

Department of Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

Mr. Daryl Smith, Director
Hillsborough County Solid Waste
PO Box 1110
Tampa, Fl. 33601

January 23, 1996

RE: Southeast Landfill Financial Responsibility Cost Estimates
Permit No.: SO29-158504, Hillsborough County

Dear Mr. Smith:

This letter is to acknowledge receipt of the cost estimates dated September 13, 1995, prepared by SCS Engineers, for closure and long-term care of the Southeast Landfill. The Department apologizes for the delay in reviewing these estimates. Unfortunately, the cost estimates dated September 13, 1995, are not approved. The following information is needed to fully evaluate the cost estimates submitted:

Long-Term Care:

Several of the long-term care costs have either not changed, or have been reduced from, the November 15, 1994 approved cost estimates. Please explain this, or provide detailed third-party costs supporting the costs submitted for the following: groundwater monitoring, leachate monitoring, surface water monitoring, landscape maintenance, administrative/overhead, and surface water drainage maintenance.

If you have any questions, you may contact me at (813) 744-6100 ext. 386.

Sincerely,

Susan J. Pelz, E.I.
Solid Waste Section
Division of Waste Management

cc: Patricia Berry, HCDSW, P.O. Box 1110, Tampa, Fl. 33601
Robert Gardner, P.E., SCS Engineers, 3012 US Hwy 301 North, Suite 700, Tampa, Fl. 33619
Paul Schipfer, HCEPC
Fred Wick, FDEP, Tallahassee, w/attachment
Robert Butera, P.E., FDEP Tampa
Kim Ford, P.E., FDEP Tampa
Steve Morgan, FDEP Tampa

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 1/17/96 Subject SE Hills Landfill
Time 9:45 Permit No. _____
County Hills
M Ron Cope Telephone No. 272-5788
Representing Hills Co EPC
[] Phoned Me [X] Was Called [] Scheduled Meeting [] Unscheduled Meeting
Other Individuals Involved in Conversation/Meeting _____

Summary of Conversation/Meeting _____
Left message re 12/7/95 letter from HCDSW re beach to
1/19 Ron will look up this correspondence & let ^{discharge} 9/21/95
me know if he needs anything from me.

(continue on another
sheet, if necessary)

Signature A. Amrarn
Title PGI

HILLSBOROUGH COUNTY

Florida

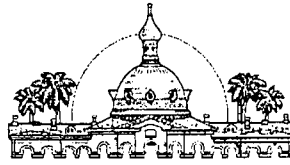
Office of the County Administrator
Daniel A. Kleman

RECEIVED
JAN 19 1996

Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

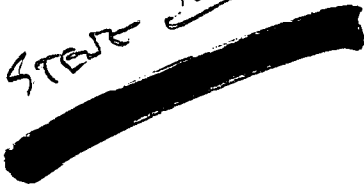
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START red + new 1/23


January 17, 1996

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

RE: Southeast County Landfill - Stormwater Samples

Dear Mr. Ford:

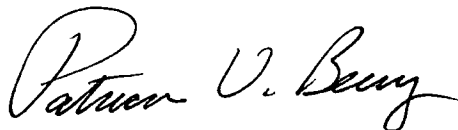
In response to the January 1, 1996 stormwater discharge from the containment berm surrounding the active area of the County's Southeast County Landfill (Landfill), Waste Management Inc. of Florida (WMI) sampled and analyzed the Landfill's stormwater collection basin discharge to determine if the site's surface water quality was impacted from the active area stormwater discharge.

The Hillsborough County Department of Solid Waste (DSW) has received a copy of the analysis from WMI and is forwarding a copy to the Florida Department of Environmental Protection and the Hillsborough County Environmental Protection Commission for your information and files. As expected, the analysis indicates that the stormwater discharge had no impact on the Landfill's surface water quality.

Mr. Kim Ford
January 17, 1996
Page Two

Please advise should you require any additional information concerning this incident.

Sincerely,

A handwritten signature in cursive script, reading "Patricia V. Berry". The signature is written in dark ink and is positioned above the printed name and title.

