Smith, George

From: Wiesman, Ronald <WiesmanR@hillsboroughcounty.org>
Sent: Friday, October 15, 2021 3:06 PM
To: Morgan, Steve; SWD_Waste
Cc: Madden, Melissa; Cope, Ronald; Byer, Kimberly; Ruiz, Larry; O'Neill, Joseph; Spradlin, Kollan; Curtis, Bob
Subject: WACS ID 41193 - Qtr. 3 2021 Water Balance & Waste Tire Report for Southeast County
Attachments: 3Q2021 Water Balance Report.pdf; 3Q2021 Waste Tire Report.pdf

Mr. Morgan,

The Quarterly Water Balance and Waste Tire Report for the Southeast County Landfill are attached (WACS ID 41193).

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

Ron Wiesman II
Manager
Solid Waste Management Division
Public Utilities Department

P: (813) 671-7707 VOIP 42801
M: (813) 455-2194
E: wiesmanr@HCFLGov.net
W:http://HCFLGOV.net

Hillsborough County
15960 County Road 672 Lithia, FL 33547

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Hillsborough County Florida

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

October 15, 2021

Mr. Steve Morgan
Solid Waste Section
Florida Department of Environmental Protection
Southwest District
13051 N. Telecom Pkwy
Temple Terrace, Florida 33637

RE: Waste Tire Facility Quarterly Report - Permit No. 126787-007-WT/02

Dear Mr. Morgan:

In accordance with Rule 62-711, F.A.C. and Permit No 126787-007-WT/02, the Solid Waste Management Division (SWMD) is submitting the Quarterly Report for the Waste Tire Facility for the period July 1, 2021 through September 30, 2021. The SWMD staff compiled the information from the site's daily reports for this Quarterly Report.

Should you have any questions or require additional information concerning this submittal, please contact me at (813) 671-7707.

Sincerely,

Larry E. Ruiz
Manager Landfill Operations
Solid Waste Management Division

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

WASTE TIRE FACILITY
QUARTERLY TONNAGE REPORT
THIRD QUARTER 2021

		THIRD QUARTER	Beginning Tonnage (Jul. 1, 2021)	912.65
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Jul. 2021	190.89	284.92	7.9	6.62
Beginning Tons	912.65			
	1,103.54	-284.92	-7.93	-6.62
			Ending Tonnage	804.07

Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Aug. 2021	198.60	170.47	0.00	5.56
Beginning Tons	804.07			
	1,002.67	-170.47	0.00	-5.56
			Ending Tonnage	826.64

Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Sep. 2021	223.49	98.84	73.20	36.28
Beginning Tons	826.64			
	1,050.13	-98.84	-73.20	-36.28
			Ending Tonnage	841.81

Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Jul. 2021	190.89	284.92	7.93	6.62
Aug. 2021	198.60	170.47	0.00	5.56
Sep. 2021	223.49	98.84	73.20	36.28
Sub-Total	612.98	554.23	81.13	48.46
Beginning Tons	912.65			
TOTAL	1,525.63	-554.23	-81.13	-48.46
			Ending Tonnage	841.81

Department of Environmental Protection

DEP Form # 62-701.900(21)
Form Title Waste Tire Processing Facility Quarterly Report
Effective Date 3/22/00
DEP Application No. _____ (Filled in by DEP)

Waste Tire Processing Facility Quarterly Report

Pursuant to Rule 62-711.530, Florida Administrative Code, the owner or operator of a waste tire processing facility shall submit the following information to the Department quarterly.

Quarter covered by this report 7/1/21 thru 9/30/21 (First quarter begins on January 1 of any given year)

1. Facility name: Hillsborough County Southeast Landfill Waste Tire Facility
2. Facility mailing address: 332 N. Falkenburg Road
   City: Tampa County: Hillsborough Zip: 33619
3. Facility permit number: 126787-007-WT/02
4. Facility telephone number (813) 671-7707
5. Authorized person preparing report: Larry E. Ruiz
6. Affiliation with facility: Owner Representative - Manager Landfill Operations
7. Telephone number (if different from above): ( )
8. Activity: Report in tons

	Beginning Inventory	Received	Processed	Consumed	Removed	Adjustments	Ending Inventory
Used Tires	912.65	612.98			635.36	48.46	841.81
Other whole Tires							
Processed tires							
Processing Waste							
Other							
Total	912.65	612.98			635.36	48.46	841.81

a. Explain all inventory adjustments. 48.46
48.46 tons of unprocessed truck tires.

b. List any period in which one or more category of inventory exceeded the permitted maximum for that category. How was that condition relieved?

For any excess inventory at the end of the quarter, state how and when this condition will be relieved. Attach Additional sheets, if necessary.

9. Certification:

To the best of my knowledge and belief, I certify the information provided in this report is true, accurate, and complete.

Larry E. Ruiz — Print Name of Authorized Agent
Larry E. Ruiz — Signature of Authorized Agent
10/15/2021 — Date

Mail complete form to
the appropriate district office

Northwest District
160 Governmental Center
Pensacola, FL 32501-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. 200 B
Jacksonville, FL 32256-7590
904-448-4300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
3804 Coconut Palm Dr.
Tampa, FL 33619
813-744-6100

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33902-2549
941-332-6975

Southeast District
400 North Congress Ave.
West Palm Beach, FL 33401
561-681-6600

Hillsborough County Florida

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

October 15, 2021

Mr. Steve Morgan
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 Mr. Morgan:

In accordance with Specific Condition No. C.12.d of Permit No. 35435-022-SO/01, the Solid Waste Management Division (SWMD) is submitting the Quarterly Leachate Water Balance summary for the Southeast County Landfill for the quarter ending September 30, 2021. The data is being submitted as separate monthly reports for July, August and September 2021.

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

Sincerely,

Larry E. Ruiz
Manager Landfill Operations
Solid Waste Management Division

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: August 13, 2021

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 July 2021
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 2021 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 15.45 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 3.3 feet.

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month the daily average depth of effluent in Pond B was 4.1 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 depth recorded on the seventh was due to a power outage, once the power was restored the level returned to normal range in a few hours. The average recorded depth of leachate in the PS-B sump was 20.4 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 depth recorded on the seventh was due to a power outage, once the power was restored the level returned to normal range in a few hours. The average recorded depth of leachate in the CO 2-1 was 21.1 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 24.4 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 84,555 gallons. A total of 2,621,204 gallons of leachate was pumped this month.

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

Column VIX 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 1,566 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 382,643 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 3,003,847 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 312,492 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 3,852 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 423,100 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 418,000 gallons of leachate was stored in the tank.

Leachate Treated at LTRF (Column XVI)

Column XVI 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 753,907 gallons of leachate was treated at the plant.

Total Leachate Hauled (Column XVII)

Column XVII presents the daily amount of leachate, in gallons, hauled off site. This month a total of 2,507,051 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVIII)

Column XVIII 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 XIX)

Column XIX 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 126,600 gallons of effluent was stored in Pond A.

Pond B Storage (Column XX)

Column XX presents the daily amount of effluent, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of 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/effluent removed from the pond by the evaporation system, hauled from the pond, used for dust control or evaporated; was stored in Pond B. This month a daily average of 258,100 gallons of effluent was stored in Pond B.

Effluent Sprayed at Pond B (Column XXI)

