,927	25,281	14,000	0.0	23	0	0	0	0	0
11	5	18	12	3	67	**12.7**	36,712,100	9.5	42,593	25,200	14,000	0.0	23	0	0	0	0	0
12	5	17	12	3	66	**13.6**	36,777,100	9.5	43,226	12,600	0	0.0	26	0	0	0	0	0
13	5	17	11	3	67	**14.5**	36,837,600	9.5	36,753	25,291	14,000	0.0	26	0	36,430	0	0	0
14	5	17.5	12	4	71	**15.4**	36,898,900	9.5	12,200	25,394	0	0.9	18	0	0	0	0	0
15	5	16.5	12	3	69	**16.3**	36,957,400	10.5	36,533	25,104	0	0.0	18	0	0	0	0	0
16	5	NR	NR	NR	NR	***17.1***	***37,007,900***	NR	0	0	0	0.0	NR	0	0	0	0	0
17	5	16	12	3	68	**17.9**	37,058,400	12	37,243	25,420	7,000	0.0	18	0	0	0	0	0
18	5	16	11.5	3.5	63.5	**18.7**	37,110,500	12	42,972	25,597	7,000	0.0	18	0	0	0	0	0
19	5	17.5	21	3.5	68	**18.8**	37,111,700	10	61,135	6,300	7,000	0.0	18	0	18,240	0	0	0
20	5	19	12	3	67	**18.8**	37,199,300	10.5	36,603	25,266	7,000	0.7	16	0	0	0	0	0
21	5	20	12	3.5	72	**18.8**	37,259,900	10.5	42,668	25,190	0	0.5	16	0	0	0	0	0
22	5	20.5	11.5	3	72	**18.8**	37,319,900	11	36,534	0	0	0.0	16	0	0	0	0	0
23	5	NR	NR	NR	NR	***18.8***	***37,372,300***	NR	0	0	0	0.0	NR	0	0	0	0	0
24	5	21.5	12	3	72	**18.8**	37,424,700	13	42,304	12,600	7,000	0.0	16	0	0	0	0	0
25	5	22	12	3.5	71	**18.8**	37,465,900	12	42,745	24,890	7,000	0.0	14	0	0	0	0	0
26	5	22.5	17	3	70	**18.8**	37,499,500	11	42,347	12,600	14,000	0.0	14	0	26,360	0	0	0
27	5	23	12.5	3	68.5	**18.8**	37,536,900	11	29,062	25,236	7,000	0.0	0	0	0	0	0	0
28	5	24	14	3	70	**18.8**	37,575,500	10	30,374	25,236	7,000	0.0	0	0	0	0	0	0
29	5	24.5	11.5	3	67.5	**18.8**	37,642,500	10.5	24,137	0	7,000	0.0	0	0	0	0	0	0
30	5	NR	NR	NR	NR	***18.8***	***37,686,550***	NR	0	0	0	0.0	NR	0	0	0	0	0
31	5	26	19	3.5	69	**18.8**	37,730,600	11.5	42,192	25,228	0	0.3	0	0	0	0	0	0

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Notes:

1. NR = No Records.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Columns II-IX , XIII and XIV, field measured.
4. Column VIII, reading from flow meter.
5. Column XIII, Trace is less than 0.01 inches.
6. Column IV, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
7. Column III, Phase IV piezometer began monitoring on 7/10/95.
8. Columns XV and XVI, quantities from flow meters.
9. Column IX, field measured.
10. ColumnVII, hour reading from TPS-3.

TABLE 3. 1997 LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

		Leachate Arriving at LTRF		Leachate Leaving LTRF			Effluent Disposal			Inflow/Outflow Balance For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (gal.)	Leachate from SELF Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Leachate Dust Control / Evap. From LTRF (gal.)	Leachate Treated at LTRF (gal.)	Total Eff. Hauled (gal.)	Effluent Dust Control/ Evaporation (gal.)	Effluent Irrigation / Evaporation (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Balance For Month (gal.)
January	3.30	0	1,892,150	2,006,378	0	0	0	0	10,470	1,892,150	2,006,378	(114,228)
February	2.20	0	1,672,700	1,558,554	0	0	0	0	49,290	1,672,700	1,558,554	114,146
March	2.40	0	1,587,700	1,610,179	196,000	0	0	0	140,080	1,587,700	1,806,179	(218,479)
April										0	0	0
May										0	0	0
June										0	0	0
July										0	0	0
August										0	0	0
September										0	0	0
October										0	0	0
November										0	0	0
December										0	0	0
YTD Total	7.90	0	5,152,550	5,175,111	196,000	0	0	0	199,840	5,152,550	5,371,111	

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Note:

1. If the effluent bypass 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 Falukenburg Road Waste Water Treatment Facility until the Leachate Treatment Plant resumes operation.