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

Attachment

xc: Matt Matthews, DSW
Larry Ruiz, SCS
Steve Morgan, DEP
Paul Schipfer, EPC
Greg Walk, WMI

Southeast Landfill
P.O. Box 627
Balm, Florida 33503
(813) 634-9203
Fax: (813) 634-6518



A Waste Management Company

TO: Patty Berry
FROM: Greg Walk *SW*
DATE: January 8, 1996
SUBJECT: Test Results - January 1 Incident



Attached are the analysis for leachate indicators sampled from Basin D discharge. Please attach them to the January 1, 1996 incident report previously sent. It appears the parameters sampled are in line with previously analyzed surface water points.

cc: Matt Mathews
Sheree Henninger
Incident File

FAX COVER SHEET

FROM: PROGRESS ENVIRONMENTAL LABORATORIES
4420 Pendola Point Rd.
Tampa, Florida 33619
PHONE: 813-247-2805 FAX: 813-248-1537

TO: Greg E. Walk

COMPANY: Southeast Landfill
Blam, FL 33503

Date: 1/07/96

FAX NUMBER: (813)634-6518

FROM: GEORGE LEABU / JOHN MELENDEZ

THIS FAX CONSISTS OF 2 PAGE(S), EXCLUSIVE OF COVER.

REGARDING: Discharge From Basin D

P.E.L. #: 960100007



Progress Environmental Laboratories

4420 Pandora Point Road
Tampa, Florida 33619
(813) 247-2805
FAX: (813) 248-1537

492

Client: <u>Southwest Landfill</u>		Due Date(TAT):		<div style="display: flex; justify-content: space-around; text-align: center;"> <div>Ammonia or U</div> <div>TDS</div> <div>TSS</div> <div>T. Microgen</div> <div>NO₃</div> <div>TTC</div> <div>T. Phos</div> </div>									
Project Mgr: <u>Greg Walk</u>		Fax Reports to: ()											
Project:		Bill to:											
Project #:		Sampler's Initials: <u>JB</u>											
PO #:				9601-7									
Station ID	Date	Time	PEL Lab #	# of Btts	Pres	Asp	0	0	Asp	2	Asp	Asp	Remarks
Discharge from Basin D	1/2/96	1428		5		1	✓	-	1	1	1	1	pH Temp cond 630 22.5 ϕ 635 22.3 ϕ 639 22.1 ϕ
Relinquished By:	Received By:		Date	Time	Project Notes 1-3 10 1 hr Sampling Time 240								
<u>Jason Beebe</u>	<u>Jason Beebe</u>		1/2/96	1515									
Relinquished By:	Received By:		Date	Time									
Relinquished By:	Received By:		Date	Time									
Relinquished By:	Received By:		Date	Time									

JAN-08-1996 12:52 FROM PRESS ENVIR - LAB TO 6346518 P.02

01/08/96 11:51 TX/RX NO.1987 P.002



Progress Environmental Laboratories

4420 Pendola Point Road
Tampa, Florida 33619
(813) 247-2805
FAX: (813) 248-1537

- CERTIFICATE OF ANALYSIS - (HRS #E84207 and FDER CompQap #900306G)

To: Southeast Landfill
P.O. Box 627
Blam, FL 33503

Report Date: 1/07/96
Page: 1

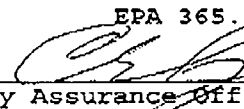
Attn: Greg E. Walk


PEL Lab # : 9601-00007-1
Client ID : Discharge Basin D
Project ID :
Location : Southeast Landfill
Matrix : Water

Collection Information:
Sample Date: 1/02/96
Sample Time: 14:28
Sampled By: JB
Sample Quality:

**Analyses run by outside lab (HRS#E84282, CompQap#890142G) ND = Less than MDL
Parameter Method Results Units MDL

Ammonium -N	CALCULATION	0.180	mg/l	0.03
Total Dissolved Solids	EPA 160.1	185	mg/l	10
Total Suspended Solids	EPA 160.2	15	mg/l	4
**Total Nitrogen	CALCULATION	ND	mg/l	0.050
**Nitrate-N	EPA 353.3	0.38	mg/l	0.050
Total Organic Carbon	EPA 415.1	7.56	mg/l	1
Total Phosphorus	EPA 365.2	ND	mg/l	0.01

Respectfully submitted, 
Charles R. Ingram, Quality Assurance Officer.

