Hillsborough County Florida

SOLID WASTE MANAGEMENT
PO Box 1110, Tampa, FL 33601-1110
813-612-7718

July 15, 2022

Ms. Melissa Madden
Solid Waste Section
Florida Department of Environmental Protection
Southwest District
13051 N. Telecom Pkwy
Temple Terrace, Florida 33637

RE: Southeast County Landfill –Leachate Data Quarterly Report

Dear Ms. Madden:

In accordance with Specific Condition No. C.12.d of Permit No. 35435-022-SO/01, the Solid Waste Management Department (SWMD) is submitting the Quarterly Leachate Water Balance summary for the Southeast County Landfill for the quarter ending June 30, 2022. The data is being submitted as separate monthly reports for April, May, and June 2022.

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

Sincerely,

Larry E. Ruiz

Larry E. Ruiz
Manager Landfill Operations
Solid Waste Management Department

LER/rw
Attachments
xc: Ron Cope, EPC
Kimberly Byer, SWMD

Hillsborough County Florida

SOLID WASTE MANAGEMENT
PO Box 1110, Tampa, FL 33601-1110

MEMORANDUM

DATE: May 15, 2022

TO: Larry E. Ruiz, Manager Landfill Operations, Solid Waste Management Division

FROM: Ron W. Wiesman, Manager, Solid Waste Management Division

SUBJECT: Leachate Water Balance Report Forms for April 2022
Southeast County Landfill, Hillsborough County, Florida

The Solid Waste Management Division (SWMD) staff has compiled and reviewed the leachate management operational data from the Southeast County Landfill Phases I-VI, Sections 7-8, and Section 9. Attached are the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 2022 Summary (Table 3). Also, attached find Figure 1 showing leachate levels in Pump Station B sump of Phases I-VI and rainfall for the month.

TABLE 1

Day (Column I)

Column I presents the calendar days for the month.

Rainfall (Column II)

Column II presents the average rainfall, in inches, as measured in the field from rainfall stations at the site. This month there was 5.16 inches of rainfall recorded at the Southeast County Landfill (SCLF).

Depth in Pond A (Column III)

Column III presents the daily depth, in feet, of effluent stored in effluent pond (Pond A). The daily depth in Pond A varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. This month the daily average of effluent stored in Pond A was 1.5 feet.

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month the daily average depth of leachate in Pond B was 2.8 feet.

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

Column V presents the depth of leachate, in inches, in the PS-B sump. Leachate from Phases I-VI flows to the PS-B sump for removal from the landfill. PS-B then pumps the leachate to Pump Station A (PS-A). Daily depth readings from the PS-B sump are included in this column. The average recorded depth of leachate in the PS-B sump was 18.2 inches.

Depth in Clean Out 2-1 (CO 2-1) (Column VI)

Column VI presents the depth of leachate, in inches, in the East side of the landfill. Daily depth readings from the CO 2-1 are included in this column. The average recorded depth of leachate in the CO 2-1 was 19.9 inches.

Depth in Monitoring Port 2-2 (MP 2-2) (Column VII)

Column VII presents the depth of leachate, in inches, in the South East side of the landfill. Daily depth readings from the MP 2-2 are included in this column the average recorded depth of leachate in the MP 2-2 was 22.2 inches.

Leachate Pumped to MLPS from Phases I-VI (Column VIII)

Column VIII presents the daily amount of leachate, in gallons, collected from PS-A and pumped through the MLPS to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. This column also includes the Phase II data from the dewatering wells and PS-2. The average daily amount of leachate pumped from PS-A was 66,899 gallons. A total of 2,006,957 gallons of leachate was pumped this month.

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

Column IX presents the quantity of leachate removed from the leak detection system (LDS) of Sections 7-8. The quantity is measured by a flow meter before being pumped for removal with Sections 7-8 leachate. The removal rate did not exceed 1,930 gallons per day. This month 804 gallons of leachate was removed from the leak detection system of Sections 7-8.

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

Column X presents the quantity of leachate collected at Sections 7-8 and pumped to the MLPS. The quantity is measured by a flow meter and includes any leachate removed from the leak detection system of Sections 7-8 (Column VII). This month a total of 151,989 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column XI)

Column XI presents the total quantity of leachate pumped to the LTRF from Phases I-VI (including condensate removed from LFG Wells and Condensate Traps), and Sections 7-8. This month a total of 2,158,946 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column XII)

Column XII presents the daily amount of leachate, in gallons, collected from Section 9 and pumped to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. A total of 129,467 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XIII)

Column XIII presents the daily amount of leachate, in gallons, collected from the LDS of Section 9 and pumped to the 575,000-gallon storage tank at the LTRF for treatment or disposal. The removal rate did not exceed 4,651 gallons per day. This month 1,525 gallons of leachate was removed from the leak detection system.

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

Column XIV presents the daily amount of leachate, in gallons, stored in the 575,000-gallon leachate holding tank T1 at the LTRF. The amount of leachate stored in T1 is calculated based on the circumference of the tank and the daily level reading. This month an average of 160,033 gallons of leachate was stored in the tank.

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

Column XV typically presents the daily amount of effluent, in gallons, stored in the 575,000- gallon effluent holding tank T6 at the LTRF. The amount of effluent/leachate stored in T6 is calculated based on the circumference of the tank and the daily level reading. This month an average of 147,667 gallons of leachate was stored in the tank.

Leachate Treated at LEF (Column XVI)

Column XVI presents the daily amount of leachate, in gallons, treated at the LEF (Leachate Evaporator Facility). On September 1, 2021, Hillsborough County started treating leachate at the LEF. This month a total of 1,388,533 gallons of leachate was treated at the evaporator.

Leachate Treated at LTRF (Column XVII)

Column XVII presents the daily amount of leachate, in gallons, treated at the LTRF. On September 15, 2019, plant staff restarted treatment operations. This month a total of 355,573 gallons of leachate was treated at the plant.

Total Leachate Hauled (Column XVIII)

Column XVIII presents the daily amount of leachate, in gallons, hauled off site. This month a total of 654,652 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XIX)

Column XIX presents the daily amount of leachate, in gallons, measured from the flow meter at the bypass-loading arm at the leachate storage tank. The leachate is used for dust control in the active area of the landfill. This month a total of zero gallons of leachate was used for dust control.

Pond A Storage (Column XX)

Column XX presents the daily amount of effluent, in gallons, stored in Pond A. The daily amount stored in the pond is calculated by using the daily depth of effluent in the Pond A (Column III). Under normal operating conditions, the daily amount of effluent stored in the pond varies depending upon the daily amount of leachate treated at the LTRF, the daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation. This month a daily average of 40,500 gallons of effluent was stored in Pond A.

Pond B Storage (Column XXI)

Column XXI presents the daily amount of leachate, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of liquid in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of leachate pumped from the pond to the evaporator, hauled from the pond, used for dust control or evaporated. This month a daily average of 225,133 gallons of leachate was stored in Pond B.

Effluent Irrigation (Column XXII)

Column XXII presents the daily amount of effluent, in gallons, used for spray irrigation on top of Phases IV-VI. The daily amount of effluent irrigation on Phases I-VI is measured from the flow meter at the irrigation pump station. This month a total of 242,565 gallons of effluent was sprayed.

Effluent Dust Control Sprayed (Column XXIII)

Column XXIII presents the daily amount of effluent, in gallons, sprayed for dust control in the active areas of the SCLF. The daily amount of effluent used for dust control, is measured from the flow meter at the bypass-loading arm. This month zero gallons of effluent was sprayed as dust control.

Total Effluent Hauled (Column XXIV)

Column XXIV presents the daily amount of effluent, in gallons, hauled off site, as measured from the flow meter at the bypass-loading arm. This month zero gallons of effluent was hauled off site.

Total Evaporation (Column XXV)

Column XXV presents the daily amount of leachate and effluent, in gallons, that evaporates and therefore will not be returned to the SCLF and/or requires treatment. Evaporation rates of 80 percent and 5 percent evaporation rate for spray in Pond B are assumed. Total evaporation estimated for this month was 1,443,700 gallons.

TABLE 2

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

TABLE 3

Leachate Balance Summary

The Leachate Balance Summary (see Table 3) presents a review of inflow and outflow quantities for the LTRF, as well as rainfall and effluent disposal quantities at the landfill. Total inflow quantity to the LTRF was 2,290,525 gallons. Total outflow quantity from the LTRF was 2,398,758 gallons. The change in storage for the month decreased by 108,233 gallons. Please advise should you have any questions concerning the information provided.