Column XXI presents the daily amount of effluent, in gallons, sprayed for evaporation at Pond B. The amount evaporated is calculated by using 5 percent of the daily flow meter quantity sprayed at Pond B and it is included in Column XX. This month zero gallons of effluent was sprayed 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 629,769 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 39,138 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 535,000 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 3,321,931 gallons. Total outflow quantity from the LTRF was 3,260,958 gallons. The change in storage for the month increased by 60,973 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
JULY 2021
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 LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Pond A Storage (gal.)	Pond B Storage (gal)	Effluent Sprayed Pond B (gal)	Effluent Irrigation (gal.)	Effluent Dust Control (Sprayed) (gal.)	Total Effluent Hauled (gal.)	Total Evaporation (gal.)
1	0.83	3.4	3.6	21.0	24.3	24.3	60,298	32	6,437	66,735	2,800	0	187,000	235,000	32,180	63,855	0	129,000	234,000	0	0	0	0	0
2	0.57	3.5	3.6	24.0	25.0	24.4	63,741	0	6,572	70,313	1,939	0	209,000	221,000	27,133	71,429	0	140,000	234,000	0	0	0	0	0
3	2.37	3.5	3.7	24.0	23.6	24.4	59,974	33	2,270	62,244	3,147	0	233,000	214,000	27,536	0	0	140,000	245,000	0	31,627	0	0	25,300
4	0.00	3.5	4.0	14.4	22.6	24.4	69,182	0	4,246	73,428	4,311	0	295,000	216,000	27,536	0	0	140,000	267,000	0	50,415	0	0	40,300
5	1.00	3.0	4.0	21.6	12.5	24.4	62,606	32	4,141	66,747	2,930	0	362,000	221,000	27,536	12,800	0	108,000	267,000	0	18,936	0	0	15,100
6	3.17	3.4	3.9	23.4	23.3	24.3	57,121	0	4,268	61,389	2,719	0	345,000	307,000	29,328	59,162	0	129,000	267,000	0	56,432	0	0	45,100
7	0.06	3.4	4.1	37.2	32.2	25.3	91,501	30	15,719	107,220	12,366	3	329,000	345,000	29,328	66,948	0	129,000	267,000	0	0	0	0	0
8	1.77	3.4	4.4	19.2	24.1	25.1	90,289	0	13,558	103,847	10,413	2	329,000	345,000	29,328	43,975	0	129,000	267,000	0	39,089	0	0	31,300
9	0.00	3.4	4.1	25.2	23.6	25.0	99,171	31	24,208	123,379	19,466	6	504,000	336,000	31,108	69,302	0	129,000	267,000	0	0	0	0	0
10	0.10	3.4	4.1	14.4	25.6	25.1	101,681	0	21,660	123,341	18,591	735	434,000	487,000	29,751	116,929	0	129,000	267,000	0	54,655	0	0	43,700
11	0.00	3.3	3.8	17.3	*22.8*	*25.0*	102,426	56	14,535	116,961	13,492	768	450,000	497,000	29,751	0	0	123,000	256,000	0	43,302	0	0	34,600
12	0.20	3.1	3.5	20.2	20.0	24.8	97,695	56	14,535	112,230	13,492	768	466,000	506,000	29,751	93,170	0	113,000	223,000	0	*0*	*0*	*0*	0
13	0.00	3.4	3.5	13.2	19.0	24.7	74,949	44	16,175	91,124	15,211	17	504,000	497,000	30,289	110,537	0	129,000	223,000	0	0	0	0	0
14	0.01	3.4	3.6	15.6	20.4	24.7	99,775	26	5,456	105,231	5,740	0	494,000	480,000	26,949	104,889	0	129,000	234,000	0	14,593	0	0	11,700
15	0.00	3.5	3.7	13.2	20.4	24.8	73,227	38	21,399	94,626	18,922	6	494,000	474,000	30,192	113,215	0	140,000	245,000	0	6,659	0	0	5,300
16	0.00	3.5	3.8	23.4	15.6	24.9	90,412	38	21,399	111,811	18,922	6	494,000	468,000	29,372	92,195	0	140,000	256,000	0	32,817	0	0	26,300
17	0.00	3.1	3.8	20.2	14.5	24.8	81,228	37	14,460	95,688	11,708	3	463,000	497,000	26,906	64,814	0	113,000	256,000	0	27,984	0	0	22,400
18	0.00	3.3	3.9	16.7	*18.4*	*24.9*	111,875	112	16,598	128,473	13,593	6	470,000	510,000	26,906	0	0	123,000	267,000	0	23,207	0	0	18,600
19	0.78	3.3	3.8	21.0	22.3	24.9	49,474	0	2,670	52,143	1,339	0	497,000	530,000	26,906	91,132	0	123,000	256,000	0	24,598	0	0	19,700
20	0.38	3.4	4.0	13.2	27.8	25.2	89,067	112	13,928	102,995	12,254	7	477,000	523,000	31,847	100,294	0	129,000	267,000	0	18,430	0	0	14,700
21	0.37	3.4	4.1	22.8	16.4	24.7	82,881	123	14,423	97,304	8,063	3	489,000	489,000	24,353	123,566	0	129,000	267,000	0	16,105	0	0	12,900
22	0.00	3.5	4.2	20.8	15.9	24.7	71,749	83	11,573	83,322	8,630	1,474	482,000	461,000	26,004	159,103	0	140,000	267,000	0	4,162	0	0	3,300
23	2.20	3.5	4.3	21.2	16.4	24.8	94,787	126	15,169	109,956	7,492	1	461,000	413,000	27,391	131,090	0	140,000	267,000	0	18,581	0	0	14,900
24	0.53	3.5	4.7	23.4	24.9	25.1	88,825	85	9,287	98,112	8,278	5	470,000	374,000	25,314	105,288	0	140,000	267,000	0	0	0	0	0
25	0.00	3.5	4.8	17.4	15.7	25.0	92,745	84	10,448	103,193	9,578	9	437,000	466,000	25,314	0	0	140,000	267,000	0	20,960	0	0	16,800
26	0.00	3.4	4.8	24.0	14.2	25.1	79,491	88	14,309	93,800	11,118	9	422,000	511,000	25,314	100,735	0	129,000	267,000	0	13,994	0	0	11,200
27	1.08	3.3	4.9	20.4	15.6	24.9	99,694	42	12,097	111,791	12,149	8	477,000	453,000	0	126,111	0	123,000	267,000	0	0	0	0	0
28	0.00	3.4	4.6	21.0	23.9	25.2	95,456	86	10,854	106,310	8,852	2	470,000	473,000	0	130,248	0	129,000	267,000	0	0	19,562	0	15,600
29	0.03	3.4	4.5	16.2	23.3	25.5	94,519	84	15,175	109,694	13,829	9	480,000	444,000	0	112,892	0	129,000	267,000	0	30,026	10,229	0	32,200
30	0.00	2.6	4.5	27.6	24.7	25.2	106,978	41	11,312	118,290	9,376	3	453,000	475,000	0	149,623	0	88,000	267,000	0	22,587	9,347	0	25,500
31	0.00	2.3	4.5	18.6	20.8	25.2	88,393	47	13,763	102,156	11,775	3	439,000	489,000	20,584	93,749	0	74,000	267,000	0	60,610	0	0	48,500
Total	15.45				650	771	2,621,204	1,566	382,643	3,003,847	312,492	3,852			753,907	2,507,051	0			0	629,769	39,138	0	535,000
Daily Average		3.3	4.1	20.4	21.0	24.9	84,555	51	12,343	96,898	10,080	124	423,100	418,000				126,600	258,100					
Mo. Average					20	20											0				20,300	1,000	0	17,260

balance\2020\7-20bal.xls

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-XI, XVI, XVII, XVIII and XXI-XXIV, quantities from flow meters.
12. Column XXV includes 80% of the daily values from Columns XVIII, XXII - XXIV, plus 5% of the daily values from column XXII.

TABLE 2. FIELD DATA ENTRY FORM
JULY 2021
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