Respectfully submitted, 
Vincent M. Giampa, Laboratory Manager.

A Florida Progress Company

TOTAL P.03



STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 1/8/96 Subject SELF
Time 1:50 Permit No. _____
County Hill
M S-PARTY BERRY Telephone No. 2762908
Representing Hill Co
[] Phoned Me [☒] Was Called [] Scheduled Meeting [] Unscheduled Meeting
Other Individuals Involved in Conversation/Meeting _____

Summary of Conversation/Meeting _____

I REQUESTED :

- ① RECORD DRAWINGS ON NEW PIZOMETER
(pump control well) , AND
- ② DAILY READINGS ON NEW PIZOMETER
- ③ RECORD DRAWING ON NEW SEILMENT PLATE

PARTY SAID SHE IS WAITING FOR
RECORD DRAWING ON NEW PIZOMETER ,
SEILMENT PLATE DETAILS WILL BE SENT , AND
DAILY READINGS ARE NOW TAKEN SINCE DEC 5 .
AND WILL BE SENT WITH DETAILS

UPDATE :

(continue on another
sheet, if necessary)

Signature [Signature]

Title _____

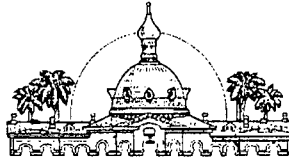
HILLSBOROUGH COUNTY

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Certa Johnson
Jimmie Keel
Robert Taylor

January 3, 1996

RECEIVED
JAN - 5 1996

Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

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

RE: Southeast County Landfill - Stormwater Management Incident

Dear Mr. Ford:

The Hillsborough County Department of Solid Waste (DSW) is writing to notify the Florida Department of Environmental Protection (DEP) of a recent stormwater management incident which occurred at the County's Southeast County Landfill (Landfill).

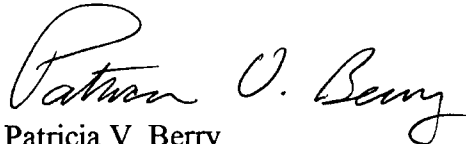
Specifically, on January 1, 1996, following a 3+ inch rain event, stormwater overflowed an area of the containment berm surrounding the active Landfill area. The active Landfill area had daily soil and ash cover at the time of the incident. The Landfill contractor, Waste Management Inc. of Florida (WMI), investigated and corrected the problem and submitted the attached incident memorandum to the DSW on January 2, 1996.

Additionally, WMI had water samples taken to determine if the site's stormwater quality was impacted from the active area discharge. Copies of the analysis will be provided to the DEP once available. WMI also developed a corrective action plan to ensure that a similar event will not occur in the future.

Mr. Kim Ford
January 3, 1996
Page Two

Please advise should you require any additional information concerning this incident at this time.

Sincerely,

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

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

Attachment

xc: Matt Matthews, DSW
Steve Hamilton, SCS
Steve Morgan, DEP
Paul Schipfer, EPC

Southeast Landfill
P.O. Box 627
Balm, Florida 33503
(813) 634-9203
Fax: (813) 634-6518



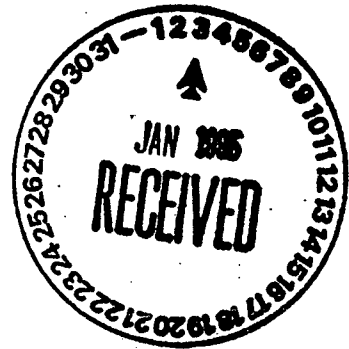
A Waste Management Company

TO: Incident File

FROM: Greg Walk *GW*

DATE: January 2, 1996

SUBJECT: Stormwater Discharge From Active Area



On January 1, 1996 at approximately 11:30 a.m., I received a call from Matt Mathews. He reported that the landfill had received a 3+" rain event and the active area containment berms were reaching capacity. I arrived at the site 40 minutes later to find the berm already over flowing on the north side in one spot. The discharge stormwater flowed via ditches to Basin D. Since the operating permit does not allow stormwater runoff from areas with ash as initial cover, I immediately elevated this area to stop the discharge. I then reinforced and elevated the rest of the berms a minimum of 24 inches above the existing water elevation. I instructed security to monitor the water level and to call me if it continued to rise.