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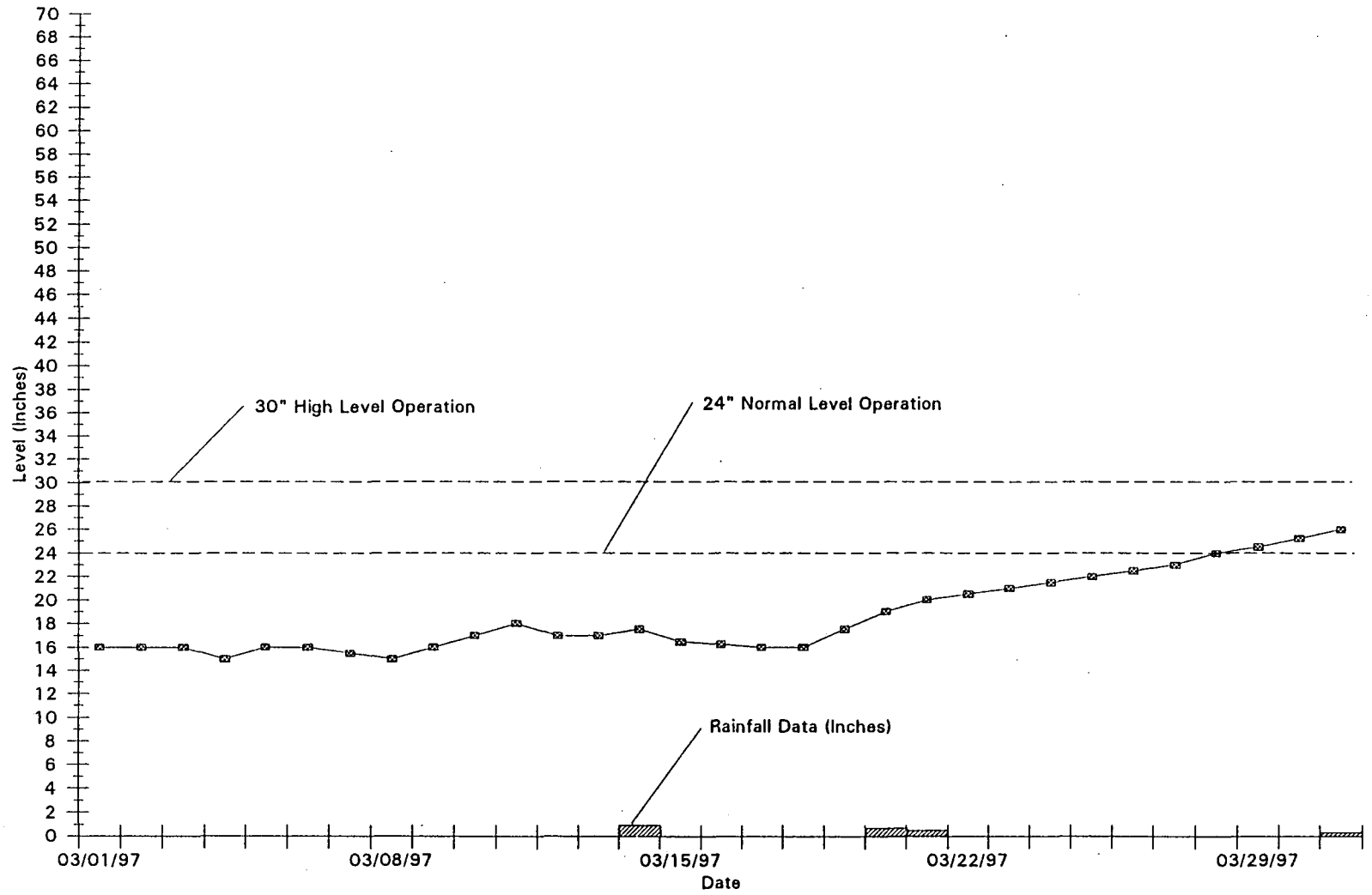
Figure 1.