A	B	C	D	E	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
															Leachate Hauled			Effluent Hauled		
Day	Rainfall (in.)	Flow Meter Pump Sta. A (gal.)	Reading PS-B (in.)	Section 9 Pump 1 (gal.)	Section 9 LDS (gal.)	Sections 7-8 Pump (gal.)	Sections 7-8 LDS (gal.)	Pond B Depth (ft.)	Pond B Effluent Sprayed (gal)	Pond A Depth (ft.)	Effluent Spray Irrigation (gal.)	Depth in 575K Tank Leachate (ft.)	Depth in 575K Tank Effluent (ft.)	Leachate Treated at LTRF (gal.)	Contractor (gal.)	County (gal.)	Leachate Dust Control (Sprayed) (gal.)	Contractor (gal.)	County (gal.)	Effluent Dust Control (Sprayed) (gal)
1	0.83	8,673,422	28.6	511,244	14,322	3,306,981	1,300	3.6	0.0	3.4	0	6.50	8.17	32,180	44,306	19,549	0	0	0	0
2	0.57	8,724,534	24.0	513,183	14,386	3,313,553	1,300	3.6	0.0	3.5	0	7.25	7.67	27,133	50,396	21,033	0	0	0	0
3	2.37	8,774,607	24.0	516,330	14,386	3,315,823	1,333	3.7	0.0	3.5	31,627	8.08	7.42	27,536	0	0	0	0	0	0
4	0.00	8,830,569	14.4	520,641	14,386	3,320,069	1,333	4.0	0.0	3.5	50,415	10.25	7.50	27,536	0	0	0	0	0	0
5	1.00	8,882,834	21.6	523,571	14,386	3,324,210	1,365	4.0	0.0	3.0	18,936	12.58	7.67	27,536	12,800	0	0	0	0	0
6	3.17	8,933,847	23.4	526,290	14,386	3,328,478	1,365	3.9	0.0	3.4	56,432	12.00	10.67	29,328	59,162	0	0	0	0	0
7	0.06	9,021,513	37.2	538,656	14,389	3,344,197	1,395	4.1	0.0	3.4	0	11.42	12.00	29,328	66,948	0	0	0	0	0
8	1.77	9,083,799	19.2	549,069	14,391	3,357,755	1,395	4.4	0.0	3.4	39,089	11.42	12.00	29,328	43,975	0	0	0	0	0
9	0.00	9,161,589	25.2	568,535	14,397	3,381,963	1,426	4.1	0.0	3.4	0	17.50	11.67	31,108	69,302	0	0	0	0	0
10	0.10	9,251,959	14.4	587,126	15,132	3,403,623	1,426	4.1	0.0	3.4	54,655	15.08	16.92	29,751	116,929	0	0	0	0	0
11	*0.00*	*9,343,074*	*17.3*	*600,618*	*15,900*	*3,418,158*	*1,482*	*3.8*	0.0	*3.3*	*43,302*	*15.63*	*17.25*	*29,751*	*0*	*0*	*0*	*0*	*0*	*0*
12	0.20	9,434,189	20.2	614,109	16,668	3,432,693	1,538	3.5	0.0	3.1	0	16.17	17.58	*29,751*	93,170	0	0	0	0	0
13	0.00	9,502,852	13.2	629,320	16,685	3,448,868	1,582	3.5	0.0	3.4	0	17.50	17.25	30,289	110,537	0	0	0	0	0
14	0.01	9,566,812	15.6	635,060	16,679	3,454,324	1,608	3.6	0.0	3.4	14,593	17.17	16.67	26,949	104,889	0	0	0	0	0
15	0.00	9,640,039	13.2	653,982	16,685	3,475,723	1,646	3.7	0.0	3.5	6,659	17.17	16.46	30,192	113,215	0	0	0	0	0
16	0.00	9,714,645	23.4	672,903	16,690	3,497,122	1,684	3.8	0.0	3.5	32,817	17.17	16.25	29,372	92,195	0	0	0	0	0
17	0.00	9,789,272	20.2	684,611	16,693	3,511,582	1,721	3.8	0.0	*3.1*	27,984	16.08	17.25	26,906	64,814	0	0	0	0	0
18	*0.00*	*9,894,547*	*16.7*	*698,204*	*16,699*	*3,528,180*	*1,833*	*3.9*	0.0	*3.3*	*23,207*	*16.33*	*17.71*	*26,906*	*0*	*0*	*0*	*0*	*0*	*0*
19	0.78	9,929,808	21.0	699,542	16,697	3,530,849	1,833	3.8	0.0	3.3	24,598	17.25	18.42	*26,906*	91,132	0	0	0	0	0
20	0.38	9,999,821	13.2	711,796	16,704	3,544,777	1,945	4.0	0.0	3.4	18,430	16.58	18.17	31,847	100,294	0	0	0	0	0
21	0.37	10,068,545	22.8	719,859	16,707	3,559,200	2,068	4.1	0.0	3.4	16,105	17.00	17.00	24,353	123,566	0	0	0	0	0
22	0.00	10,125,468	20.8	728,489	18,181	3,570,773	2,151	4.2	0.0	3.5	4,162	16.75	16.00	26,004	159,103	0	0	0	0	0
23	2.20	10,194,432	21.2	735,981	18,182	3,585,942	2,277	4.3	0.0	3.5	18,581	16.00	14.33	27,391	131,090	0	0	0	0	0
24	0.53	10,260,150	23.4	744,259	18,187	3,595,229	2,362	4.7	0.0	3.5	0	16.33	13.00	25,314	105,288	0	0	0	0	0
25	0.00	10,331,295	17.4	753,837	18,196	3,605,677	2,446	4.8	0.0	3.5	20,960	15.17	16.17	25,314	0	0	0	0	0	0
26	0.00	10,396,332	24.0	764,955	18,205	3,619,986	2,534	4.8	0.0	3.4	13,994	14.67	17.75	25,314	100,735	0	0	0	0	0
27	1.08	10,487,001	20.4	777,104	18,213	3,632,083	2,576	4.9	0.0	3.3	0	16.58	15.75	0	126,111	0	0	0	0	0
28	0.00	10,561,763	21.0	785,956	18,215	3,642,937	2,662	4.6	0.0	3.4	0	16.33	16.42	0	130,248	0	0	0	0	19,562
29	0.03	10,640,265	16.2	799,785	18,224	3,658,112	2,746	4.5	0.0	3.4	30,026	16.67	15.42	0	112,892	0	0	0	0	10,229
30	0.00	10,724,751	27.6	809,161	18,227	3,669,424	2,787	4.5	0.0	2.6	22,587	15.75	16.50	0	149,623	0	0	0	0	9,347
31	0.00	10,805,831	18.6	820,936	18,230	3,683,187	2,834	4.5	0.0	2.3	60,610	15.25	17.00	20,584	93,749	0	0	0	0	0
Totals	15.45								0		629,769			753,907	2,466,469	40,582	0	0	0	39,138

balance\2020\7-20bal.xls

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 J include quantities from leak detection system.
4. Column B, trace is less than 0.01 inches.
5. Columns C, D, E, F, G, H, I, J, K, L, N, and R-V are quantities from flow meters.
6. Columns K and M measured from staff gages in each pond.

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

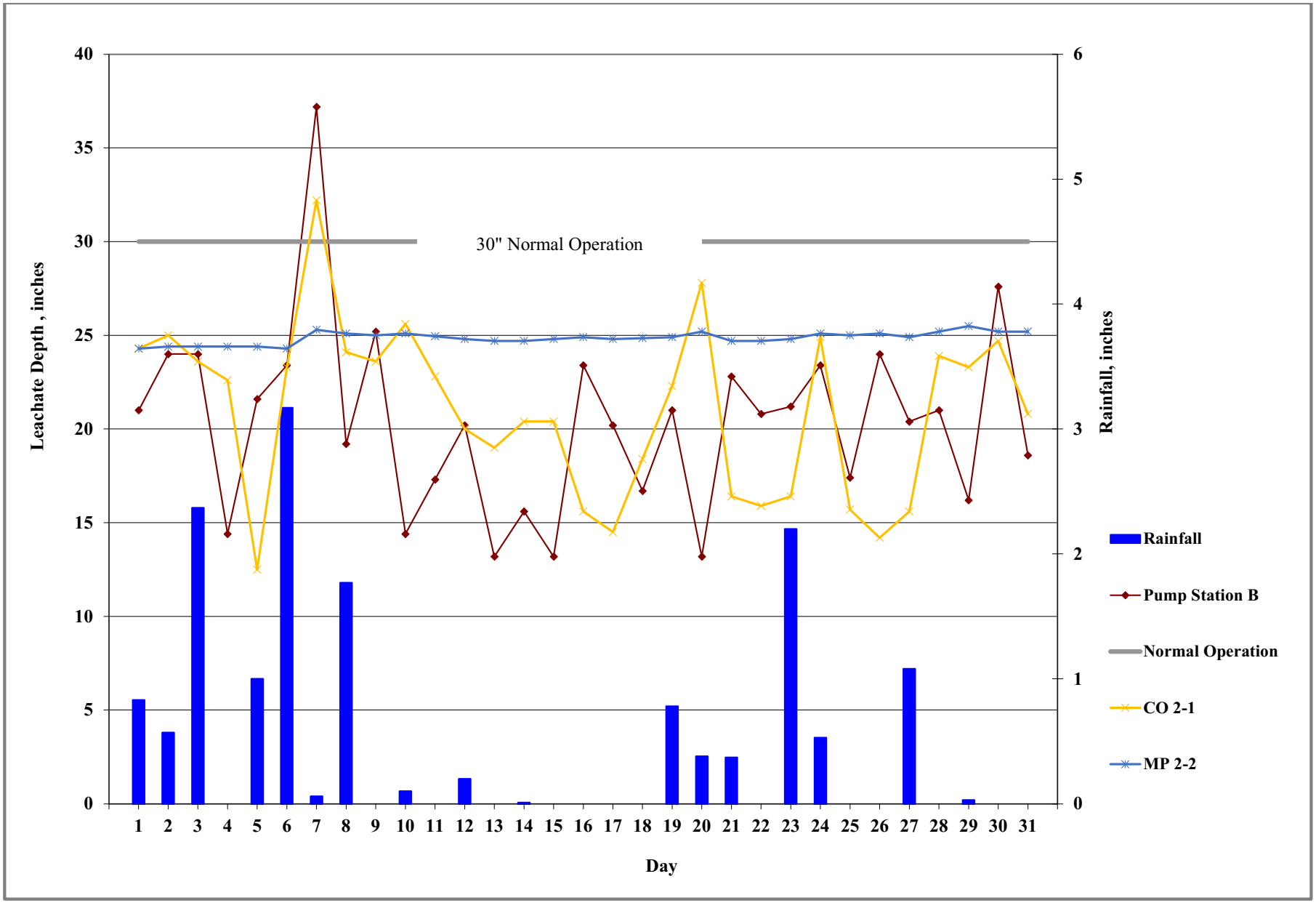

Figure 1. Leachate Levels in Pump Station B and Rainfall for July 2021.

TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2021

		Leachate Arriving at LTRF				Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
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.)	Total Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal.)	Effluent Irrigation (gal.)	Total Inflow to LTRF (gal.)	Total Outflow from LTRF (gal.)	Change in Storage[3] (gal.)
January	1.38	240	151,803	252,214	2,851,511	2,492,589	7,043	867,500	0	0	933,772	3,255,768	3,367,132	-111,365
February	4.53	532	128,100	184,450	2,334,983	1,989,793	3,048	515,325	0	0	402,814	2,648,065	2,508,166	139,899
March	1.75	290	123,318	194,837	2,431,421	2,249,071	3,534	816,961	0	0	791,751	2,749,866	3,069,566	-319,701
April	4.18	522	91,296	142,727	2,166,002	1,595,033	3,700	829,417	0	0	590,194	2,400,547	2,428,150	-27,603
May	0.77	104	114,629	127,374	2,016,306	1,535,387	2,981	811,156	0	0	546,887	2,258,412	2,349,524	-91,112
June	5.96	1,140	107,211	132,370	1,818,520	1,783,721	3,697	754,519	0	0	416,077	2,059,240	2,541,937	-482,697
July	15.45	1,740	316,344	382,643	2,621,204	2,507,051	0	753,907	0	39,138	629,769	3,321,931	3,260,958	60,973
August														
September														
October														
November														
December														
YTD Total	34.02	4,568	1,032,701	1,416,614	16,239,945	14,152,645	24,003	5,348,785	0	39,138	4,311,264	18,693,828	19,525,433	-831,605

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: September 15, 2021

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 August 2021
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 2021 Summary (Table 3). Also, attached find Figure 1 showing leachate levels in Pump Station B sump of Phases I-VI and rainfall for the month.

TABLE 1

Day (Column I)

Column I presents the calendar days for the month.

Rainfall (Column II)

Column II presents the average rainfall, in inches, as measured in the field from rainfall stations at the site. This month there was 7.85 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 1.8 feet.

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month the daily average depth of effluent 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 depth recorded on the third was due to a power outage, once the power was restored the level returned to normal range in a few hours. The average recorded depth of leachate in the PS-B sump was 19.8 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 depth recorded on the third was due to a power outage, once the power was restored the level returned to normal range in a few hours. The average recorded depth of leachate in the CO 2-1 was 21.8 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 25.8 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 112,323 gallons. A total of 3,482,010 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 1,375 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 501,887 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 3,983,897 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 308,778 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 1,549 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 413,400 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 424,500 gallons of leachate was stored in the tank.

Leachate Treated at LTRF (Column XVI)

Column XVI 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 624,583 gallons of leachate was treated at the plant.

Total Leachate Hauled (Column XVII)

Column XVII presents the daily amount of leachate, in gallons, hauled off site. This month a total of 2,901,269 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVIII)

Column XVIII 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 5,436 gallons of leachate was used for dust control.

Pond A Storage (Column XIX)

Column XIV 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 54,900 gallons of effluent was stored in Pond A.

Pond B Storage (Column XX)

Column XX presents the daily amount of effluent, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of 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/effluent removed from the pond by the evaporation system, hauled from the pond, used for dust control or evaporated; was stored in Pond B. This month a daily average of 147,100 gallons of effluent was stored in Pond B.

Effluent Sprayed at Pond B (Column XXI)

Column XXI presents the daily amount of effluent, in gallons, sprayed for evaporation at Pond B. The amount evaporated is calculated by using 5 percent of the daily flow meter quantity sprayed at Pond B and it is included in Column XX. This month zero gallons of effluent was sprayed 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 704,760 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 568,000 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 4,295,484 gallons. Total outflow quantity from the LTRF was 3,531,288 gallons. The change in storage for the month increased by 764,196 gallons. Please advise should you have any questions concerning the information provided.

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
AUGUST 2021
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 LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Pond A Storage (gal.)	Pond B Storage (gal)	Effluent Sprayed Pond B (gal)	Effluent Irrigation (gal.)	Effluent Dust Control (Sprayed) (gal.)	Total Effluent Hauled (gal.)	Total Evaporation (gal.)
1	*0.00*	*2.0*	*4.3*	*0.0*	28.6	23.3	*82,210*	*71*	*5,197*	*87,407*	*4,839*	*0*	*468,000*	*486,000*	*0*	*0*	*0*	*61,000*	*267,000*	*0*	*43,816*	*0*	*0*	*35,100*
2	0.08	1.6	4.0	21.6	36.3	25.8	82,279	71	5,197	87,476	4,839	0	497,000	482,000	5,193	134,054	0	44,000	267,000	0	27,022	0	0	21,600
3	1.18	1.6	3.7	40.2	37.2	28.7	123,664	45	24,905	148,569	14,213	9	413,000	489,000	5,193	123,661	0	44,000	245,000	0	0	0	0	0
4	0.83	1.9	3.5	22.8	22.8	25.2	105,870	84	3,154	109,024	1,524	0	473,000	453,000	8,750	131,375	0	57,000	223,000	0	0	0	0	0
5	0.01	2.3	3.4	13.2	28.6	25.9	81,650	41	17,383	99,033	9,368	2	497,000	439,000	46,163	138,460	0	74,000	213,000	0	0	0	0	0
6	0.04	2.1	3.0	13.2	24.7	26.2	108,859	39	20,252	129,111	15,514	4	441,000	477,000	22,189	124,283	0	65,000	172,000	0	60,987	0	0	48,800
7	0.00	1.1	2.5	15.6	28.2	26.5	91,187	42	14,069	105,256	9,098	5	461,000	466,000	22,189	75,142	0	28,000	124,000	0	41,583	0	0	33,300
8	0.00	1.3	2.0	22.3	27.7	26.6	59,640	48	10,300	69,940	10,210	3	443,000	484,000	*22,189*	0	0	36,000	72,000	0	0	0	0	0
9	0.00	1.5	1.4	28.9	27.2	26.7	71,275	48	10,300	81,575	10,210	3	425,000	502,000	22,189	123,426	0	40,000	38,000	0	56,039	0	0	44,800
10	0.00	1.3	1.2	24.0	26.7	25.6	132,336	68	19,345	151,681	12,722	3	494,000	461,000	18,300	118,029	0	36,000	28,000	0	33,437	0	0	26,700
11	0.00	1.5	0.0	17.0	26.7	25.3	132,635	41	16,181	148,816	10,699	12	463,000	489,000	22,051	131,110	0	40,000	0	0	29,433	0	0	23,500
12	0.73	1.0	0.0	24.0	14.9	25.4	120,876	41	15,781	136,657	8,359	7	482,000	475,000	0	131,578	0	24,000	0	0	19,556	0	0	*15,600*
13	0.10	1.0	0.0	16.8	16.2	25.3	105,756	41	15,549	121,305	10,492	10	473,000	473,000	0	115,368	0	24,000	0	0	23,215	0	0	18,600
14	0.57	1.3	1.1	28.4	23.5	25.5	95,989	43	15,028	111,017	5,883	1	432,000	446,000	22,474	101,844	0	36,000	23,000	0	25,258	0	0	20,200
15	0.00	1.6	1.9	25.0	22.9	25.5	121,420	42	12,649	134,068	8,336	6	411,000	439,000	*22,474*	0	0	44,000	64,000	0	0	0	0	0
16	0.43	1.9	2.6	21.6	22.2	25.5	122,399	42	12,649	135,048	8,336	6	391,000	432,000	22,474	142,061	0	57,000	133,000	0	17,706	0	0	14,200
17	1.80	2.0	3.0	28.2	22.0	25.4	109,733	42	13,579	123,312	6,268	4	305,000	403,000	20,561	113,057	0	61,000	172,000	0	0	0	0	0
18	0.00	3.1	3.1	16.2	17.8	25.5	115,743	41	12,409	128,152	9,756	6	322,000	386,000	25,470	79,291	0	113,000	182,000	0	0	0	0	0
19	0.00	3.0	2.7	17.4	18.4	25.6	125,572	41	17,727	143,299	15,337	7	350,000	345,000	24,428	128,788	0	108,000	143,000	0	22,995	0	0	18,400
20	0.57	3.0	2.2	23.4	15.6	25.8	124,819	44	17,786	142,605	12,386	5	403,000	309,000	25,778	125,813	0	108,000	97,000	0	41,685	0	0	33,300
21	0.00	2.5	3.0	18.6	12.9	25.9	130,815	41	18,138	148,953	15,161	2	379,000	300,000	26,265	67,764	0	83,000	172,000	0	51,017	0	0	40,800
22	0.05	2.5	3.7	12.6	17.4	25.7	126,766	43	19,032	145,798	13,847	0	374,000	295,000	*26,265*	0	0	83,000	245,000	0	47,891	0	0	38,300
23	0.58	1.6	3.3	17.4	21.9	26.0	125,268	43	18,189	143,457	11,809	1,442	470,000	288,000	26,265	114,884	0	44,000	202,000	0	30,557	0	0	24,400
24	0.01	1.7	2.9	13.2	14.5	25.9	122,444	40	17,531	139,975	11,258	1	434,000	360,000	28,209	108,317	0	48,000	162,000	0	0	0	0	0
25	0.00	2.2	2.5	27.6	18.0	25.7	134,003	0	16,812	150,815	11,524	3	348,000	489,000	26,647	92,805	0	70,000	124,000	0	40,973	0	0	32,800
26	0.02	1.5	3.4	16.2	21.1	25.7	126,397	47	17,267	143,664	10,355	1	336,000	461,000	13,837	94,629	5,436	40,000	213,000	0	34,777	0	0	32,200
27	0.67	1.2	3.2	24.6	14.6	25.8	108,332	46	*23,305*	131,637	10,155	1	293,000	439,000	21,293	76,009	0	32,000	192,000	0	28,682	0	0	22,900
28	0.00	1.2	3.3	15.6	17.7	25.9	126,899	41	31,566	158,465	8,324	2	331,000	422,000	22,306	66,244	0	32,000	202,000	0	28,131	0	0	22,500
29	0.13	1.5	3.3	16.4	16.8	25.9	116,725	41	22,787	139,511	9,652	2	377,000	413,000	*22,306*	0	0	40,000	192,000	0	0	0	0	0
30	0.05	1.8	3.2	17.2	15.8	25.8	123,153	41	22,787	145,940	9,652	2	422,000	403,000	22,306	127,062	0	52,000	192,000	0	0	0	0	0
31	0.00	2.4	3.3	14.4	16.4	25.6	127,302	18	15,035	142,337	8,654	2	408,000	355,000	30,819	116,215	0	79,000	202,000	0	0	0	0	0
Total	7.85						3,482,010	1,375	501,887	3,983,897	308,778	1,549			624,583	2,901,269	5,436			0	704,760	0	0	568,000
Daily Average		1.8	2.6	19.8	21.8	25.8	112,323	44	16,190	128,513	9,961	50	413,400	424,500				54,900	147,100					
Mo. Average					20	30																0	0	18,320