On January 2, I ordered samples collected by Progress Environmental Laboratories from the Basin D discharge for leachate indicator analysis. I have no accurate estimate on the volume escaping the berm. I am confident the contamination, if any, will be minimal as the water only had contact with soil and ash daily cover. Analysis results will be forwarded for attachment as soon as they are available.

To prevent this from reoccurring, the following plan will be implemented. After any rain event in excess of (1) one inch, security will automatically include inspecting the berms during their hourly rounds until they are relieved by operations personnel. If water levels rise to within 12 inches of the top of any portion of the berm, they will begin calling operations personnel until they are successful with a response. Operations will evaluate and take the necessary steps.

cc: Patty Berry ✓
Matt Mathews
Sheree Henninger - For analysis review, comments
Chester McKinney - For CARS issue
Gene White - Train security where and what to look for. Inform operations of what is expected if called.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 12-28-95 Subject SOUTHWEST LF.
Time 11:35 A.M. Permit No. _____
County HILLSBOROUGH
M. R. LARRY RUIZ Telephone No. 813-621-0080
Representing SCS/HCD SW
[] Phoned Me [X] Was Called [] Scheduled Meeting [] Unscheduled Meeting
Other Individuals Involved in Conversation/Meeting —

Summary of Conversation/Meeting CONTACTED LARRY RUIZ PER DIRECTION OF
PAT BERRY (HCD SW) RELATIVE TO WAIVER REQUEST AND MEMO TO FRED
DATED 12-19-95.

(1) APPROVED WAIVER REQUEST THRU 3-31-96. (90 days) - Larry
Ruiz OPTIMISTIC RELATING TO LEACHATE HEAD REDUCTION @ LANDFILL.

(2) INFORMED LARRY RUIZ THAT SHOULD LEACHATE LEVELS NOT SUB-
SIDE HCD SW SHALL APPLY FOR A VARIANCE TO TALLAHASSEE FOR AN
INCREASED SWAMP AREA - ^{LARRY} STATED THAT THIS LANDFILL WAS UNIQUE IN
ITS ORIGINAL DESIGN. C.O. may be issued to collect fees for
the past 1 1/4 yrs. LARRY STATED THAT HCD SW, SCS & KIM RECOMMENDED
THAT THE COMPLIANCE PROBLEM BE RESOLVED IN SW DISTRICT AND
KIM SUGGESTED THAT THE COUNTY NOT APPLY TO TALLAHASSEE FOR A VARIANCE
BECAUSE OF KIM'S FAMILIARITY TO THE LANDFILL DESIGN.
(continue on another sheet, if necessary)

Signature Robert J. Antea
Title P.E. III

SE Hills permit
file

HILLSBOROUGH COUNTY

Florida

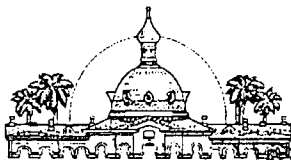
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Lovie Keel
Robert Taylor



December 18, 1995

RECEIVED
DEC 21 1995

Carl J. Heintz
Environmental Protection Commission
Water Management Division
1900 9th Avenue
Tampa, Florida 33605

Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

Subject: Monitor Well TH-36

Dear Mr. Heintz:

In response to your December 11, 1995 letter concerning monitor well TH-36, attached is a copy of my December 1, 1994 letter to Allison Amram of the Florida Department of Environmental Protection (DEP) which addresses monitor well TH-36

To date the well has not been repaired or relocated due to on going negotiations with Great Monument Construction Company (GMCC). Last week the Department of Solid Waste reached a tentative agreement with GMCC and relocation of the well may proceed fairly soon.

If you have any further questions, you may call me at 276-2920.