TABLE 1. LEACHATE WATER BALANCE REPORT FORM

SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI	XXII	XXIII	XXIV	XXV
Day	Rainfall (in.)	Depth in Pond A (ft.)	Depth in Pond B (ft.)	Estimated Depth at PS-B (in)	Depth in CO 2-1 (in)	Depth in MP 2-2 (in.)	Leachate Pumped to MLPS from Phases I-VI (gal.)	Leachate Pumped from Sections 7-8 LDS (gal.)	Leachate Pumped to MLPS from Sections 7-8 (gal.)	Leachate Pumped to LTRF from MPLS (gal.)	Leachate Pumped to LTRF from Section 9 (gal.)	Leachate Pumped from Section 9 LDS (gal.)	Leachate in 575K Tank (gal.)	Effluent in 575K Tank (gal.)	Leachate Treated at LEF (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Pond A Storage (gal.)	Pond B Storage (gal)	Effluent Irrigation (gal.)	Effluent Dust Control (Sprayed) (gal.)	Total Effluent Hauled (gal.)	Total Evaporation (gal.)
1	0.30	1.8	3.2	25.8	20.9	24.4	73,773	39	5,479	79,252	3,863	0	108,000	144,000	50,660	21,695	33,393	0	52,000	265,000	0	0	0	45,600
2	0.33	2.1	3.2	11.4	22.4	24.4	75,461	0	3,917	79,378	3,858	0	86,000	144,000	49,255	21,695	28,176	0	65,000	265,000	56,718	0	0	89,700
3	0.00	2.0	3.1	14.1	*23.3*	*24.4*	73,632	36	5,593	79,225	3,483	0	95,000	144,000	51,388	21,695	0	0	61,000	254,000	0	0	0	46,200
4	0.00	1.8	3.0	16.8	24.2	24.4	70,734	36	5,593	76,327	3,483	0	103,000	144,000	51,388	21,695	26,878	0	52,000	242,000	0	0	0	46,200
5	0.00	1.6	3.1	18.0	20.7	12.4	67,175	0	3,560	70,735	3,846	0	137,000	144,000	26,482	3,820	26,982	0	44,000	254,000	0	0	0	23,800
6	0.00	1.6	2.2	21.0	24.2	11.6	70,958	40	5,713	76,671	4,229	0	182,000	144,000	38,913	2	26,960	0	44,000	157,000	30,603	0	0	59,500
7	2.50	0.8	2.4	23.4	24.7	20.0	69,392	38	4,389	73,781	3,747	0	194,000	144,000	41,435	2,610	48,238	0	17,000	178,000	0	0	0	37,300
8	0.00	1.6	3.2	28.6	17.8	19.7	67,423	31	4,997	72,420	3,095	30	180,000	144,000	47,735	15,302	48,186	0	44,000	265,000	0	0	0	43,000
9	0.00	1.8	3.0	16.8	22.1	20.7	59,152	32	5,240	64,392	3,336	0	151,000	149,000	49,348	15,161	28,144	0	52,000	242,000	0	0	0	44,400
10	0.00	2.0	2.9	15.3	*23.2*	*21.6*	59,945	18	10,348	70,293	3,017	0	144,000	149,000	49,364	15,161	0	0	61,000	231,000	0	0	0	44,400
11	0.00	2.2	2.8	13.8	24.3	22.5	61,615	18	10,348	71,963	3,017	0	137,000	149,000	49,364	15,161	6,396	0	70,000	221,000	29,075	0	0	67,700
12	0.00	1.7	2.8	20.4	22.8	22.8	63,121	36	3,062	66,183	5,555	0	158,000	149,000	46,475	3,630	7,035	0	48,000	221,000	24,540	0	0	61,500
13	0.00	1.3	2.8	25.2	17.5	23.3	67,353	0	4,663	72,016	3,554	0	180,000	149,000	51,685	9,596	14,075	0	36,000	221,000	25,469	0	0	66,900
14	0.00	0.8	2.8	19.2	15.3	23.4	67,927	40	4,607	72,534	4,843	0	189,000	149,000	48,725	12,640	14,065	0	17,000	221,000	0	0	0	43,900
15	0.00	1.0	3.0	15.6	20.9	23.4	70,681	38	6,258	76,939	6,565	0	185,000	149,000	50,368	12,084	49,258	0	24,000	242,000	0	0	0	45,300
16	0.00	1.1	3.0	15.6	20.5	23.3	67,742	0	3,008	70,750	6,164	0	173,000	149,000	48,952	10,914	0	0	28,000	242,000	0	0	0	44,100
17	0.00	1.3	2.8	17.1	*18.9*	*23.4*	70,813	41	5,305	76,117	3,396	1	190,000	149,000	52,419	10,914	0	0	32,000	221,000	0	0	0	47,200
18	0.00	1.4	2.6	18.6	17.2	23.5	69,319	41	5,305	74,624	3,396	1	206,000	149,000	52,419	10,916	33,265	0	36,000	199,000	0	0	0	47,200
19	0.00	1.6	2.6	17.4	16.6	23.2	65,431	0	4,542	69,973	20,689	0	187,000	149,000	49,417	12,108	48,897	0	44,000	199,000	0	0	0	44,500
20	0.00	1.7	2.6	23.4	23.7	22.5	60,748	41	4,683	65,431	288	0	153,000	149,000	46,555	12,856	41,997	0	48,000	199,000	33,123	0	0	68,400
21	0.00	1.1	2.6	17.4	22.9	22.5	60,641	38	3,838	64,479	3,719	2	130,000	149,000	41,045	14,030	37,881	0	28,000	199,000	0	0	0	36,900
22	0.00	1.1	2.4	22.8	16.6	22.7	61,900	0	5,650	67,550	4,797	47	151,000	149,000	46,650	1,144	0	0	28,000	178,000	0	0	0	42,000
23	0.00	1.1	2.6	17.4	20.7	23.1	63,766	53	3,870	67,636	3,133	0	166,000	149,000	50,693	0	0	0	28,000	199,000	0	0	0	45,600
24	0.00	1.3	2.8	17.1	19.1	23.2	69,506	21	5,326	74,831	4,172	0	175,000	149,000	25,334	10,443	0	0	36,000	210,000	14,346	0	0	34,300
25	0.00	1.5	2.9	16.8	17.4	23.3	58,540	21	5,326	63,866	4,172	0	185,000	149,000	25,334	10,443	33,302	0	40,000	231,000	28,691	0	0	45,800
26	0.00	1.0	3.8	18.0	15.6	23.2	72,805	37	3,003	75,808	2,726	0	175,000	149,000	49,140	10,404	20,505	0	24,000	337,000	0	0	0	44,200
27	0.00	1.2	2.7	12.6	*17.9*	23.4	66,796	0	4,692	71,488	2,730	0	175,000	149,000	52,495	15,042	12,902	0	32,000	210,000	0	0	0	47,200
28	0.00	1.4	2.7	17.4	17.3	23.3	68,087	41	5,558	73,645	4,165	1,444	175,000	149,000	50,555	14,984	19,937	0	36,000	210,000	0	0	0	45,500
29	1.40	1.4	2.6	10.8	15.6	23.4	71,207	36	3,470	74,677	3,855	0	173,000	149,000	43,343	14,714	34,029	0	36,000	199,000	0	0	0	39,000
30	0.63	1.8	3.0	18.0	12.9	23.4	61,319	34	4,649	65,968	2,575	1	158,000	149,000	51,600	14,714	14,151	0	52,000	242,000	0	0	0	46,400
31																								
Total	5.16						2,006,957	804	151,989	2,158,946	129,467	1,525			1,388,533	355,573	654,652	0			242,565	0	0	1,443,700
Daily Average		1.5	2.8	18.2	19.9	22.2	66,899						160,033	147,667	46,284	11,852	21,822		40,500	225,133				48,123
Mo. Average																								

Notes:

1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Daily average is calculated by dividing the total by the actual days measured in the month.
4. Monthly average calculated by dividing the total by the number of days of the month.
5. Column II, Trace is less than 0.01 inches and is not included in total.
6. Columns III and IV, field measured at staff gauges.
7. Column VI is recorded from the pressure liquid level sensor in CO 2-1.
8. Column VII is recorded from the pressure liquid level sensor in MP 2-2.
9. Columns IX, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
10. Column XIV and XV, calculated from depth in 575,000 gal. tanks.
11. Columns VIII-XIII, XVI-XIX, and XXII-XXIV, quantities from flow meters.
12. Column XXV includes 80% of the daily values from Columns XIX, XXII - XXIII, plus 90% of Column XVI.

TABLE 2. FIELD DATA ENTRY FORM

MONTH/YEAR **April 2022**

SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Day	Rainfall (in.)	Flow Meter Pump Sta. A (gal.)	Reading PS-B (in.)	Section 9 Pumps (gal.)	Section 9 LDS (gal.)	Sections 7-8 Pump (gal.)	Sections 7-8 LDS (gal.)	MLPS to Pond B (gal.)	Pond B to LEF (gal.)	Pond B Depth (ft.)	Pond A Depth (ft.)	Effluent Spray Irrigation (gal.)	Depth in 575K Tank Leachate (ft.)	Depth in 575K Tank Effluent (ft.)	Leachate Treated at LTRF (gal.)	Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal)
1	0.30	31,233,280	25.8	3,173,895	47,656	6,732,754	8,292	6,528,557	9,087,027	3.2	1.8	0	3.75	5.00	21,695	33,393			
2	0.33	31,289,822	11.4	3,177,753	47,656	6,736,671	8,292	6,581,760	9,136,282	3.2	2.1	56,718	3.00	5.00	21,695	28,176			
3	0.00	*31,344,535*	*14.1*	*3,181,236*	*47,656*	*6,742,264*	*8,328*	*6,637,369*	*9,187,670*	*3.1*	*2.0*	*0*	*3.3*	*5.0*	*21,695*	*0*	*0*	*0*	*0*
4	0.00	31,399,248	16.8	3,184,719	47,656	6,747,856	8,364	6,692,977	9,239,057	3.0	1.8	0	3.58	5.00	21,695	26,878			
5	0.00	31,451,782	18.0	3,188,565	47,656	6,751,416	8,364	6,723,710	9,265,539	3.1	1.6	0	4.75	5.00	3,820	26,982			
6	0.00	31,507,232	21.0	3,192,794	47,656	6,757,129	8,404	6,757,129	9,304,452	2.2	1.6	30,603	6.33	5.00	2	26,960			
7	2.50	31,562,024	23.4	3,196,541	47,656	6,761,518	8,442	6,778,850	9,345,887	2.4	0.8	0	6.75	5.00	2,610	48,238			
8	0.00	31,616,664	28.6	3,199,636	47,686	6,766,515	8,473	6,809,681	9,393,622	3.2	1.6	0	6.25	5.00	15,302	48,186			
9	0.00	31,662,742	16.8	3,202,972	47,686	6,771,755	8,505	6,858,888	9,442,970	3.0	1.8	0	5.25	5.17	15,161	28,144			
10	0.00	*31,709,613*	*15.3*	*3,205,989*	*47,686*	*6,782,103*	*8,523*	*6,906,632*	*9,492,334*	*2.9*	*2.0*	*0*	*5.0*	*5.2*	*15,161*	*0*	*0*	*0*	*0*
11	0.00	31,756,484	13.8	3,209,006	47,686	6,792,451	8,541	6,954,376	9,541,697	2.8	2.2	29,075	4.75	5.17	15,161	6,396			
12	0.00	31,803,220	20.4	3,214,561	47,686	6,795,513	8,577	7,001,931	9,588,172	2.8	1.7	24,540	5.50	5.17	3,630	7,035			
13	0.00	31,852,638	25.2	3,218,115	47,686	6,800,176	8,577	7,052,739	9,639,857	2.8	1.3	25,469	6.25	5.17	9,596	14,075			
14	0.00	31,904,764	19.2	3,222,958	47,686	6,804,783	8,617	7,105,117	9,688,582	2.8	0.8	0	6.58	5.17	12,640	14,065			
15	0.00	31,957,849	15.6	3,229,523	47,686	6,811,041	8,655	7,160,803	9,738,950	3.0	1.0	0	6.42	5.17	12,084	49,258			
16	0.00	32,006,410	15.6	3,235,687	47,686	6,814,049	8,655	7,208,344	9,787,902	3.0	1.1	0	6.00	5.17	10,914	0			
17	0.00	*32,058,042*	*17.1*	*3,239,083*	*47,687*	*6,819,354*	*8,696*	*7,261,880*	*9,840,321*	*2.8*	*1.3*	*0*	*6.6*	*5.2*	*10,914*	*0*	*0*	*0*	*0*
18	0.00	32,109,674	18.6	3,242,478	47,687	6,824,658	8,736	7,315,416	9,892,740	2.6	1.4	0	7.17	5.17	10,916	33,265			
19	0.00	32,161,108	17.4	3,263,167	47,687	6,829,200	8,736	7,367,219	9,942,157	2.6	1.6	0	6.50	5.17	12,108	48,897			
20	0.00	32,207,706	23.4	3,263,455	47,687	6,833,883	8,777	7,416,764	9,988,712	2.6	1.7	33,123	5.33	5.17	12,856	41,997			
21	0.00	32,252,204	17.4	3,267,174	47,689	6,837,721	8,815	7,459,137	10,029,757	2.6	1.1	0	4.50	5.17	14,030	37,881			
22	0.00	32,299,376	22.8	3,271,971	47,736	6,843,371	8,815	7,499,300	10,076,407	2.4	1.1	0	5.25	5.17	1,144	0			
23	0.00	32,344,816	17.4	3,275,104	47,736	6,847,241	8,868	7,544,504	10,127,100	2.6	1.1	0	5.75	5.17	0	0			
24	0.00	*32,395,996*	*17.1*	*3,279,276*	*47,736*	*6,852,567*	*8,889*	*7,597,896*	*10,152,434*	*2.8*	*1.3*	*14,346*	*6.1*	*5.2*	*10,443*	*0*	*0*	*0*	*0*
25	0.00	32,447,176	16.8	3,283,448	47,736	6,857,892	8,909	7,651,288	10,177,767	2.9	1.5	28,691	6.42	5.17	10,443	33,302			
26	0.00	32,495,694	18.0	3,286,174	47,736	6,860,895	8,946	7,699,232	10,226,907	3.8	1.0	0	6.08	5.17	10,404	20,505			
27	0.00	32,545,226	12.6	3,288,904	47,736	6,865,587	8,946	7,750,408	10,279,402	2.7	1.2	0	6.08	5.17	15,042	12,902			
28	0.00	32,597,168	17.4	3,293,069	49,180	6,871,145	8,987	7,802,380	10,329,957	2.7	1.4	0	6.08	5.17	14,984	19,937			
29	1.40	32,652,346	10.8	3,296,924	49,180	6,874,615	9,023	7,850,909	10,373,300	2.6	1.4	0	6.00	5.17	14,714	34,029			
30	0.63	32,699,010	18.0	3,299,499	49,181	6,879,264	9,057	7,904,134	10,424,900	3.0	1.8	0	5.50	5.17	14,714	14,151			
31																			
Totals	5.16											242,565			355,573	654,652			0