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Notes:
1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. 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-XI, XVI, XVII, XVIII and XXI-XXIV, quantities from flow meters.
12. Column XXV includes 80% of the daily values from Columns XVIII, XXII - XXIV, plus 5% of the daily values from column XXII.

TABLE 2. FIELD DATA ENTRY FORM
AUGUST 2021
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

A	B	C	D	E	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
Day	Rainfall (in.)	Flow Meter Pump Sta. A (gal.)	Reading PS-B (in.)	Section 9 Pump 1 (gal.)	Section 9 LDS (gal.)	Sections 7-8 Pump (gal.)	Sections 7-8 LDS (gal.)	Pond B Depth (ft.)	Pond B Effluent Sprayed (gal)	Pond A Depth (ft.)	Effluent Spray Irrigation (gal.)	Depth in 575K Tank Leachate (ft.)	Depth in 575K Tank Effluent (ft.)	Leachate Treated at LTRF (gal.)	Leachate Hauled		Leachate Dust Control (Sprayed) (gal.)	Effluent Hauled		Effluent Dust Control (Sprayed) (gal)
															Contractor (gal.)	County (gal.)		Contractor (gal.)	County (gal.)	
1	*0.00*	*10,880,729*	*20.1*	*825,775*	*18,235*	*3,688,384*	*2,905*	*4.3*	*0.0*	*2.0*	*43,816*	*16.25*	*16.88*	*1*	*0*	0	*0*	*0*	*0*	*0*
2	0.08	10,955,626	21.6	830,613	18,239	3,693,581	2,976	4.0	0.0	1.6	27,022	17.25	16.75	5,193	134,054	0	0	0	0	0
3	1.18	11,031,264	40.2	844,826	18,248	3,718,486	3,021	3.7	0.0	1.6	0	14.33	17.00	5,193	123,661	0	0	0	0	0
4	0.83	11,130,198	22.8	846,350	18,248	3,721,640	3,105	3.5	0	1.9	0	16.42	15.75	8,750	131,375	0	0	0	0	0
5	0.01	11,187,487	13.2	855,718	18,250	3,739,023	3,146	3.4	0.0	2.3	0	17.25	15.25	46,163	138,460	0	0	0	0	0
6	0.04	11,275,050	13.2	871,232	18,254	3,759,275	3,185	3.0	0	2.1	60,987	15.33	16.58	22,189	124,283	0	0	0	0	0
7	0.00	11,355,818	15.6	880,330	18,259	3,773,344	3,227	2.5	0	1.1	41,583	16.00	16.17	22,189	75,142	0	0	0	0	0
8	0.00	*11,405,039*	*22.3*	*890,540*	*18,262*	*3,783,644*	*3,275*	*2.0*	0.0	*1.3*	0	*15.38*	*16.80*	22,189	0	0	0	0	0	0
9	0.00	11,454,260	28.9	900,750	18,264	3,793,944	3,322	1.4	0.0	1.5	56,039	14.75	17.42	22,189	123,426	0	0	0	0	0
10	0.00	11,569,154	24.0	913,472	18,267	3,813,289	3,390	1.2	0	1.3	33,437	17.17	16.00	18,300	118,029	0	0	0	0	0
11	0.00	11,650,260	17.0	924,171	18,279	3,829,470	3,431	0.0	0.0	1.5	29,433	16.08	17.00	22,051	131,110	0	0	0	0	0
12	0.73	11,739,115	24.0	932,530	18,286	3,845,251	3,472	0.0	0.0	1.0	19,556	16.75	16.50	0	131,578	0	0	0	0	0
13	0.10	11,814,733	16.8	943,022	18,296	3,860,800	3,513	0.0	0	1.0	23,215	16.42	16.42	0	115,368	0	0	0	0	0
14	0.57	11,881,875	28.4	948,905	18,297	3,875,828	3,556	1.1	0.0	1.3	25,258	15.00	15.50	22,474	101,844	0	0	0	0	0
15	0.00	*11,974,448*	*25.0*	*957,241*	*18,303*	*3,888,477*	*3,598*	*1.9*	*0.0*	*1.6*	*0*	*14.29*	*15.25*	22,474	0	0	0	0	0	0
16	0.43	12,067,021	21.6	965,576	18,309	3,901,125	3,640	2.6	0.0	1.9	17,706	13.58	15.00	22,474	142,061	0	0	0	0	0
17	1.80	12,150,790	28.2	971,844	18,313	3,914,704	3,682	3.0	0.0	2.0	0	10.58	14.00	20,561	113,057	0	0	0	0	0
18	0.00	12,237,577	16.2	981,600	18,319	3,927,113	3,723	3.1	0.0	3.1	0	11.17	13.42	25,470	79,291	0	0	0	0	0
19	0.00	12,329,050	17.4	996,937	18,326	3,944,840	3,764	2.7	0.0	3.0	22,995	12.17	12.00	24,428	128,788	0	0	0	0	0
20	0.57	12,417,177	23.4	1,009,323	18,331	3,962,626	3,808	2.2	0.0	3.0	41,685	14.00	10.75	25,778	125,813	0	0	0	0	0
21	0.00	12,515,878	18.6	1,024,484	18,333	3,980,764	3,849	3.0	0.0	2.5	51,017	13.17	10.42	26,265	67,764	0	0	0	0	0
22	0.05	12,610,530	12.6	1,038,331	18,333	3,999,796	3,892	3.7	0.0	2.5	47,891	13.00	10.25	26,265	0	0	0	0	0	0
23	0.58	12,702,876	17.4	1,050,140	19,775	4,017,985	3,935	3.3	0.0	1.6	30,557	16.33	10.00	26,265	114,884	0	0	0	0	0
24	0.01	12,792,846	13.2	1,061,398	19,776	4,035,516	3,975	2.9	0.0	1.7	0	15.08	12.50	28,209	108,317	0	0	0	0	0
25	0.00	12,893,773	27.6	1,072,922	19,779	4,052,328	3,975	2.5	0.0	2.2	40,973	12.08	17.00	26,647	92,805	0	0	0	0	0
26	0.02	12,984,436	16.2	1,083,277	19,780	4,069,595	4,022	3.4	0.0	1.5	34,777	11.67	16.00	13,837	94,629	0	5,436	0	0	0
27	0.67	13,060,117	24.6	1,093,432	19,781	4,092,900	4,068	3.2	0.0	1.2	28,682	10.17	15.25	21,293	76,009	0	0	0	0	0
28	0.00	13,156,705	15.6	1,101,756	19,783	4,124,466	4,109	3.3	0.0	1.2	28,131	11.50	14.67	22,306	66,244	0	0	0	0	0
29	*0.13*	*13,243,119*	*16.4*	*1,111,408*	*19,785*	*4,147,253*	*4,150*	*3.3*	*0.0*	*1.5*	*0*	*13.09*	*14.34*	*22,306*	*0*	*0*	*0*	*0*	*0*	*0*
30	0.05	13,329,533	17.2	1,121,060	19,786	4,170,039	4,191	3.2	0.0	1.8	0	14.67	14.00	22,306	127,062	0	0	0	0	0
31	0.00	13,423,307	14.4	1,129,714	19,788	4,185,074	4,209	3.3	0.0	2.4	0	14.17	12.33	30,819	116,215	0	0	0	0	0
Totals	7.85								0		704,760			624,584	2,901,269	0	5,436	0	0	0