Sincerely,

James G. Clayton
Environmental Supervisor
Department of Solid Waste

JGC/jc

Attachment

xc: Allison Amram, Department of Environmental Protection
Thomas G. Smith, Department of Solid Waste
Patricia V. Berry, Department of Solid Waste

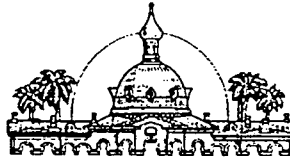
HILLSBOROUGH COUNTY

Florida

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Cretta Johnson
Jimmie Keel
Robert Taylor

Ms. Allison Amram
Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619-8318

Subject: Abandonment and Replacement of Monitor Well TH-36

Dear Ms. Amram:

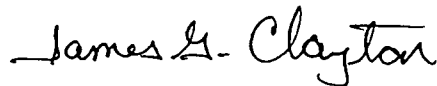
As we have previously discussed over the telephone, it is the intent of the Hillsborough County Department of Solid Waste (DSW) to replace monitor well TH-36. The monitor well has been struck and damaged during the construction of the Leachate Treatment Plant at the Southeast County Landfill.

The DSW would like for this well replacement to be included as part of the permit renewal for the Southeast County Landfill. The DSW plans to move TH-36 five feet east of its existing location. TH-36 was last sampled in November, 1994. The well will no longer be sampled due to excessive amounts of silt which is entering the well casing. Negotiations are under way with the contractor responsible for the damage to have the well relocated and replaced as soon as possible. The DSW hopes to have the matter resolved and the new well in place in the next six to twelve months. A copy of the typical well construction diagram is attached for your review.

Allison Amram
December 1, 1994
Page 2

Thank you for your attention in this issue. Should you have any questions or comments, please contact me at 276-2920.

Sincerely,

A handwritten signature in cursive script that reads "James G. Clayton".

James G. Clayton
Environmental Supervisor
Department of Solid Waste

JGC/jc

Attachment

xc: Thomas G. Smith, Department of Solid Waste
Patricia V. Berry, Department of Solid Waste
John Johnson, Department of Solid Waste