Phase IV Piezometer



SCS ENGINEERS

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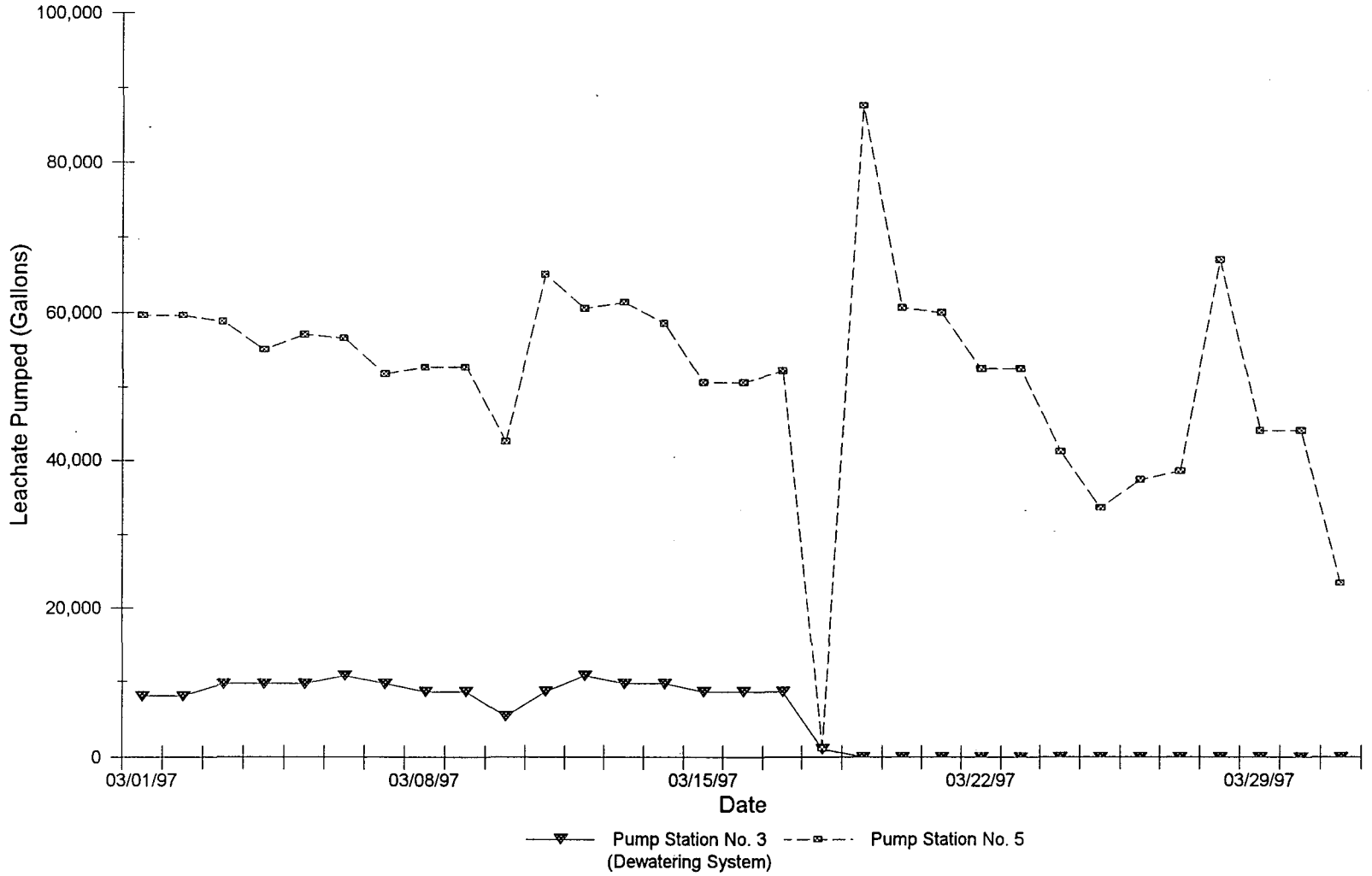
Figure 2.