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Notes:

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

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

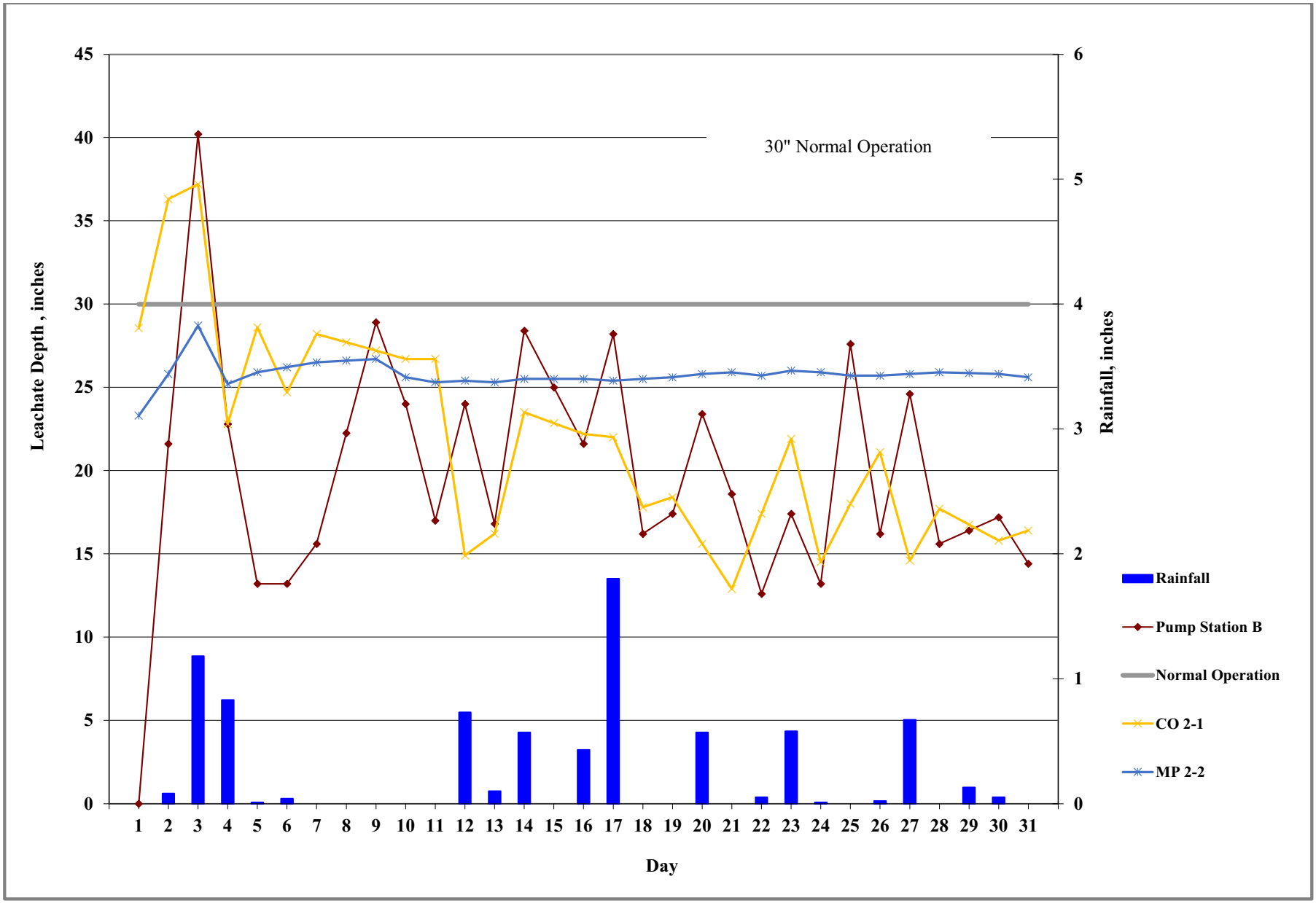

Figure 1. Leachate Levels in Pump Station B and Rainfall for August 2021.

TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2021

		Leachate Arriving at LTRF				Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
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.)	Total Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal.)	Effluent Irrigation (gal.)	Total Inflow to LTRF (gal.)	Total Outflow from LTRF (gal.)	Change in Storage[3] (gal.)
January	1.38	240	151,803	252,214	2,851,511	2,492,589	7,043	867,500	0	0	933,772	3,255,768	3,367,132	-111,365
February	4.53	532	128,100	184,450	2,334,983	1,989,793	3,048	515,325	0	0	402,814	2,648,065	2,508,166	139,899
March	1.75	290	123,318	194,837	2,431,421	2,249,071	3,534	816,961	0	0	791,751	2,749,866	3,069,566	-319,701
April	4.18	522	91,296	142,727	2,166,002	1,595,033	3,700	829,417	0	0	590,194	2,400,547	2,428,150	-27,603
May	0.77	104	114,629	127,374	2,016,306	1,535,387	2,981	811,156	0	0	546,887	2,258,412	2,349,524	-91,112
June	5.96	1,140	107,211	132,370	1,818,520	1,783,721	3,697	754,519	0	0	416,077	2,059,240	2,541,937	-482,697
July	15.45	1,740	316,344	382,643	2,621,204	2,507,051	0	753,907	0	39,138	629,769	3,321,931	3,260,958	60,973
August	7.85	1,260	310,327	501,887	3,482,010	2,901,269	5,436	624,583	0	0	704,760	4,295,484	3,531,288	764,196
September														
October														
November														
December														
YTD Total	41.87	5,828	1,343,028	1,918,501	19,721,956	17,053,914	29,439	5,973,368	0	39,138	5,016,024	22,989,312	23,056,721	-67,409

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: October 13, 2021

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 September 2021
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 2021 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 11.9 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 2.1 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 3.5 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 depth recorded on the twenty-second and twenty-fifth was due to a high storage tank level, after a few hours of off-site hauling the level returned to normal range by end of day. The average recorded depth of leachate in the PS-B sump was 24.9 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 depth recorded on the thirteen was due to a high storage tank level, after a few hours of off-site hauling the level returned to normal range by end of day. From September 17th through the 23rd. Clean-out 2-1 exceeded 30 inches. As of today the level at CO 2-1 has returned to below 30-inches (28.6). Per action Table 9.2.4 we have taken the following actions:

1. On the 21st began evaluating Pump Station 2 to confirm performance.
2. On the 23nd flushed the suction line of Pump Station 2.
3. In the event is needed, installed a temporary diesel pump at cleanout 2-2, currently on standby.

The average recorded depth of leachate in the CO 2-1 was 26.3 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. From September seventeen through the twenty-third the level was affected by clean-out 2.1, actions taken mentioned above. The average recorded depth of leachate in the MP 2-2 was 27.3 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 95,308 gallons. A total of 2,859,237 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 1,362 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 610,808 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 2,229,437 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 391,002 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 4,090 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 451,700 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 455,500 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 1,336,672 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 764,137 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 2,987,400 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 171,120 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 66,300 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 299,833 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 731,282 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 1,924,900 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 4,803,256 gallons. Total outflow quantity from the LTRF was 5,259,329 gallons. The change in storage for the month decreased by 456,074 gallons. Please advise should you have any questions concerning the information provided.