Notes:

1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values
3. Columns G and I include quantities from leak detection system.
4. Column B, trace is less than 0.01 inches.
5. Columns C- K, N, and Q-U are quantities from flow meters.

Type of Cover	Phases I-VI acres	Section 7-9 acres
Open	5	0
Intermediate	134.4	34.5
Final	23	0
Not Opened	0	0

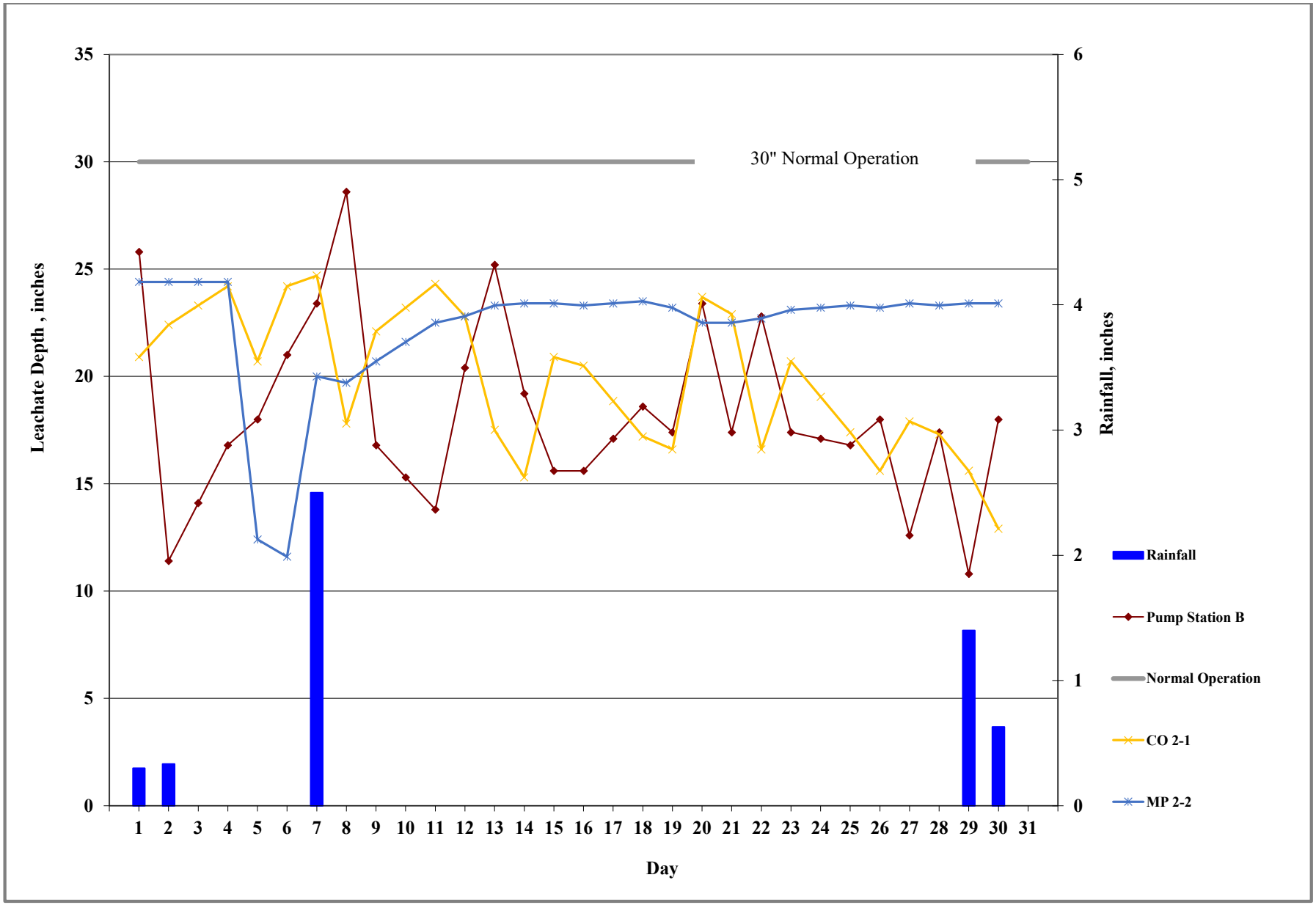

Figure 1. Leachate Levels in Pump Station B and Rainfall for April 2022.

TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2022

		Leachate Arriving at LTRF				Leachate Leaving LTRF			LEF	Effluent Disposal			Inflow / Outflow For L	
Month	Rainfall (in.)	Condensate from LFG CS-1 (gal.)	Leachate from Section 9 Pumped to LTRF (gal.)	Leachate from Section 7-8 Pumped to LTRF (gal.)	Leachate from Phases I-VI Pumped to LTRF (gal.)	Total Leachate Hauled from LTRF (gal.)	Leachate Dust Control (Sprayed) (gal.)	Leachate Treated at LTRF (gal.)	Leachate Treated at LEF (gal.)	Total Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal.)	Effluent Irrigation (gal.)	Total Inflow to LTRF (gal.)	Total Outflow from LTRF (gal.)
January	1.94	177	267,905	237,637	2,946,654	1,665,014	0	310,423	1,281,386	0	0	327,064	3,452,373	3,256,823
February	0.60	70	207,603	171,218	2,282,000	1,658,498	0	390,783	1,024,398	0	0	39,931	2,660,891	3,073,679
March	3.00	272	187,103	184,958	2,360,014	1,305,276	0	573,348	1,108,913	0	0	374,378	2,732,347	2,987,537
April	5.16	587	130,992	151,989	2,006,957	654,652	0	355,573	1,388,533	0	0	242,565	2,290,525	2,398,758
May														
June														
July														
August														
September														
October														
November														
December														
YTD Total														

Note:

1. If the bypass at the effluent pond is ever used to pump effluent back to the LTRF, this table must be modified.
2. Change in storage represents total inflow to LTRF minus total outflow from LTRF.

Hillsborough County Florida

SOLID WASTE MANAGEMENT
PO Box 1110, Tampa, FL 33601-1110

MEMORANDUM

DATE: June 15, 2022

TO: Larry E. Ruiz, Manager Landfill Operations, Solid Waste Management Division

FROM: Ron W. Wiesman, Manager, Solid Waste Management Division

SUBJECT: Leachate Water Balance Report Forms for May 2022
Southeast County Landfill, Hillsborough County, Florida

The Solid Waste Management Division (SWMD) staff has compiled and reviewed the leachate management operational data from the Southeast County Landfill Phases I-VI, Sections 7-8, and Section 9. Attached are the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 2022 Summary (Table 3). Also, attached find Figure 1 showing leachate levels in Pump Station B sump of Phases I-VI and rainfall for the month.

TABLE 1

Day (Column I)

Column I presents the calendar days for the month.

Rainfall (Column II)

Column II presents the average rainfall, in inches, as measured in the field from rainfall stations at the site. This month there was 3.26 inches of rainfall recorded at the Southeast County Landfill (SCLF).

Depth in Pond A (Column III)

Column III presents the daily depth, in feet, of effluent stored in effluent pond (Pond A). The daily depth in Pond A varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. This month the daily average of effluent stored in Pond A was 1.7 feet.

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month the daily average depth of leachate in Pond B was 3.0 feet.

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

Column V presents the depth of leachate, in inches, in the PS-B sump. Leachate from Phases I-VI flows to the PS-B sump for removal from the landfill. PS-B then pumps the leachate to Pump Station A (PS-A). Daily depth readings from the PS-B sump are included in this column. The average recorded depth of leachate in the PS-B sump was 14.2 inches.

Depth in Clean Out 2-1 (CO 2-1) (Column VI)

Column VI presents the depth of leachate, in inches, in the East side of the landfill. Daily depth readings from the CO 2-1 are included in this column. The average recorded depth of leachate in the CO 2-1 was 16.6 inches.

Depth in Monitoring Port 2-2 (MP 2-2) (Column VII)

Column VII presents the depth of leachate, in inches, in the South East side of the landfill. Daily depth readings from the MP 2-2 are included in this column the average recorded depth of leachate in the MP 2-2 was 23.3 inches.

Leachate Pumped to MLPS from Phases I-VI (Column VIII)

Column VIII presents the daily amount of leachate, in gallons, collected from PS-A and pumped through the MLPS to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. This column also includes the Phase II data from the dewatering wells and PS-2. The average daily amount of leachate pumped from PS-A was 68,111 gallons. A total of 1,965,984 gallons of leachate was pumped this month.

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

Column IX presents the quantity of leachate removed from the leak detection system (LDS) of Sections 7-8. The quantity is measured by a flow meter before being pumped for removal with Sections 7-8 leachate. The removal rate did not exceed 1,930 gallons per day. This month 781 gallons of leachate was removed from the leak detection system of Sections 7-8.