Pump Station No. 3 and No. 5



SCS ENGINEERS

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Mar. 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled Contractor (gallons)	Leachate Hauled County (gallons)	Leachate Recirculation (gallons)	Rainfall (inches)
1		16	11.5	3	70	4.5	36166300	13	42,645	Ø	14,000	Ø
2		NR	NR	NR	NR	NR	NR	NR	Ø	Ø	Ø	Ø
3		16	13	3	69	6.0	36285500	15	42,619	23,609	14,000	Ø
4		15	11	3	69	6.9	36344300	14	73,738	25,619	7,000	Ø
5		16	12	3	69	7.8	36399300	12	85,465	12,600	14,000	Ø
6		16	12	4	69	8.7	36456300	11	79,112	25,183	7,000	Ø
7		15.5	11	4	68	9.7	36512800	10	42,592	25,097	7,000	Ø
8		15	11	3.5	68	10.6	36564500	9.5	34,919	Ø	14,000	Ø
9		NR	NR	NR	NR	NR	NR	NR	Ø	Ø	Ø	Ø
10		17	12	3	69	12.2	36669600	11	42,927	25,281	14,000	Ø
11		18	12	3	67	12.7	36712100	9.5	42,593	25,200	14,000	Ø
12		17	12	3	66	13.5	36777100	9.5	43,226	12,600	Ø	Ø
13		17	11	3	67	14.5	36837600	9.5	36,753	25,291	14,000	Ø
14		17.5	12	4	71	15.4	36898900	9.5	12,200	25,394	Ø	.9
15		16.5	12	3	69	16.3	36957400	10.5	36,533	25,104	Ø	Ø
16		NR	NR	NR	NR	NR	NR	NR	Ø	Ø	Ø	Ø

(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: Mar. 11 - Well point pump down 12 hrs. - Sump 5 pump down ? hrs. Mar. 19 - Pumps off for change over & repair. Mar. 19 thru 22, pump station #3 pump off for repairs Mar. 25 thru 28 pump station #5 pump down all nights. Mar. 31 pump needs repair.

Prepared by T. Robertson

LEACHATE DEPTH/SUMMARY DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Mar. 97

Date	Active Area (acres)	(1) Piezometer Phase IV (inches)	Phase IV LCRS Cleanout (inches)	Phase III LCRS Cleanout (inches)	Pump Sta. No. 4 (inches)	Pump Sta. No. 3 Reading (hours)	Landfill Flow Meter Pump Sta. No. 5 (gallons)	Depth in 500K Tank (feet)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		16	12	3	68	17.9	37058400	12	37,243	25,420	7,000	Ø
18		16	11.5	3.5	63.5	18.7	37110500	12	42,972	25,597	7,000	Ø
19		17.5	21	3.5	68	18.8	37111700	10	61,135	6,300	7,000	Ø
20		19	12	3	67	18.8	37199300	10.5	36,603	25,266	7,000	.7
21		20	12	3.5	72	18.8	37259900	10.5	42,668	25,190	Ø	.5
22		20.5	11.5	3	72	18.8	37319900	11	36,534	Ø	Ø	Ø
23		NR	NR	NR	NR	NR	NR	NR	Ø	Ø	Ø	Ø
24		21.5	12	3	72	18.8	37424700	13	42,394	12,600	7,000	Ø
25		22	12	3.5	71	18.8	37465900	12	42,745	24,890	7,000	Ø
26		22.5	17	3	70	18.8	37499500	11	42,347	12,600	14,000	Ø
27		23	12.5	3	68.5	18.8	37536900	11	29,062	25,236	7,000	Ø
28		24	14	3	70	18.8	37575500	10	30,374	25,236	7,000	Ø
29		24.5	11.5	3	67.5	18.8	37642500	10.5	24,137	Ø	7,000	Ø
30		NR	NR	NR	NR	NR	NR	NR	Ø	Ø	Ø	Ø
31		26	19	3.5	69	18.8	37730600	11.5	42,192	25,228	Ø	.3

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(1) If depth is greater than 24 inches (2.0 feet): Contact Supervisor immediately. Complete Evaluation Report Form.