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
SEPTEMBER 2021
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	0.92	2.6	3.3	18.6	20.6	26.0	120,851	22	15,031	88,260	8,391	4	420,000	325,000	49,000	34,498	105,332	3,677	88,000	277,000	0	0	0	47,000
2	0.18	3.1	3.3	23.4	24.2	25.6	81,606	9	14,500	50,798	7,963	4	475,000	329,000	50,550	25,561	134,536	0	113,000	277,000	0	0	0	45,500
3	0.00	3.0	3.3	15.6	22.8	26.0	74,942	41	15,635	45,983	8,027	2	274,000	403,000	51,020	21,627	100,287	0	108,000	277,000	47,989	0	0	84,300
4	1.33	2.6	3.0	24.0	23.9	26.0	65,678	48	12,711	27,109	6,585	1	271,000	396,000	51,580	21,980	22,618	0	88,000	242,000	61,871	0	0	95,900
5	**0.00**	**1.7**	**3.3**	**28.2**	**15.9**	**26.0**	**89,320**	**46**	**12,084**	**72,988**	**8,774**	**2**	**336,000**	**403,000**	**28,340**	**21,980**	**0**	**0**	**48,000**	**277,000**	**41,513**	**0**	**0**	**58,700**
6	*0.42*	*2.0*	*3.3*	*24.4*	*16.7*	*25.9*	*72,892*	*1*	*13,310*	*38,065*	*8,294*	*2*	*404,000*	*395,000*	*46,130*	*21,979*	*24,044*	*0*	*61,000*	*277,000*	*0*	*0*	*0*	*41,500*
7	0.18	2.3	3.3	20.5	17.4	25.7	57,000	1	13,310	22,173	8,294	2	473,000	386,000	52,720	21,979	108,952	0	74,000	277,000	0	0	0	47,400
8	0.01	2.6	3.2	24.0	23.6	25.7	86,356	0	13,286	72,088	10,743	3	413,000	432,000	39,428	19,276	92,500	5,652	88,000	265,000	38,227	0	0	70,600
9	1.15	2.2	3.3	18.0	20.0	25.8	66,313	0	13,563	19,398	10,445	3	350,000	489,000	53,522	17,666	80,993	0	70,000	277,000	30,170	0	0	72,300
10	0.70	1.8	3.4	26.4	13.7	25.7	115,877	0	14,393	122,416	9,360	2	384,000	470,000	15,451	19,472	121,892	0	52,000	289,000	0	0	0	13,900
11	0.00	1.9	3.4	16.8	24.0	25.8	94,268	0	16,756	84,006	11,764	3	434,000	461,000	35,833	20,841	51,499	0	57,000	289,000	61,603	0	0	81,500
12	*0.00*	*1.6*	*3.4*	*20.7*	*29.2*	*25.8*	*74,669*	*1*	*20,814*	*45,964*	*17,413*	*3*	*453,000*	*479,000*	*53,343*	*20,841*	*6,028*	*0*	*44,000*	*277,000*	*23,810*	*0*	*0*	*67,100*
13	0.33	1.2	3.3	24.6	34.3	25.8	63,213	1	20,814	34,508	17,413	3	473,000	497,000	53,343	20,841	142,844	0	32,000	277,000	0	0	0	48,000
14	2.12	1.5	3.2	18.0	24.4	26.1	79,837	0	19,016	55,391	15,473	1,462	497,000	489,000	48,220	18,016	123,459	0	40,000	265,000	0	0	0	43,400
15	0.01	2.2	3.2	15.6	27.6	28.9	102,971	0	22,373	104,272	19,547	0	494,000	494,000	55,380	20,991	114,555	3,272	70,000	265,000	0	0	0	52,500
16	0.10	2.5	3.3	19.2	25.8	29.8	90,142	55	25,145	47,041	21,539	1	494,000	482,000	55,808	18,432	113,883	0	83,000	277,000	0	0	0	50,200
17	0.28	1.6	3.7	28.6	36.4	29.5	46,653	85	36,765	0	29,840	253	489,000	444,000	66,666	25,146	123,592	17,804	44,000	325,000	70,443	0	0	130,600
18	0.00	1.2	3.7	21.0	37.9	28.7	95,164	14	30,128	72,474	25,791	741	420,000	475,000	54,017	33,444	109,859	30,221	32,000	325,000	56,773	0	0	118,200
19	**0.00**	**1.6**	**3.7**	**14.4**	**35.3**	**27.3**	**97,262**	**52**	**22**	**66,244**	**0**	**59**	**482,000**	**477,000**	**35,062**	**33,444**	**6,021**	**0**	**44,000**	**325,000**	**30,540**	**0**	**0**	**56,000**
20	0.00	1.6	3.7	24.3	35.2	26.9	84,683	178	22	22,985	0	0	523,000	473,000	55,961	33,444	175,759	0	44,000	325,000	40,049	0	0	82,400
21	2.67	1.6	3.7	22.2	34.3	26.7	118,123	226	38,994	124,079	27,020	941	504,000	473,000	29,733	36,459	130,683	0	44,000	325,000	27,799	0	0	49,000
22	0.00	2.2	3.8	50.2	38.1	29.0	117,142	286	30,883	134,665	12,111	1	523,000	477,000	47,241	38,562	154,643	7,100	70,000	337,000	0	0	0	48,200
23	0.68	2.8	3.8	22.2	40.2	31.9	178,290	283	23	178,313	0	0	506,000	477,000	0	23,170	152,607	18,374	98,000	337,000	0	0	0	14,700
24	0.00	3.6	3.8	27.3	27.0	27.4	185,874	14	44,689	200,023	33,116	6	492,000	475,000	47,003	23,170	132,537	0	145,000	337,000	0	0	0	42,300
25	0.00	3.2	3.8	46.3	39.5	30.3	101,899	0	43,484	99,739	29,820	5	499,000	489,000	36,080	23,170	125,378	0	118,000	337,000	65,236	0	0	84,700
26	*0.82*	*2.3*	*3.8*	*38.0*	*28.9*	*29.3*	*40,067*	*0*	*524*	*16,060*	*0*	*1*	*486,000*	*495,000*	*44,760*	*23,170*	*34,899*	*0*	*74,000*	*325,000*	*52,663*	*0*	*0*	*82,400*
27	0.00	1.4	3.7	29.7	18.2	28.3	66,233	0	524	42,226	0	1	473,000	502,000	44,760	23,170	119,308	0	36,000	325,000	0	0	0	40,300
28	0.00	1.7	3.7	28.0	16.2	26.4	36,404	0	98,650	54,502	11,286	1	494,000	489,000	47,911	33,239	112,798	18,060	48,000	325,000	35,857	0	0	86,300
29	0.00	1.6	3.7	28.9	12.8	28.6	182,150	0	7,499	133,363	948	4	523,000	492,000	54,540	33,239	135,254	24,143	44,000	325,000	46,739	0	0	105,800
30	0.00	1.2	3.8	29.4	23.9	28.0	173,359	0	15,862	154,307	31,045	583	492,000	497,000	33,272	35,330	130,640	42,817	32,000	337,000	0	0	0	64,200
31																								
Total	11.90						2,859,237	1,362	610,808	2,229,437	391,002	4,090			1,336,672	764,137	2,987,400	171,120			731,282	0	0	1,924,900
Daily Average		2.1	3.5	24.9	26.3	27.3	95,308	45	20,360	74,315	13,033	136	451,700	455,500					66,300	299,833				
Mo. Average					0	0												0			0	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. 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
SEPTEMBER 2021
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	0.92	13,512,480	18.6	1,138,105	19,792	4,200,105	4,231	8,460,402	1,121,540	3.3	2.6	0	14.58	11.30	34,498	105,332	3,677	0	
2	0.18	13,604,036	23.4	1,146,068	19,796	4,214,605	4,240	8,505,710	1,172,090	3.3	3.1	0	16.50	11.42	25,561	134,536	0	0	
3	0.00	13,694,064	15.6	1,154,095	19,798	4,230,240	4,281	8,550,304	1,223,110	3.3	3.0	47,989	9.50	14.00	21,627	100,287	0	0	
4	1.33	13,779,875	24.0	1,160,680	19,799	4,242,951	4,329	8,601,584	1,274,690	3.0	2.6	61,871	9.42	13.75	21,980	22,618	0	0	
5	0.00	13,866,359	28.2	1,169,454	19,801	4,255,035	4,375	8,630,000	1,303,030	3.3	1.7	41,513	11.67	14.00	21,980	0	0	0	
6	0.42	*13,956,136*	*24*	*1,177,748*	*19,803*	*4,268,345*	*4,376*	*8,678,137*	1,349,160	*3.3*	*2.0*	0	*14.05*	*13.71*	21,979	24,044	0	0	
7	0.18	14,045,912	20.5	1,186,042	19,804	4,281,655	4,377	8,726,274	1,401,880	3.3	2.3	0	16.42	13.42	21,979	108,952	0	0	
8	0.01	14,133,497	24.0	1,196,785	19,807	4,294,941	4,377	8,753,828	1,441,308	3.2	2.6	38,227	14.33	15.00	19,276	92,500	5,652	0	
9	1.15	14,226,484	18.0	1,207,230	19,810	4,308,504	4,377	8,814,306	1,494,830	3.3	2.2	30,170	12.17	17.00	17,666	80,993	0	0	
10	0.70	14,321,880	26.4	1,216,590	19,812	4,322,897	4,377	8,822,160	1,510,281	3.4	1.8	0	13.33	16.33	19,472	121,892	0	0	
11	0.00	14,417,075	16.8	1,228,354	19,815	4,339,653	4,377	8,849,178	1,546,114	3.4	1.9	61,603	15.08	16.00	20,841	51,499	0	0	
12	0.00	14,515,173	21	1,245,767	19,818	4,360,467	4,378	8,898,697	1,599,457	3	2	23,810	16	17	20,841	6,028	0	0	
13	0.33	14,613,270	24.6	1,263,180	19,820	4,381,281	4,378	8,948,216	1,652,799	3.3	1.2	0	16.42	17.25	20,841	142,844	0	0	
14	2.12	14,719,023	18.0	1,278,653	21,282	4,400,297	4,378	8,991,678	1,701,019	3.2	1.5	0	17.25	17.00	18,016	123,459	0	0	
15	0.01	14,825,354	15.6	1,298,200	21,282	4,422,670	59	9,012,750	1,756,399	3.2	2.2	0	17.17	17.17	20,991	114,555	3,272	0	
16	0.10	14,959,301	19.2	1,319,739	21,283	4,447,815	114	9,080,996	1,812,207	3.3	2.5	0	17.17	16.75	18,432	113,883	0	0	
17	0.28	15,104,058	28.6	1,349,579	21,536	4,484,580	199	9,193,620	1,878,873	3.7	1.6	70,443	17.00	15.42	25,146	123,592	17,804	0	
18	0.00	15,224,774	21.0	1,375,370	22,277	4,514,708	213	9,246,438	1,932,890	3.7	1.2	56,773	14.58	16.50	33,444	109,859	30,221	0	
19	0.00	15,314,338	14.4	1,375,370	22,336	4,514,730	265	9,277,478	1,967,952	3.7	1.6	30,540	16.75	16.58	33,444	6,021	0	0	
20	0.00	15,440,810	24.3	1,375,370	22,336	4,514,751	443	9,339,198	2,023,913	3.7	1.6	40,049	18.17	16.42	33,444	175,759	0	0	
21	2.67	15,558,862	22.2	1,402,390	23,277	4,553,745	669	9,372,236	2,053,646	3.7	1.6	27,799	17.50	16.42	36,459	130,683	0	0	
22	0.00	15,650,657	50.2	1,414,501	23,278	4,584,628	955	9,385,596	2,100,887	3.8	2.2	0	18.17	16.58	38,562	154,643	7,100	0	
23	0.68	15,814,251	22.2	1,414,501	23,278	4,584,651	1,238	9,385,596	2,100,887	3.8	2.8	0	17.58	16.58	23,170	152,607	18,374	0	
24	0.00	16,003,766	27.3	1,447,617	23,284	4,629,340	1,252	9,416,136	2,147,890	3.8	3.6	0	17.08	16.50	23,170	132,537	0	0	
25	0.00	16,116,960	46.3	1,477,437	23,289	4,672,824	1,252	9,461,780	2,183,970	3.8	3.2	65,236	17.33	17.00	23,170	125,378	0	0	
26	0.82	16,147,210	38.0	1,477,437	23,290	4,673,348	1,252	9,486,311	2,228,730	3.8	2.3	52,663	16.88	17.21	23,170	34,899	0	0	
27	0.00	16,177,459	29.7	1,477,437	23,290	4,673,871	1,252	9,510,842	2,273,489	3.7	1.4	0	16.42	17.42	23,170	119,308	0	0	
28	0.00	16,237,750	28.0	1,488,723	23,291	4,772,521	1,252	9,591,394	2,321,400	3.7	1.7	35,857	17.17	17.00	33,239	112,798	18,060	0	
29	0.00	16,413,653	28.9	1,489,671	23,295	4,780,020	1,252	9,647,680	2,375,940	3.7	1.6	46,739	18.17	17.08	33,239	135,254	24,143	0	
30	0.00	16,567,766	29.4	1,520,716	23,878	4,795,882	1,252	9,682,594	2,409,212	3.8	1.2	0	17.08	17.25	35,330	130,640	42,817	0	
31	0.00																0	0	
Totals	11.90											731,282			764,137	2,987,400	171,120	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