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

Column X presents the quantity of leachate collected at Sections 7-8 and pumped to the MLPS. The quantity is measured by a flow meter and includes any leachate removed from the leak detection system of Sections 7-8 (Column VII). This month a total of 145,455 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column XI)

Column XI presents the total quantity of leachate pumped to the LTRF from Phases I-VI (including condensate removed from LFG Wells and Condensate Traps), and Sections 7-8. This month a total of 2,111,439 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column XII)

Column XII presents the daily amount of leachate, in gallons, collected from Section 9 and pumped to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. A total of 118,437 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XIII)

Column XIII presents the daily amount of leachate, in gallons, collected from the LDS of Section 9 and pumped to the 575,000-gallon storage tank at the LTRF for treatment or disposal. The removal rate did not exceed 4,651 gallons per day. This month 3,102 gallons of leachate was removed from the leak detection system.

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

Column XIV presents the daily amount of leachate, in gallons, stored in the 575,000-gallon leachate holding tank T1 at the LTRF. The amount of leachate stored in T1 is calculated based on the circumference of the tank and the daily level reading. This month an average of 187,903 gallons of leachate was stored in the tank.

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

Column XV typically presents the daily amount of effluent, in gallons, stored in the 575,000- gallon effluent holding tank T6 at the LTRF. The amount of effluent/leachate stored in T6 is calculated based on the circumference of the tank and the daily level reading. This month an average of 171,774 gallons of leachate was stored in the tank.

Leachate Treated at LEF (Column XVI)

Column XVI presents the daily amount of leachate, in gallons, treated at the LEF (Leachate Evaporator Facility). On September 1, 2021, Hillsborough County started treating leachate at the LEF. This month a total of 1,444,252 gallons of leachate was treated at the evaporator.

Leachate Treated at LTRF (Column XVII)

Column XVII presents the daily amount of leachate, in gallons, treated at the LTRF. On September 15, 2019, plant staff restarted treatment operations. This month a total of 401,147 gallons of leachate was treated at the plant.

Total Leachate Hauled (Column XVIII)

Column XVIII presents the daily amount of leachate, in gallons, hauled off site. This month a total of 243,391 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XIX)

Column XIX presents the daily amount of leachate, in gallons, measured from the flow meter at the bypass-loading arm at the leachate storage tank. The leachate is used for dust control in the active area of the landfill. This month a total of zero gallons of leachate was used for dust control.

Pond A Storage (Column XX)

Column XX presents the daily amount of effluent, in gallons, stored in Pond A. The daily amount stored in the pond is calculated by using the daily depth of effluent in the Pond A (Column III). Under normal operating conditions, the daily amount of effluent stored in the pond varies depending upon the daily amount of leachate treated at the LTRF, the daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation. This month a daily average of 48,129 gallons of effluent was stored in Pond A.

Pond B Storage (Column XXI)

Column XXI presents the daily amount of leachate, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of liquid in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of leachate pumped from the pond to the evaporator, hauled from the pond, used for dust control or evaporated. This month a daily average of 242,032 gallons of leachate was stored in Pond B.

Effluent Irrigation (Column XXII)

Column XXII presents the daily amount of effluent, in gallons, used for spray irrigation on top of Phases IV-VI. The daily amount of effluent irrigation on Phases I-VI is measured from the flow meter at the irrigation pump station. This month a total of 275,271 gallons of effluent was sprayed.

Effluent Dust Control Sprayed (Column XXIII)

Column XXIII presents the daily amount of effluent, in gallons, sprayed for dust control in the active areas of the SCLF. The daily amount of effluent used for dust control, is measured from the flow meter at the bypass-loading arm. This month zero gallons of effluent was sprayed as dust control.

Total Effluent Hauled (Column XXIV)

Column XXIV presents the daily amount of effluent, in gallons, hauled off site, as measured from the flow meter at the bypass-loading arm. This month zero gallons of effluent was hauled off site.

Total Evaporation (Column XXV)

Column XXV presents the daily amount of leachate and effluent, in gallons, that evaporates and therefore will not be returned to the SCLF and/or requires treatment. Evaporation rates of 80 percent and 5 percent evaporation rate for spray in Pond B are assumed. Total evaporation estimated for this month was 1,520,000 gallons.

TABLE 2

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

TABLE 3

Leachate Balance Summary

The Leachate Balance Summary (see Table 3) presents a review of inflow and outflow quantities for the LTRF, as well as rainfall and effluent disposal quantities at the landfill. Total inflow quantity to the LTRF was 2,233,433 gallons. Total outflow quantity from the LTRF was 2,088,790 gallons. The change in storage for the month increased by 144,643 gallons. Please advise should you have any questions concerning the information provided.

TABLE 1. LEACHATE WATER BALANCE REPORT FORM

SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI	XXII	XXIII	XXIV	XXV
Day	Rainfall (in.)	Depth in Pond A (ft.)	Depth in Pond B (ft.)	Estimated Depth at PS-B (in)	Depth in CO 2-1 (in)	Depth in MP 2-2 (in.)	Leachate Pumped to MLPS from Phases I-VI (gal.)	Leachate Pumped from Sections 7-8 LDS (gal.)	Leachate Pumped to MLPS from Sections 7-8 (gal.)	Leachate Pumped to LTRF from MPLS (gal.)	Leachate Pumped to LTRF from Section 9 (gal.)	Leachate Pumped from Section 9 LDS (gal.)	Leachate in 575K Tank (gal.)	Effluent in 575K Tank (gal.)	Leachate Treated at LEF (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Pond A Storage (gal.)	Pond B Storage (gal)	Effluent Irrigation (gal.)	Effluent Dust Control (Sprayed) (gal.)	Total Effluent Hauled (gal.)	Total Evaporation (gal.)
1	0.20	2.1	3.0	12.0	15.9	23.2	66,240	0	4,659	70,899	4,036	0	168,000	149,000	47,700	17,714	0	0	65,000	242,000	33,197	0	0	69,500
2	0.12	1.5	2.9	18.6	15.2	23.1	66,466	35	4,609	71,075	3,014	0	180,000	149,000	45,672	14,716	0	0	40,000	231,000	0	0	0	41,100
3	1.62	1.0	3.1	16.2	16.7	23.3	63,197	36	4,433	67,630	4,626	2	187,000	149,000	42,960	9,461	0	0	24,000	254,000	14,906	0	0	50,600
4	0.00	0.8	3.2	7.8	18.8	23.4	66,967	0	4,524	71,491	3,127	0	211,000	149,000	54,710	9,461	6,016	0	17,000	265,000	0	0	0	49,200
5	0.00	1.0	3.2	15.6	17.0	23.3	69,160	40	4,396	73,556	3,929	9	233,000	144,000	48,315	0	0	0	24,000	265,000	0	0	0	43,500
6	0.00	1.3	3.2	12.6	16.0	23.5	68,563	38	5,370	73,933	2,976	1	218,000	187,000	21,545	13,246	14,116	0	36,000	265,000	0	0	0	19,400
7	0.00	1.6	3.2	13.8	17.0	23.8	67,468	0	4,246	71,714	4,666	0	197,000	221,000	45,786	17,913	14,119	0	44,000	265,000	0	0	0	41,200
8	0.00	1.9	3.3	16.5	*16.9*	*23.5*	70,579	38	4,486	75,064	3,446	2	174,000	250,000	37,830	17,913	0	0	57,000	265,000	0	0	0	34,000
9	0.00	2.2	3.3	19.1	16.7	23.1	66,811	38	4,486	71,296	3,446	2	151,000	278,000	37,830	17,913	25,315	0	70,000	277,000	32,090	0	0	59,700
10	0.00	1.8	2.9	9.5	16.9	22.9	59,475	35	4,461	63,936	2,188	4	125,000	312,000	49,875	19,646	12,650	0	52,000	231,000	0	0	0	44,900
11	0.00	1.2	2.8	15.6	19.1	23.0	60,320	0	4,517	64,837	4,053	1,470	252,000	168,000	51,755	0	25,580	0	32,000	221,000	0	0	0	46,600
12	0.00	1.4	2.8	11.4	18.6	23.4	67,128	39	4,716	71,844	3,280	1	233,000	163,000	53,700	13,794	27,046	0	36,000	221,000	0	0	0	48,300
13	0.00	1.7	3.0	15.0	*18.0*	23.4	67,713	36	4,643	72,356	4,311	7	206,000	158,000	49,523	18,996	39,729	0	48,000	242,000	0	0	0	44,600
14	0.00	2.0	2.9	12.6	16.7	23.3	63,599	0	2,971	66,570	4,251	5	178,000	158,000	53,578	12,962	14,242	0	61,000	231,000	0	0	0	48,200
15	0.00	2.2	2.9	15.0	*17.6*	*23.3*	65,425	37	4,474	69,899	3,883	5	179,000	161,000	55,087	12,962	0	0	70,000	221,000	0	0	0	49,600
16	0.00	2.4	2.8	17.4	18.5	23.3	64,846	37	4,474	69,320	3,883	5	180,000	163,000	55,087	12,964	14,335	0	79,000	221,000	34,135	0	0	76,900
17	0.00	2.0	2.8	10.8	19.0	23.3	63,730	0	4,293	68,023	3,656	0	173,000	163,000	45,035	13,358	21,565	0	61,000	221,000	21,339	0	0	57,600
18	0.00	1.8	2.8	14.4	11.6	23.2	60,764	40	4,198	64,962	2,864	1,189	156,000	156,000	53,996	16,442	0	0	52,000	221,000	48,155	0	0	87,100
19	0.00	1.0	2.6	12.8	17.2	23.3	63,595	37	5,533	69,128	5,064	400	146,000	156,000	53,464	13,218	0	0	24,000	199,000	0	0	0	48,100
20	0.00	1.1	2.8	12.9	19.2	23.3	57,705	0	3,880	61,585	4,716	0	139,000	158,000	45,994	14,556	0	0	28,000	221,000	0	0	0	41,400
21	0.33	1.4	2.9	15.6	18.6	22.8	58,077	39	4,059	62,136	2,923	1	144,000	158,000	35,659	14,556	0	0	36,000	231,000	0	0	0	32,100
22	0.00	1.8	2.9	13.5	*15.5*	*23.0*	58,383	35	4,823	63,205	4,135	0	152,000	158,000	49,454	14,556	0	0	52,000	231,000	0	0	0	44,500
23	0.42	2.1	2.9	11.4	12.4	23.2	60,764	35	4,823	65,587	4,135	0	161,000	158,000	49,454	14,556	0	0	65,000	231,000	0	0	0	44,500
24	0.00	2.8	3.0	13.8	16.3	23.5	62,829	0	8,775	71,604	4,070	0	173,000	158,000	25,949	0	0	0	98,000	242,000	47,267	0	0	61,200
25	0.00	1.3	3.2	14.4	16.5	23.3	60,339	37	13,262	73,601	4,733	0	185,000	158,000	52,121	0	0	0	36,000	265,000	0	0	0	46,900
26	0.00	1.3	3.1	10.2	17.5	23.1	60,918	0	132	61,050	2,872	0	202,000	158,000	44,855	0	0	0	36,000	254,000	0	0	0	40,400
27	0.00	1.5	3.1	17.4	19.2	23.3	65,173	41	4,699	69,872	4,024	0	206,000	158,000	56,690	18,048	0	0	40,000	254,000	0	0	0	51,000
28	0.00	1.9	3.1	10.2	15.9	23.5	66,398	37	5,658	72,056	4,415	0	221,000	156,000	53,674	18,048	28,678	0	57,000	254,000	22,857	0	0	66,600
29	0.00	1.7	3.1	19.0	13.4	23.4	60,671	0	2,363	63,034	4,051	0	221,000	158,000	45,204	18,048	0	0	48,000	254,000	21,325	0	0	57,700
30	0.57	1.8	3.1	17.9	*13.7*	23.0	55,737	37	3,748	59,485	3,833	1	232,000	157,000	40,876	18,048	0	0	52,000	254,000	0	0	0	36,800
31	0.00	1.8	3.1	16.8	14.0	23.1	56,945	37	3,748	60,693	3,833	1	242,000	156,000	40,876	18,052	0	0	52,000	254,000	0	0	0	36,800
Total	3.26						1,965,984	781	145,455	2,111,439	118,437	3,102			1,444,252	401,147	243,391	0			275,271	0	0	1,520,000
Daily Average		1.7	3.0	14.2	16.6	23.3	63,419						187,903	171,774				0	48,129	242,032	8,880	0	0	49,032
Mo. Average																								