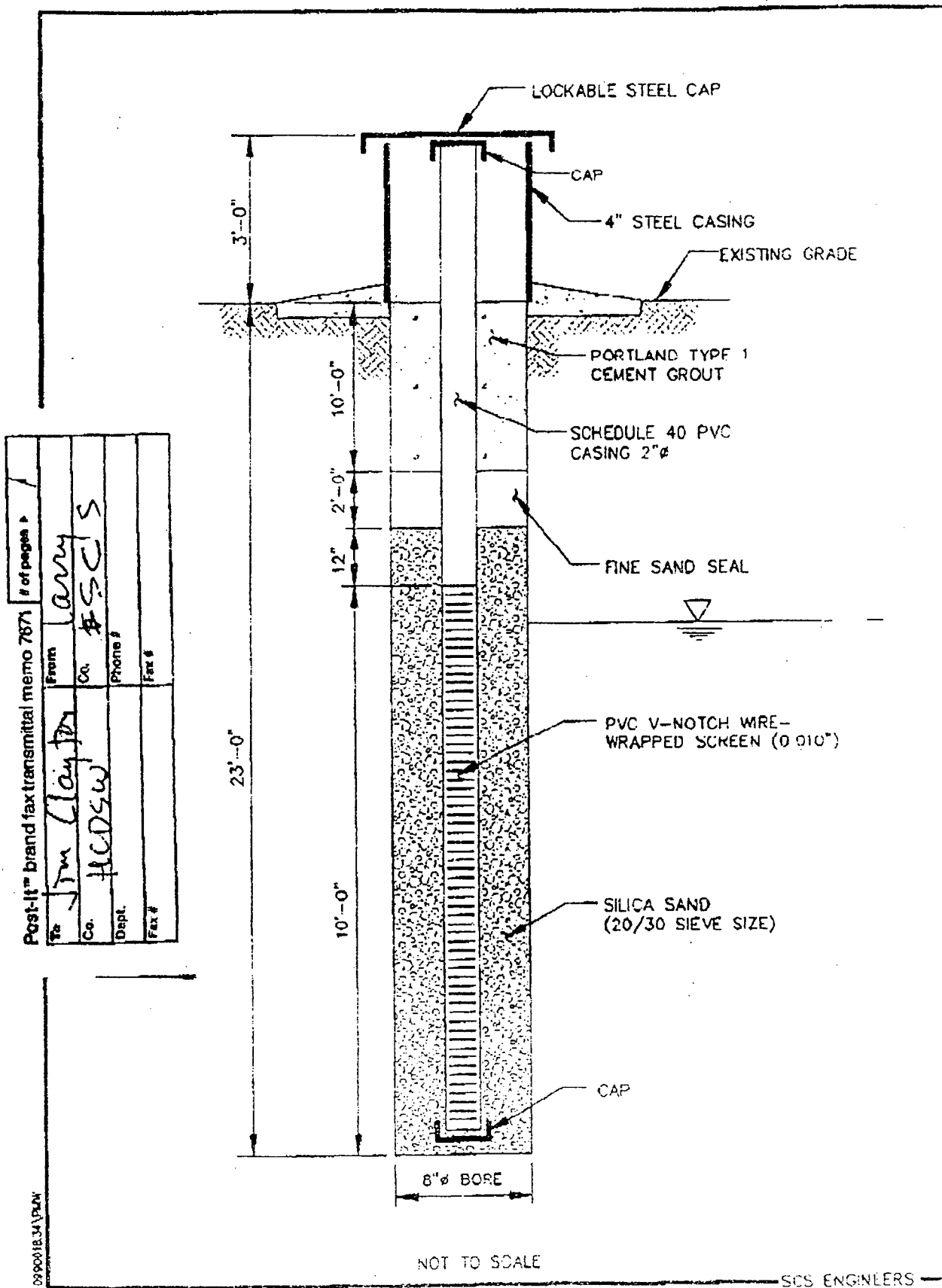


Figure 1. Typical Well Construction for Proposed Monitoring Wells.

HILLSBOROUGH COUNTY

Florida

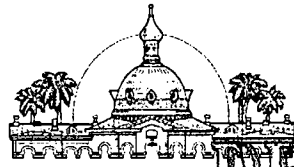
Office of the County Administrator
Daniel A. Kleman

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Robert Taylor



December 20, 1995

RECEIVED
DEC 20 1995

Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

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

RE: Southeast County Landfill - Leachate Management

Dear Mr. Butera:

As requested by the Florida Department of Environmental Protection (DEP) during our recent telephone conversation, the Department of Solid Waste (DSW) is providing the following information to the DEP pertaining to the Southeast County Landfill (Landfill):

- the leachate data through December 13, 1995;
- an evaluation of the clay settlement under Phase IV;
- the status of the leachate removal at temporary pump station 5 (TPS-5); and,
- the identification of a plan for continued management of the leachate within the Landfill and specifically under Phase IV.

The DSW requested that its landfill consultant, SCS Engineers, assist in this evaluation and in the development of a recommended course of action. SCS Engineers' response, which is attached, addresses all items listed above. Since SCS Engineers has responded in some detail, the DSW will forgo reiterating their response. The DSW does concur with SCS Engineers recommendations.

As recommended by SCS Engineers, the DSW again requests that the DEP accept and grant the second 3-month waiver to provide sufficient time for the DSW to obtain direct data on the performance of TPS-5. The DSW is optimistic that, by the end of the second waiver period, the DEP will be in a position to issue the permit renewal for the Landfill with specific conditions addressing the provisions of the Leachate Management Plan (LMP).

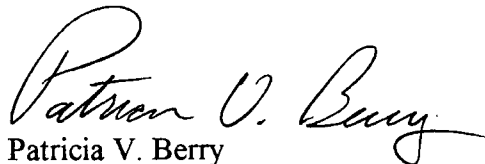
Mr. Robert Butera
December 20, 1995
Page Two

The DSW feels that, in light of measures taken by the DSW to address the LMP and the overall leachate management of the Landfill, the DEP does not need to consider utilizing a consent order for compliance monitoring. The DSW is committed to operating the Landfill in accordance with DEP regulations and will consider permit conditions which provide sufficient guidelines for the DEP to monitor compliance with the LMP.