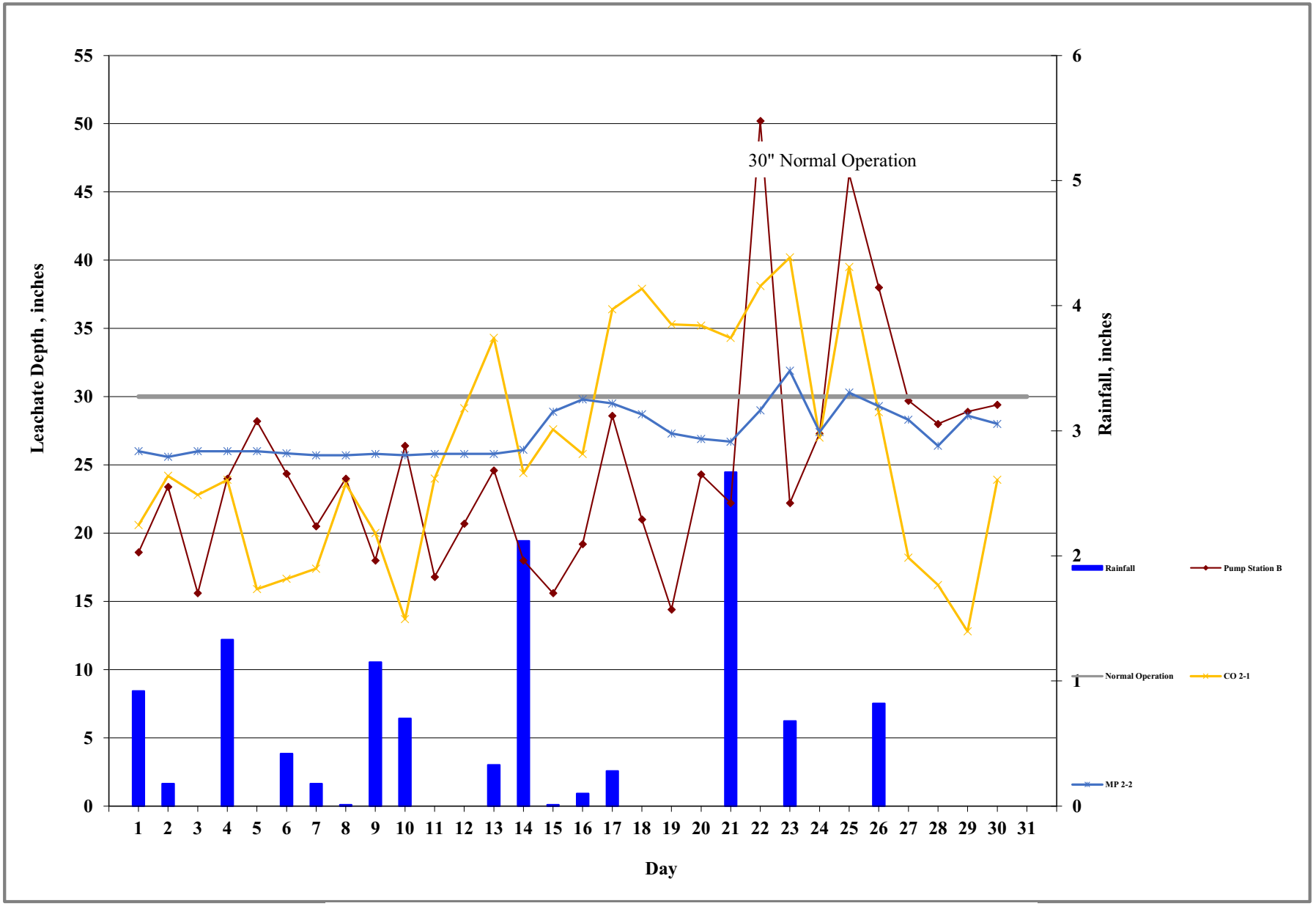

Figure 1. Leachate Levels in Pump Station B and Rainfall for September 2021

TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2021

		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	1.38	240	151,803	252,214	2,851,511	2,492,589	7,043	867,500	0	0	0	933,772	3,255,768	3,367,132
February	4.53	532	128,100	184,450	2,334,983	1,989,793	3,048	515,325	0	0	0	402,814	2,648,065	2,508,166
March	1.75	290	123,318	194,837	2,431,421	2,249,071	3,534	816,961	0	0	0	791,751	2,749,866	3,069,566
April	4.18	522	91,296	142,727	2,166,002	1,595,033	3,700	829,417	0	0	0	590,194	2,400,547	2,428,150
May	0.77	104	114,629	127,374	2,016,306	1,535,387	2,981	811,156	0	0	0	546,887	2,258,412	2,349,524
June	5.96	1,140	107,211	132,370	1,818,520	1,783,721	3,697	754,519	0	0	0	416,077	2,059,240	2,541,937
July	15.45	1,740	316,344	382,643	2,621,204	2,507,051	0	753,907	0	0	39,138	629,769	3,321,931	3,260,958
August	7.85	1,260	310,327	501,887	3,482,010	2,901,269	5,436	624,584	0	0	0	704,760	4,295,484	3,531,289
September	11.90	1,149	395,092	610,808	3,796,207	2,987,400	171,120	764,137	1,336,672	0	0	731,282	4,803,256	5,259,329
October														
November														
December														
YTD Total	53.77	6,977	1,738,120	2,529,309	23,518,162	20,041,314	200,559	6,737,506	1,336,672	0	39,138	5,747,306	27,792,568	28,316,051

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.