Notes:

1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Daily average is calculated by dividing the total by the actual days measured in the month.
4. Monthly average calculated by dividing the total by the number of days of the month.
5. Column II, Trace is less than 0.01 inches and is not included in total.
6. Columns III and IV, field measured at staff gauges.
7. Column VI is recorded from the pressure liquid level sensor in CO 2-1.
8. Column VII is recorded from the pressure liquid level sensor in MP 2-2.
9. Columns IX, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
10. Column XIV and XV, calculated from depth in 575,000 gal. tanks.
11. Columns VIII-XIII, XVI-XIX, and XXII-XXIV, quantities from flow meters.
12. Column XXV includes 80% of the daily values from Columns XIX, XXII - XXIII, plus 90% of Column XVI.

TABLE 2. FIELD DATA ENTRY FORM

MONTH/YEAR **May 2022**

SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Day	Rainfall (in.)	Flow Meter Pump Sta. A (gal.)	Reading PS-B (in.)	Section 9 Pumps (gal.)	Section 9 LDS (gal.)	Sections 7-8 Pump (gal.)	Sections 7-8 LDS (gal.)	MLPS to Pond B (gal.)	Pond B to LEF (gal.)	Pond B Depth (ft.)	Pond A Depth (ft.)	Effluent Spray Irrigation (gal.)	Depth in 575K Tank Leachate (ft.)	Depth in 575K Tank Effluent (ft.)	Leachate Treated at LTRF (gal.)	Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal)
1	0.20	32,749,704	12.0	3,303,535	49,181	6,883,923	9,057	7,954,598	10,472,600	3.0	2.1	33,197	5.83	5.17	17,714	0	0	0	0
2	0.12	32,801,166	18.6	3,306,549	49,181	6,888,532	9,092	8,006,590	10,518,272	2.9	1.5	0	6.25	5.17	14,716	0	0	0	0
3	1.62	32,849,126	16.2	3,311,175	49,183	6,892,965	9,128	8,056,033	10,561,232	3.1	1.0	14,906	6.50	5.17	9,461	0	0	0	0
4	0.00	32,900,232	7.8	3,314,302	49,183	6,897,489	9,128	8,108,328	10,615,942	3.2	0.8	0	7.33	5.17	9,461	6,016	0	0	0
5	0.00	32,951,192	15.6	3,318,231	49,192	6,901,885	9,168	8,160,037	10,664,257	3.2	1.0	0	8.08	5.00	0	0	*0*	*0*	0
6	0.00	33,002,634	12.6	3,321,207	49,193	6,907,255	9,206	8,190,072	10,685,802	3.2	1.3	0	7.58	6.50	13,246	14,116	0	0	0
7	0.00	33,052,854	13.8	3,325,873	49,193	6,911,501	9,206	8,229,436	10,731,588	3.2	1.6	0	6.83	7.67	17,913	14,119	0	0	0
8	0.00	*33,106,185*	*16.5*	*3,329,319*	*49,195*	*6,915,987*	*9,244*	*8,277,836*	*10,769,418*	*3.3*	*1.9*	*0*	*6.04*	*8.67*	17,913	0	0	0	0
9	0.00	33,159,516	19.1	3,332,765	49,196	6,920,472	9,282	8,326,236	10,807,247	3.3	2.2	32,090	5.25	9.67	17,913	25,315	0	0	0
10	0.00	33,205,634	9.5	3,334,953	49,200	6,924,933	9,317	8,357,526	10,857,122	2.9	1.8	0	4.33	10.83	19,646	12,650	0	0	0
11	0.00	33,250,242	15.6	3,339,006	50,670	6,929,450	9,317	8,404,866	10,908,877	2.8	1.2	0	8.75	5.83	0	25,580	0	0	0
12	0.00	33,300,384	11.4	3,342,286	50,671	6,934,166	9,356	8,456,460	10,962,577	2.8	1.4	0	8.08	5.67	13,794	27,046	0	0	0
13	0.00	33,351,956	15.0	3,346,597	50,678	6,938,809	9,392	8,510,966	11,012,100	3.0	1.7	0	7.17	5.50	18,996	39,729	0	0	0
14	0.00	33,399,846	12.6	3,350,848	50,683	6,941,780	9,392	8,561,774	11,065,678	2.9	2.0	0	6.17	5.50	12,962	14,242	0	0	0
15	0.00	*33,449,562*	*15.0*	3,354,731	*50,688*	*6,946,254*	*9,429*	*8,614,849*	*11,120,765*	*2.9*	*2.2*	*0*	*6.21*	*5.59*	12,962	0	0	0	0
16	0.00	33,499,278	17.4	3,358,614	50,692	6,950,727	9,465	8,667,924	11,175,852	2.8	2.4	34,135	6.25	5.67	12,964	14,335	0	0	0
17	0.00	33,548,128	10.8	3,362,270	50,692	6,955,020	9,465	8,720,742	11,220,887	2.8	2.0	21,339	6.00	5.67	13,358	21,565	0	0	0
18	0.00	33,595,328	14.4	3,365,134	51,881	6,959,218	9,505	8,771,740	11,274,883	2.8	1.8	48,155	5.42	5.42	16,442	0	0	0	0
19	0.00	33,643,904	12.8	3,370,198	52,281	6,964,751	9,542	8,824,216	11,328,347	2.6	1.0	0	5.08	5.42	13,218	0	0	0	0
20	0.00	33,689,172	12.9	3,374,914	52,281	6,968,631	9,542	8,875,098	11,374,341	2.8	1.1	0	4.83	5.50	14,556	0	0	0	0
21	0.33	33,733,692	15.6	3,377,837	52,282	6,972,690	9,581	8,922,712	11,410,000	2.9	1.4	0	5.00	5.50	14,556	0	0	0	0
22	0.00	*33,778,518*	*13.5*	*3,381,972*	*52,282*	*6,977,513*	*9,616*	*8,971,432*	*11,459,454*	*2.9*	*1.8*	*0*	*5.29*	*5.50*	14,556	0	0	0	0
23	0.42	33,823,344	11.4	3,386,106	52,282	6,982,335	9,650	9,020,152	11,508,907	2.9	2.1	0	5.58	5.50	14,556	0	0	0	0
24	0.00	33,871,740	13.8	3,390,176	52,282	6,991,110	9,650	9,074,546	11,534,856	3.0	2.8	47,267	6.00	5.50	0	0	0	0	0
25	0.00	33,917,824	14.4	3,394,909	52,282	7,004,372	9,687	9,123,472	11,586,977	3.2	1.3	0	6.42	5.50	0	0	0	0	0
26	0.00	33,963,572	10.2	3,397,781	52,282	7,004,504	9,687	9,169,330	11,631,832	3.1	1.3	0	7.00	5.50	0	0	0	0	0
27	0.00	34,011,008	17.4	3,401,805	52,282	7,009,203	9,728	9,221,536	11,688,522	3.1	1.5	0	7.17	5.50	18,048	0	0	0	0
28	0.00	34,061,944	10.2	3,406,220	52,282	7,014,861	9,765	9,277,324	11,742,196	3.1	1.9	22,857	7.67	5.42	18,048	28,678	0	0	0
29	0.00	34,108,384	19.0	3,410,271	52,282	7,017,224	9,765	9,326,264	11,787,400	3.1	1.7	21,325	7.67	5.50	18,048	0	0	0	0
30	0.57	34,149,890	17.9	3,414,104	52,283	7,020,972	9,802	9,365,127	11,828,276	3.1	1.8	0	8.05	5.46	18,048	0	0	0	0
31	0.00	34,191,396	16.8	3,417,936	52,283	7,024,719	9,838	9,403,990	11,869,152	3.1	1.8	0	8.42	5.42	18,052	0	0	0	0
Totals	3.26											275,271			401,147	243,391	0	0	0

Notes:

1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values
3. Columns G and I include quantities from leak detection system.
4. Column B, trace is less than 0.01 inches.
5. Columns C- K, N, and Q-U are quantities from flow meters.

Type of Cover	Phases I-VI acres	Section 7-9 acres
Open	5	0
Intermediate	134.4	34.5
Final	23	0
Not Opened	0	0