Comments: _____

Leachate Hauled Month Total: _____

Prepared by: M. Mueller

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Mar. 97

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
1	36	Ø	Ø	Ø	Ø	Ø	Ø	–	N
2	NR	Ø	Ø	Ø	Ø	Ø	Ø	–	N
3	35	Ø	Ø	Ø	Ø	Ø	Ø	–	N
4	35	Ø	Ø	Ø	Ø	Ø	Ø	–	N
5	38	Ø	Ø	Ø	Ø	Ø	Ø	–	N
6	30	Ø	31,510	Ø	Ø	Ø	Ø	–	N
7	27	Ø	27,540	Ø	Ø	Ø	Ø	–	N
8	26	Ø	Ø	Ø	Ø	Ø	Ø	–	N
9	NR	Ø	Ø	Ø	Ø	Ø	Ø	–	N
10	23	Ø	Ø	Ø	Ø	Ø	Ø	–	N
11	23	Ø	Ø	Ø	Ø	Ø	Ø	–	N
12	26	Ø	Ø	Ø	Ø	Ø	Ø	–	N
13	26	Ø	36,430	Ø	Ø	Ø	Ø	–	N
14	18	Ø	Ø	Ø	Ø	Ø	Ø	–	N
15	18	Ø	Ø	Ø	Ø	Ø	Ø	–	N
16	NR	Ø	Ø	Ø	Ø	Ø	Ø	–	N

(1) If yes: Contact Supervisor Immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: March 27 thru 31 - effluent pond empty for maintance

Prepared by: Jeff Walker

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL
(Month/Year) Mar 97

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
17	18	Ø	Ø	Ø	Ø	Ø	Ø	–	N
18	18	Ø	Ø	Ø	Ø	Ø	Ø	–	N
19	18	Ø	18,240	Ø	Ø	Ø	Ø	–	N
20	16	Ø	Ø	Ø	Ø	Ø	Ø	–	N
21	16	Ø	Ø	Ø	Ø	Ø	Ø	–	N
22	16	Ø	Ø	Ø	Ø	Ø	Ø	–	N
23	NR	Ø	Ø	Ø	Ø	Ø	Ø	–	N
24	16	Ø	Ø	Ø	Ø	Ø	Ø	–	N
25	14	Ø	Ø	Ø	Ø	Ø	Ø	–	N
26	14	Ø	26,360	Ø	Ø	Ø	Ø	–	N
27	Ø	Ø	Ø	Ø	Ø	Ø	Ø	–	N
28	Ø	Ø	Ø	Ø	Ø	Ø	Ø	–	N
29	Ø	Ø	Ø	Ø	Ø	Ø	Ø	–	N
30	NR	Ø	Ø	Ø	Ø	Ø	Ø	–	N
31	Ø	Ø	Ø	Ø	Ø	Ø	Ø	–	N

(1) If yes: Contact Supervisor immediately and stop spray irrigation. Complete Evaluation Report Form.

Comments: _____

Prepared by: M. Walker

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) Mar. 97

Action	Date															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Piezometer Phase IV																
Low Level Operation, depth less than or equal to 12 inches.																
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.																
Sump No. 4 Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
500,000 Gallon Tank at LTRF																
Normal Operation.							✓	✓			✓	✓	✓	✓	✓	
If level is greater than 11 feet, increase treatment, hauling , or recirculation.	✓	NR	✓	✓	✓	✓			NR	✓						NR
If level is less than 6 feet, decrease or stop hauling, recirculation.																
Effluent Pond																
Normal Operation.	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR
If level is 6 inches or less, stop irrigation, recirculation, hauling.																
If level is greater than 4 feet, increase irrigation, recirculation, hauling.																
Observed runoff of effluent to stormwater basins?																
No.	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.																
Runoff Type / To Basin																
1 = Severe / A, B, C, D																
2 = Moderate																
3 = Minor																

Comments/Remedial Action: _____

Prepared by: M. Mantz

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL

(Month/Year) Mar. 97

Action	Date														
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Piezometer Phase IV															
Low Level Operation, depth less than or equal to 12 inches.															
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓		NR	
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.													✓		✓
Sump No. 4 Phase VI (Stormwater)															
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.															
500,000 Gallon Tank at LTRF															
Normal Operation.			✓	✓	✓							✓	✓	NR	
If level is greater than 11 feet, increase treatment, hauling , or recirculation.	✓	✓				✓	NR	✓	✓	✓	✓				✓
If level is less than 6 feet, decrease or stop hauling, recirculation.															
Effluent Pond															
Normal Operation.	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓				NR	
If level is 6 inches or less, stop irrigation, recirculation, hauling.											✓	✓	✓		✓
If level is greater than 4 feet, increase irrigation, recirculation, hauling.															
Observed runoff of effluent to stormwater basins?															
No.	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR	✓
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin, Runoff Type and Remedial Action taken.															
Runoff Type: 1 = Severe, 2 = Moderate, 3 = Minor — To Basin: A, B, C, D															

Comments/Remedial Action: March 27 thru 31 - Effluent pond empty for maintance

Prepared by: Ted Matthews