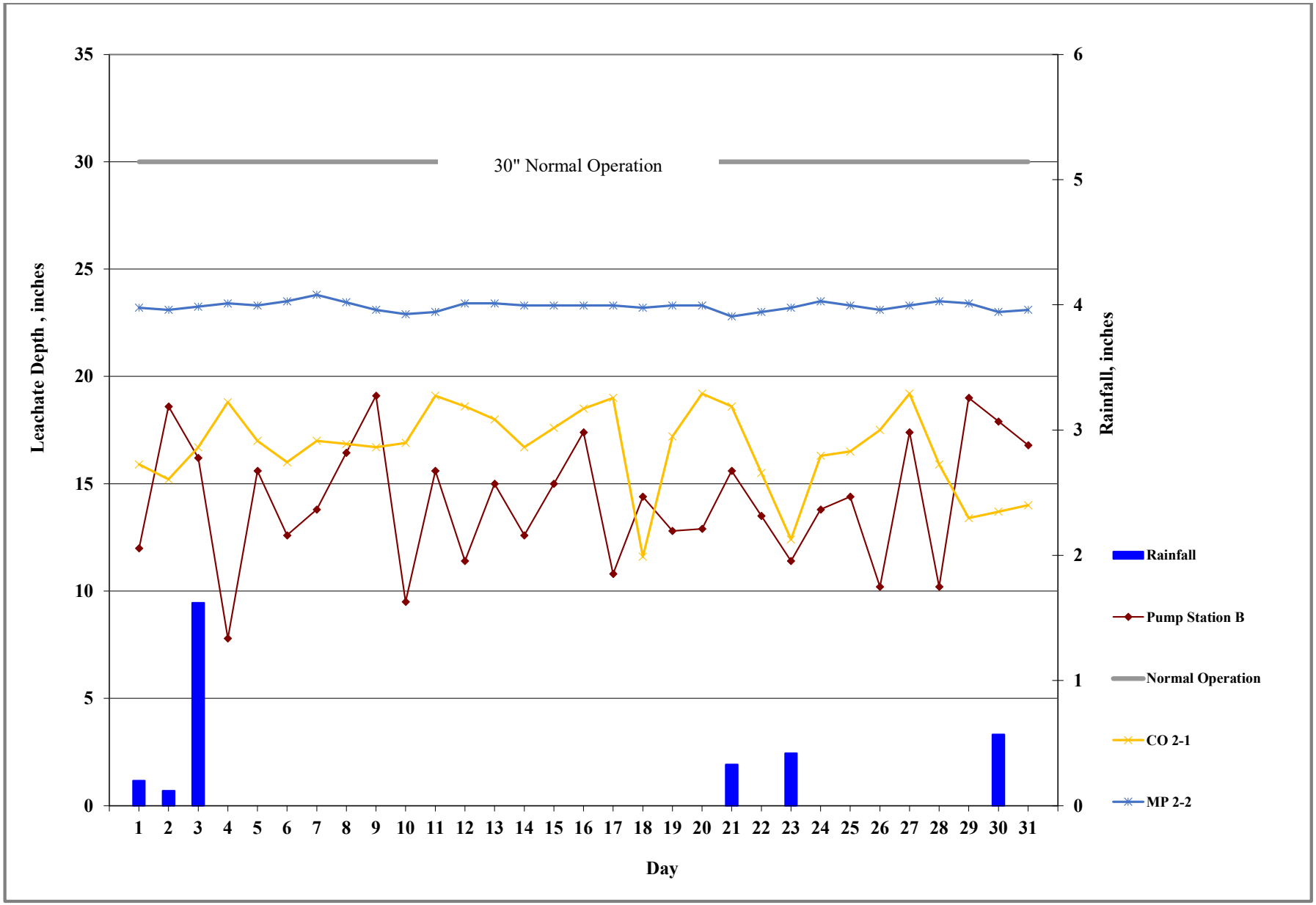

Figure 1. Leachate Levels in Pump Station B and Rainfall for May 2022.

TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2022

		Leachate Arriving at LTRF				Leachate Leaving LTRF			LEF	Effluent Disposal			Inflow / Outflow For L	
Month	Rainfall (in.)	Condensate from LFG CS-1 (gal.)	Leachate from Section 9 Pumped to LTRF (gal.)	Leachate from Section 7-8 Pumped to LTRF (gal.)	Leachate from Phases I-VI Pumped to LTRF (gal.)	Total Leachate Hauled from LTRF (gal.)	Leachate Dust Control (Sprayed) (gal.)	Leachate Treated at LTRF (gal.)	Leachate Treated at LEF (gal.)	Total Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal.)	Effluent Irrigation (gal.)	Total Inflow to LTRF (gal.)	Total Outflow from LTRF (gal.)
January	1.94	177	267,905	237,637	2,946,654	1,665,014	0	310,423	1,281,386	0	0	327,064	3,452,373	3,256,823
February	0.60	70	207,603	171,218	2,282,000	1,658,498	0	390,783	1,024,398	0	0	39,931	2,660,891	3,073,679
March	3.00	272	187,103	184,958	2,360,014	1,305,276	0	573,348	1,108,913	0	0	374,378	2,732,347	2,987,537
April	5.16	587	130,992	151,989	2,006,957	654,652	0	355,573	1,388,533	0	0	242,565	2,290,525	2,398,758
May	3.26	455	121,539	145,455	1,965,984	243,391	0	401,147	1,444,252	0	0	275,271	2,233,433	2,088,790
June														
July														
August														
September														
October														
November														
December														
YTD Total														

Note:

1. If the bypass at the effluent pond is ever used to pump effluent back to the LTRF, this table must be modified.
2. Change in storage represents total inflow to LTRF minus total outflow from LTRF.

Hillsborough County Florida

SOLID WASTE MANAGEMENT
PO Box 1110, Tampa, FL 33601-1110

MEMORANDUM

DATE: July 15, 2022

TO: Larry E. Ruiz, Manager Landfill Operations, Solid Waste Management Division

FROM: Ron W. Wiesman, Manager, Solid Waste Management Division

SUBJECT: Leachate Water Balance Report Forms for June 2022
Southeast County Landfill, Hillsborough County, Florida

The Solid Waste Management Division (SWMD) staff has compiled and reviewed the leachate management operational data from the Southeast County Landfill Phases I-VI, Sections 7-8, and Section 9. Attached are the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 2022 Summary (Table 3). Also, attached find Figure 1 showing leachate levels in Pump Station B sump of Phases I-VI and rainfall for the month.

TABLE 1

Day (Column I)

Column I presents the calendar days for the month.

Rainfall (Column II)

Column II presents the average rainfall, in inches, as measured in the field from rainfall stations at the site. This month there was 6.84 inches of rainfall recorded at the Southeast County Landfill (SCLF).

Depth in Pond A (Column III)

Column III presents the daily depth, in feet, of effluent stored in effluent pond (Pond A). The daily depth in Pond A varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. This month the daily average of effluent stored in Pond A was 1.7 feet.

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month the daily average depth of leachate in Pond B was 2.6 feet.

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

Column V presents the depth of leachate, in inches, in the PS-B sump. Leachate from Phases I-VI flows to the PS-B sump for removal from the landfill. PS-B then pumps the leachate to Pump Station A (PS-A). Daily depth readings from the PS-B sump are included in this column. The average recorded depth of leachate in the PS-B sump was 15.7 inches.

Depth in Clean Out 2-1 (CO 2-1) (Column VI)

Column VI presents the depth of leachate, in inches, in the East side of the landfill. Daily depth readings from the CO 2-1 are included in this column. The average recorded depth of leachate in the CO 2-1 was 16.1 inches.

Depth in Monitoring Port 2-2 (MP 2-2) (Column VII)

Column VII presents the depth of leachate, in inches, in the South East side of the landfill. Daily depth readings from the MP 2-2 are included in this column the average recorded depth of leachate in the MP 2-2 was 23.6 inches.

Leachate Pumped to MLPS from Phases I-VI (Column VIII)

Column VIII presents the daily amount of leachate, in gallons, collected from PS-A and pumped through the MLPS to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. This column also includes the Phase II data from the dewatering wells and PS-2. The average daily amount of leachate pumped from PS-A was 62,410 gallons. A total of 1,872,286 gallons of leachate was pumped this month.

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

Column IX presents the quantity of leachate removed from the leak detection system (LDS) of Sections 7-8. The quantity is measured by a flow meter before being pumped for removal with Sections 7-8 leachate. The removal rate did not exceed 1,930 gallons per day. This month 659 gallons of leachate was removed from the leak detection system of Sections 7-8.

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

Column X presents the quantity of leachate collected at Sections 7-8 and pumped to the MLPS. The quantity is measured by a flow meter and includes any leachate removed from the leak detection system of Sections 7-8 (Column VII). This month a total of 123,341 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column XI)

Column XI presents the total quantity of leachate pumped to the LTRF from Phases I-VI (including condensate removed from LFG Wells and Condensate Traps), and Sections 7-8. This month a total of 1,995,627 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column XII)

Column XII presents the daily amount of leachate, in gallons, collected from Section 9 and pumped to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. A total of 49,164 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XIII)

Column XIII presents the daily amount of leachate, in gallons, collected from the LDS of Section 9 and pumped to the 575,000-gallon storage tank at the LTRF for treatment or disposal. The removal rate did not exceed 4,651 gallons per day. This month 7 gallons of leachate was removed from the leak detection system.

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

Column XIV presents the daily amount of leachate, in gallons, stored in the 575,000-gallon leachate holding tank T1 at the LTRF. The amount of leachate stored in T1 is calculated based on the circumference of the tank and the daily level reading. This month an average of 291,267 gallons of leachate was stored in the tank.

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

Column XV typically presents the daily amount of effluent, in gallons, stored in the 575,000- gallon effluent holding tank T6 at the LTRF. The amount of effluent/leachate stored in T6 is calculated based on the circumference of the tank and the daily level reading. This month an average of 193,667 gallons of leachate was stored in the tank.

Leachate Treated at LEF (Column XVI)

Column XVI presents the daily amount of leachate, in gallons, treated at the LEF (Leachate Evaporator Facility). On September 1, 2021, Hillsborough County started treating leachate at the LEF. This month a total of 1,332,130 gallons of leachate was treated at the evaporator.

Leachate Treated at LTRF (Column XVII)

Column XVII presents the daily amount of leachate, in gallons, treated at the LTRF. On September 15, 2019, plant staff restarted treatment operations. This month a total of 502,013 gallons of leachate was treated at the plant.

Total Leachate Hauled (Column XVIII)

Column XVIII presents the daily amount of leachate, in gallons, hauled off site. This month a total of 338,274 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XIX)

Column XIX presents the daily amount of leachate, in gallons, measured from the flow meter at the bypass-loading arm at the leachate storage tank. The leachate is used for dust control in the active area of the landfill. This month a total of zero gallons of leachate was used for dust control.

Pond A Storage (Column XX)

Column XX presents the daily amount of effluent, in gallons, stored in Pond A. The daily amount stored in the pond is calculated by using the daily depth of effluent in the Pond A (Column III). Under normal operating conditions, the daily amount of effluent stored in the pond varies depending upon the daily amount of leachate treated at the LTRF, the daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation. This month a daily average of 52,127 gallons of effluent was stored in Pond A.

Pond B Storage (Column XXI)

Column XXI presents the daily amount of leachate, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of liquid in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of leachate pumped from the pond to the evaporator, hauled from the pond, used for dust control or evaporated. This month a daily average of 198,700 gallons of leachate was stored in Pond B.

Effluent Irrigation (Column XXII)

Column XXII presents the daily amount of effluent, in gallons, used for spray irrigation on top of Phases IV-VI. The daily amount of effluent irrigation on Phases I-VI is measured from the flow meter at the irrigation pump station. This month a total of 195,057 gallons of effluent was sprayed.

Effluent Dust Control Sprayed (Column XXIII)

Column XXIII presents the daily amount of effluent, in gallons, sprayed for dust control in the active areas of the SCLF. The daily amount of effluent used for dust control, is measured from the flow meter at the bypass-loading arm. This month zero gallons of effluent was sprayed as dust control.

Total Effluent Hauled (Column XXIV)

Column XXIV presents the daily amount of effluent, in gallons, hauled off site, as measured from the flow meter at the bypass-loading arm. This month zero gallons of effluent was hauled off site.

Total Evaporation (Column XXV)

Column XXV presents the daily amount of leachate and effluent, in gallons, that evaporates and therefore will not be returned to the SCLF and/or requires treatment. Evaporation rates of 80 percent and 5 percent evaporation rate for spray in Pond B are assumed. Total evaporation estimated for this month was 1,355,000 gallons.

TABLE 2

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

TABLE 3

Leachate Balance Summary

The Leachate Balance Summary (see Table 3) presents a review of inflow and outflow quantities for the LTRF, as well as rainfall and effluent disposal quantities at the landfill. Total inflow quantity to the LTRF was 2,049,087 gallons. Total outflow quantity from the LTRF was 2,172,417 gallons. The change in storage for the month decreased by 123,331 gallons. Please advise should you have any questions concerning the information provided.

TABLE 1. LEACHATE WATER BALANCE REPORT FORM

SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI	XXII	XXIII	XXIV	XXV
Day	Rainfall (in.)	Depth in Pond A (ft.)	Depth in Pond B (ft.)	Estimated Depth at PS-B (in)	Depth in CO 2-1 (in)	Depth in MP 2-2 (in.)	Leachate Pumped to MLPS from Phases I-VI (gal.)	Leachate Pumped from Sections 7-8 LDS (gal.)	Leachate Pumped to MLPS from Sections 7-8 (gal.)	Leachate Pumped to LTRF from MPLS (gal.)	Leachate Pumped to LTRF from Section 9 (gal.)	Leachate Pumped from Section 9 LDS (gal.)	Leachate in 575K Tank (gal.)	Effluent in 575K Tank (gal.)	Leachate Treated at LEF (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Pond A Storage (gal.)	Pond B Storage (gal)	Effluent Irrigation (gal.)	Effluent Dust Control (Sprayed) (gal.)	Total Effluent Hauled (gal.)	Total Evaporation (gal.)
1	0.22	2.3	2.7	22.8	15.5	23.4	69,700	0	5,459	75,159	3,950	1	281,000	156,000	41,370	21,210	0	0	74,000	210,000	0	0	0	37,200
2	2.20	2.2	2.0	24.0	17.1	23.5	62,662	37	4,471	67,133	2,540	1	331,000	161,000	55,670	24,850	0	0	70,000	136,000	0	0	0	50,100
3	0.32	2.8	2.1	26.2	12.8	23.6	68,419	36	4,455	72,874	5,268	1	353,000	158,000	12,580	20,866	0	0	98,000	147,000	0	0	0	11,300
4	0.00	3.1	2.1	19.2	15.6	23.7	61,577	0	3,200	64,777	2,861	0	381,000	158,000	41,111	25,846	14,667	0	113,000	147,000	0	0	0	37,000
5	0.00	3.2	2.1	17.1	*14.9*	*23.5*	66,321	19	4,883	71,204	3,959	1	401,000	161,000	53,872	0	0	0	118,000	136,000	0	0	0	48,500
6	0.00	3.2	2.0	15.0	14.1	23.2	64,415	19	4,883	69,297	3,959	1	420,000	163,000	53,872	0	41,758	0	118,000	136,000	30,893	0	0	73,200
7	0.00	1.6	2.5	10.2	17.4	23.1	60,925	39	3,292	64,217	3,933	0	417,000	163,000	17,695	19,520	48,860	0	44,000	188,000	0	0	0	15,900
8	0.00	2.0	2.2	16.8	17.7	22.9	59,178	51	4,319	63,497	2,306	0	413,000	163,000	37,630	22,962	82,132	0	61,000	157,000	22,028	0	0	51,500
9	0.17	1.1	2.2	12.6	17.8	23.1	61,478	0	4,298	65,776	3,365	1	381,000	163,000	37,515	21,994	75,081	0	28,000	157,000	0	0	0	33,800
10	0.60	1.6	2.1	13.2	17.6	23.3	64,897	0	3,148	68,045	3,360	0	326,000	158,000	53,333	26,938	54,226	0	44,000	147,000	8,777	0	0	55,000
11	1.83	1.9	1.9	17.4	18.6	23.4	59,172	40	4,672	63,844	2,534	0	295,000	158,000	58,700	21,012	14,361	0	57,000	127,000	0	0	0	52,800
12	0.00	1.8	2.0	15.0	*17.8*	*23.1*	64,624	33	3,868	68,492	0	0	282,000	192,000	35,961	21,012	0	0	52,000	127,000	0	0	0	32,400
13	0.00	1.6	2.0	12.6	16.9	22.8	64,112	33	3,868	67,980	0	0	269,000	225,000	35,961	21,012	7,189	0	44,000	136,000	0	0	0	32,400
14	0.00	1.5	2.0	16.8	13.7	23.1	60,117	0	4,354	64,471	61	0	252,000	247,000	55,515	18,307	0	0	40,000	136,000	0	0	0	50,000
15	0.00	1.6	3.3	11.4	16.6	23.4	62,213	39	3,323	65,536	107	0	252,000	180,000	6,125	6,928	0	0	44,000	277,000	0	0	0	5,500
16	0.00	1.9	2.8	11.9	18.4	23.2	62,865	0	4,471	67,336	269	0	240,000	214,000	49,661	15,148	0	0	57,000	221,000	51,098	0	0	85,600
17	0.00	1.0	2.5	16.8	17.6	23.4	61,758	40	4,747	66,505	0	0	214,000	252,000	55,574	17,804	0	0	24,000	188,000	0	0	0	50,000
18	0.00	1.3	2.4	18.0	14.8	23.4	64,051	0	3,964	68,015	473	0	245,000	209,000	56,195	19,665	0	0	36,000	178,000	40,186	0	0	82,700
19	0.42	1.6	2.7	15.3	*14.0*	*23.2*	64,853	37	4,081	68,934	19	0	239,000	215,000	50,754	19,665	0	0	44,000	210,000	0	0	0	45,700
20	0.00	1.8	3.0	12.6	*13.1*	22.9	61,801	37	4,081	65,882	19	0	233,000	221,000	50,754	19,667	0	0	52,000	242,000	0	0	0	45,700
21	0.00	1.9	3.0	17.4	15.1	22.9	55,504	0	3,089	58,593	0	1	218,000	235,000	51,372	17,541	0	0	57,000	242,000	0	0	0	46,200
22	0.00	2.2	3.0	16.7	18.7	23.3	60,796	41	4,678	65,474	0	0	206,000	242,000	49,830	21,635	0	0	70,000	242,000	0	0	0	44,800
23	0.00	1.7	3.0	10.7	16.3	23.6	68,539	0	3,418	71,957	803	0	223,000	202,000	56,850	21,122	0	0	48,000	242,000	0	0	0	51,200
24	0.00	1.1	3.0	16.2	16.4	25.0	69,851	42	4,722	74,573	1,700	0	221,000	202,000	54,886	22,298	0	0	28,000	242,000	0	0	0	49,400
25	0.13	1.1	3.2	10.8	16.2	24.7	56,466	0	4,074	60,540	14	1	238,000	202,000	21,262	0	0	0	28,000	265,000	0	0	0	19,100
26	0.45	0.6	3.2	14.1	*16.1*	*24.8*	61,068	39	3,902	64,970	1,192	0	258,000	202,000	50,969	0	0	0	6,000	265,000	0	0	0	45,900
27	0.50	0.0	3.2	17.4	*15.9*	24.9	60,932	39	3,902	64,834	1,192	0	278,000	202,000	50,969	10,845	0	0	800	265,000	0	0	0	45,900
28	0.00	1.0	3.2	14.4	18.5	24.7	59,940	0	4,491	64,431	1,914	0	281,000	202,000	55,470	10,846	0	0	24,000	265,000	0	0	0	49,900
29	0.00	1.3	3.2	13.2	13.9	24.5	56,517	0	2,864	59,381	717	0	295,000	202,000	25,865	15,620	0	0	36,000	265,000	0	0	0	23,300
30	0.00	1.7	3.2	16.2	15.0	24.7	57,535	40	4,366	61,901	2,650	0	295,000	202,000	54,810	17,700	0	0	48,000	265,000	42,075	0	0	83,000
31																								
Total	6.84						1,872,286	659	123,341	1,995,627	49,164	7			1,332,130	502,013	338,274	0			195,057	0	0	1,355,000
Daily Average		1.7	2.6	15.7	16.1	23.6	62,410	22	4,111	66,521	1,639	0	291,267	193,667	44,404	16,734	11,276	0	52,127	198,700	6,502	0	0	45,167
Mo. Average																								

Notes:

1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Daily average is calculated by dividing the total by the actual days measured in the month.
4. Monthly average calculated by dividing the total by the number of days of the month.
5. Column II, Trace is less than 0.01 inches and is not included in total.
6. Columns III and IV, field measured at staff gauges.
7. Column VI is recorded from the pressure liquid level sensor in CO 2-1.
8. Column VII is recorded from the pressure liquid level sensor in MP 2-2.
9. Columns IX, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
10. Column XIV and XV, calculated from depth in 575,000 gal. tanks.
11. Columns VIII-XIII, XVI-XIX, and XXII-XXIV, quantities from flow meters.
12. Column XXV includes 80% of the daily values from Columns XIX, XXII - XXIII, plus 90% of Column XVI.

TABLE 2. FIELD DATA ENTRY FORM

MONTH/YEAR **June 2022**

SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Day	Rainfall (in.)	Flow Meter Pump Sta. A (gal.)	Reading PS-B (in.)	Section 9 Pumps (gal.)	Section 9 LDS (gal.)	Sections 7-8 Pump (gal.)	Sections 7-8 LDS (gal.)	MLPS to Pond B (gal.)	Pond B to LEF (gal.)	Pond B Depth (ft.)	Pond A Depth (ft.)	Effluent Spray Irrigation (gal.)	Depth in 575K Tank Leachate (ft.)	Depth in 575K Tank Effluent (ft.)	Leachate Treated at LTRF (gal.)	Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal)
1	0.22	34,245,224	22.8	3,421,886	52,284	7,030,178	9,838	9,405,582	11,910,522	2.7	2.3	0	9.75	5.42	21,210	0	0	0	0
2	2.20	34,294,736	24.0	3,424,426	52,285	7,034,649	9,875	9,406,344	11,966,192	2.0	2.2	0	11.50	5.58	24,850	0	0	0	0
3	0.32	34,346,124	26.2	3,429,694	52,286	7,039,104	9,911	9,421,878	11,978,772	2.1	2.8	0	12.25	5.50	20,866	0	0	0	0
4	0.00	34,391,840	19.2	3,432,555	52,286	7,042,304	9,911	9,446,202	12,019,883	2.1	3.1	0	13.25	5.50	25,846	14,667	0	0	0
5	0.00	*34,442,300*	*17.1*	*3,436,514*	*52,287*	*7,047,187*	*9,930*	*9,482,665*	*12,073,755*	*2.1*	*3.2*	*0*	*13.92*	*5.59*	*0*	*0*	*0*	*0*	*0*
6	0.00	34,492,760	15.0	3,440,472	52,287	7,052,069	9,948	9,519,128	12,127,627	2.0	3.2	30,893	14.58	5.67	0	41,758	0	0	0
7	0.00	34,539,384	10.2	3,444,405	52,287	7,055,361	9,987	9,549,038	12,145,322	2.5	1.6	0	14.50	5.67	19,520	48,860	0	0	0
8	0.00	34,584,324	16.8	3,446,711	52,287	7,059,680	38	9,571,292	12,182,952	2.2	2.0	22,028	14.33	5.67	22,962	82,132	0	0	0
9	0.17	34,631,180	12.6	3,450,076	52,288	7,063,978	38	9,591,840	12,220,467	2.2	1.1	0	13.25	5.67	21,994	75,081	0	0	0
10	0.60	34,681,240	13.2	3,453,436	52,288	7,067,126	38	9,626,906	12,273,800	2.1	1.6	8,777	11.33	5.50	26,938	54,226	0	0	0
11	1.83	34,726,048	17.4	3,455,970	52,288	7,071,798	78	9,666,082	12,332,500	1.9	1.9	0	10.25	5.50	21,012	14,361	0	0	0
12	0.00	*34,776,308*	*15.0*	*3,455,970*	*52,288*	*7,075,666*	*111*	*9,705,078*	*12,368,461*	*2.0*	*1.8*	0	*9.79*	*6.67*	21,012	0	0	0	0
13	0.00	34,826,568	12.6	3,455,970	52,288	7,079,534	144	9,744,074	12,404,422	2.0	1.6	0	9.33	7.83	21,012	7,189	0	0	0
14	0.00	34,872,544	16.8	3,456,031	52,288	7,083,888	144	9,785,766	12,459,937	2.0	1.5	0	8.75	8.58	18,307	0	0	0	0
15	0.00	34,919,478	11.4	3,456,138	52,288	7,087,211	183	9,808,824	12,466,062	3.3	1.6	0	8.75	6.25	6,928	0	0	0	0
16	0.00	34,967,488	11.9	3,456,407	52,288	7,091,682	183	9,826,048	12,515,723	2.8	1.9	51,098	8.33	7.42	15,148	0	0	0	0
17	0.00	35,013,296	16.8	3,456,407	52,288	7,096,429	223	9,843,150	12,571,297	2.5	1.0	0	7.42	8.75	17,804	0	0	0	0
18	0.00	35,061,540	18.0	3,456,880	52,288	7,100,393	223	9,895,564	12,627,492	2.4	1.3	40,186	8.50	7.25	19,665	0	0	0	0
19	0.42	*35,110,586*	*15.3*	*3,456,899*	*52,288*	*7,104,474*	*260*	*9,928,803*	*12,678,246*	*2.7*	*1.6*	0	*8.29*	*7.46*	19,665	0	0	0	0
20	0.00	35,159,632	12.6	3,456,918	52,288	7,108,555	297	9,962,042	12,729,000	3.0	1.8	0	8.08	7.67	19,667	0	0	0	0
21	0.00	35,201,216	17.4	3,456,918	52,289	7,111,644	297	50,984	12,780,372	3.0	1.9	0	7.58	8.17	17,541	0	0	0	0
22	0.00	35,245,024	16.7	3,456,918	52,289	7,116,322	338	103,061	12,830,202	3.0	2.2	0	7.17	8.42	21,635	0	0	0	0
23	0.00	35,294,912	10.7	3,457,721	52,289	7,119,740	338	164,796	12,887,052	3.0	1.7	0	7.75	7.00	21,122	0	0	0	0
24	0.00	35,350,136	16.2	3,459,421	52,289	7,124,462	380	224,443	12,941,938	3.0	1.1	0	7.67	7.00	22,298	0	0	0	0
25	0.13	35,392,100	10.8	3,459,435	52,290	7,128,536	380	254,117	12,963,200	3.2	1.1	0	8.25	7.00	0	0	0	0	0
26	0.45	*35,438,666*	*14.1*	*3,460,627*	*52,290*	*7,132,438*	*419*	*298,538*	*13,014,169*	*3.2*	*0.6*	0	*8.96*	*7.00*	0	0	0	0	0
27	0.50	35,485,232	17.4	3,461,819	52,290	7,136,339	457	342,959	13,065,137	3.2	0.0	0	9.67	7.00	10,845	0	0	0	0
28	0.00	35,531,444	14.4	3,463,733	52,290	7,140,830	457	389,516	13,120,607	3.2	1.0	0	9.75	7.00	10,846	0	0	0	0
29	0.00	35,574,376	13.2	3,464,450	52,290	7,143,694	457	418,640	13,146,472	3.2	1.3	0	10.25	7.00	15,620	0	0	0	0
30	0.00	35,617,288	16.2	3,467,100	52,290	7,148,060	497	458,975	13,201,282	3.2	1.7	42,075	10.25	7.00	17,700	0	0	0	0
31																			
Totals	6.84											195,057			502,013	338,274			0

Notes:

1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values
3. Columns G and I include quantities from leak detection system.
4. Column B, trace is less than 0.01 inches.
5. Columns C- K, N, and Q-U are quantities from flow meters.

Type of Cover	Phases I-VI acres	Section 7-9 acres
Open	5	0
Intermediate	134.4	34.5
Final	23	0
Not Opened	0	0

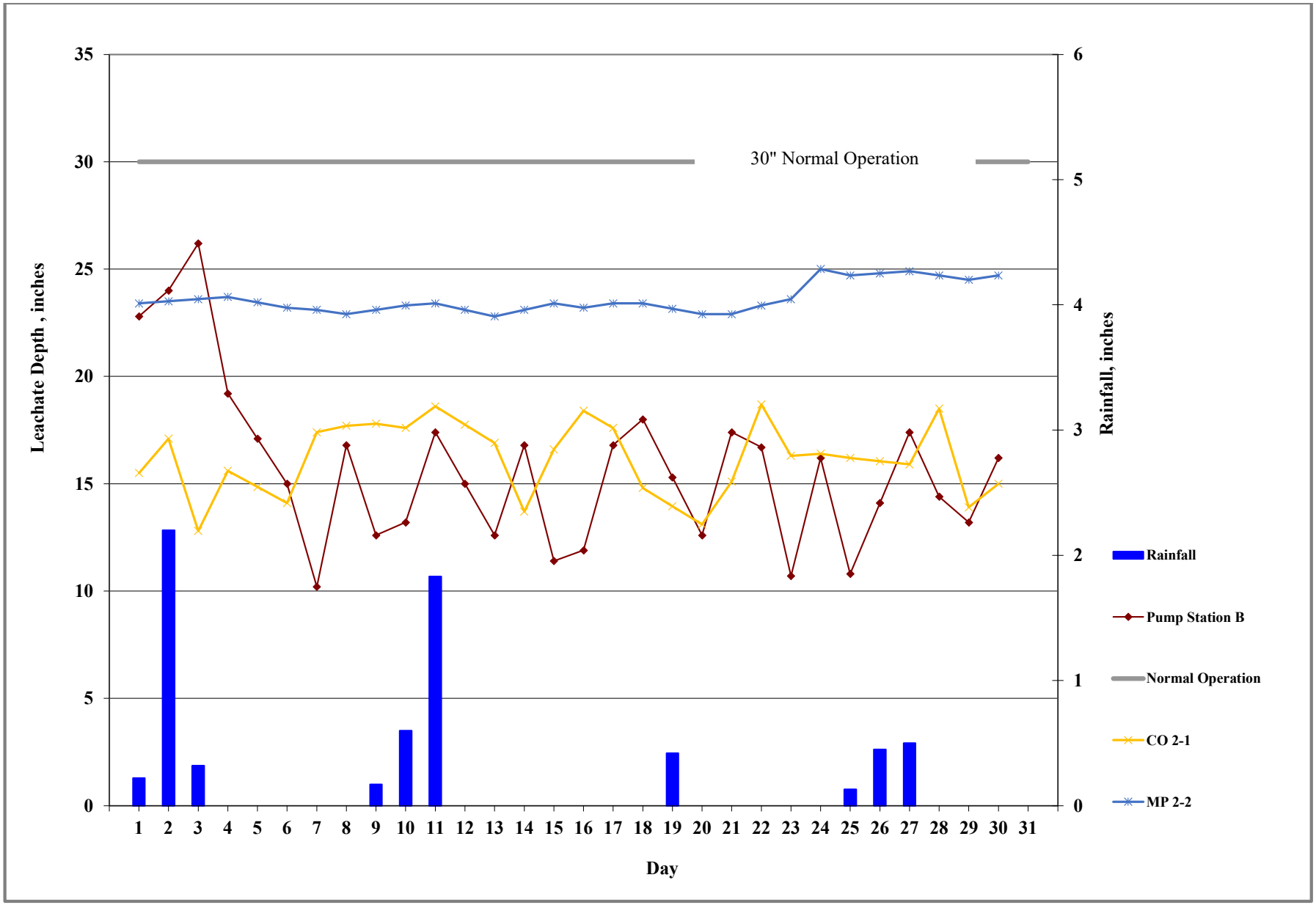

Figure 1. Leachate Levels in Pump Station B and Rainfall for June 2022.

TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2022

		Leachate Arriving at LTRF				Leachate Leaving LTRF			LEF	Effluent Disposal			Inflow / Outflow For L	
Month	Rainfall (in.)	Condensate from LFG CS-1 (gal.)	Leachate from Section 9 Pumped to LTRF (gal.)	Leachate from Section 7-8 Pumped to LTRF (gal.)	Leachate from Phases I-VI Pumped to LTRF (gal.)	Total Leachate Hauled from LTRF (gal.)	Leachate Dust Control (Sprayed) (gal.)	Leachate Treated at LTRF (gal.)	Leachate Treated at LEF (gal.)	Total Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal.)	Effluent Irrigation (gal.)	Total Inflow to LTRF (gal.)	Total Outflow from LTRF (gal.)
January	1.94	177	267,905	237,637	2,946,654	1,665,014	0	310,423	1,281,386	0	0	327,064	3,452,373	3,256,823
February	0.60	70	207,603	171,218	2,282,000	1,658,498	0	390,783	1,024,398	0	0	39,931	2,660,891	3,073,679
March	3.00	272	187,103	184,958	2,360,014	1,305,276	0	573,348	1,108,913	0	0	374,378	2,732,347	2,987,537
April	5.16	587	130,992	151,989	2,006,957	654,652	0	355,573	1,388,533	0	0	242,565	2,290,525	2,398,758
May	3.26	455	121,539	145,455	1,965,984	243,391	0	401,147	1,444,252	0	0	275,271	2,233,433	2,088,790
June	6.84	4,289	49,171	123,341	1,872,286	338,274	0	502,013	1,332,130	0	0	195,057	2,049,087	2,172,417
July														
August														
September														
October														
November														
December														
YTD Total														

Note:

1. If the bypass at the effluent pond is ever used to pump effluent back to the LTRF, this table must be modified.
2. Change in storage represents total inflow to LTRF minus total outflow from LTRF.