The DSW believes this is something that can be negotiated with the DEP as part of the permit renewal process.

Should the DEP have any questions or additional information requests following a review of this response, please contact Larry Ruiz at SCS Engineers since I will be out of the office until January 3, 1996. I hope that the information provided is as requested by the DEP.

Sincerely,

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

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

Attachments

xc: Matt Matthews, DSW
Steve Hamilton, SCS
Kim Ford, DEP
Steve Morgan, DEP
Paul Schipfer, EPC

SCS ENGINEERS

December 19, 1995
File No. 0995029.11

Patricia V. Berry
Executive Manager
Hillsborough County Department Solid Waste Division
P.O. Box 1110
Tampa, Florida 33601

Subject: Temporary Pump Station No. 5 Status

Dear Patty:

The Florida Department of Environmental Protection (FDEP) has requested that the Hillsborough County Department of Solid Waste (HCDSW) provide the following information regarding the Southeast County Landfill (SELF):

- Cause of the settlement under Phase IV.
- Status of leachate removal at the existing temporary pump station 5 (TPS-5) and updated data for December 1995.
- Options that the HCDSW is considering if the TPS-5 system is found to be ineffective in reducing the potentiometric level in the Phase IV piezometer.

As requested by the HCDSW, SCS Engineers (SCS) is providing the following information to address these issues.

SETTLEMENT IN PHASE IV

SCS believes that the low area identified under Phase IV is in part due to the fact that Phases V and VI were not preloaded during the beginning of landfilling in 1984, as recommended by Ardaman and Associates, Inc. (Ardaman). Section VI page 6-9, first paragraph last sentence of the February 1983 Ardaman report, indicated that a 3-foot thick sand drainage blanket was to be placed over the "entire site". The preloading was recommended by Ardaman to allow the phosphatic clays to begin settling, to gain strength and provide adequate slopes for the leachate collection and removal system (LCRS). At the direction of Camp Dresser and McKee, Inc. (CDM) the preloading of Phases V and VI was delayed and installed concurrently with the placement of waste in Phase IV.

Attachment 1 includes correspondence from CDM and Ardaman which provides a background of events concerning the placement of the preloading in Phases V and VI. The preloading in Phases V and VI was completed in September 1992. SCS believes that the low area under Phase IV is a temporary condition and as Phases V and VI continue to



settle, the final low point within the SELF will still occur in Phase VI as originally projected by Ardaman.

STATUS OF TPS-5 LEACHATE REMOVAL

The construction of TPS-5 was completed in August 1995. The HCDSW has continued to remove leachate from temporary pump stations 3 (TPS-3) and since August 1995 from TPS-5. However, due to pump malfunctions continuous leachate removal from TPS-5 did not begin until November 21, 1995. Since continuous leachate removal began at TPS-5, leachate flow into TPS-3 has stopped and the HCDSW is continuing leachate removal from the low area at an average rate of 85,000 gallons per day (gpd). When the continuous pumping began, the piezometer showed a potentiometric level of 57 inches, to date the piezometer potentiometric level is fluctuating between 53 and 55 inches. Attachment 2 includes the partial leachate water balance report form for the month of December 1995, the approximate top clay elevations tracking form, survey data form, and a table showing the up-to-date leachate level readings at the proposed TPS-5 pump control well.

In correspondence dated December 5, 1995, SCS recommended that the HCDSW issue a second waiver extending the FDEP's 90-day time limit to approve or deny the permit application by another 90 days. The additional 90 days will allow sufficient time for the HCDSW to take an empirical approach (i.e., direct measure) over the next couple of months to assess the performance of the TPS-5 system and the piezometer. The collected measurements should provide sufficient data to calculate the stored leachate quantities within the SELF and the time required to bring the leachate level in the piezometer in line with the depth over the liner as estimated by the SELF leachate management plan (LMP).

Since the HCDSW issued the first permit review time waiver to the FDEP on August 10, 1995, the HCDSW has completed the following construction activities at the SELF which have provided leachate depth data within the SELF.

- A. On July 6, 1995, drilling for the piezometer at the alternate location as shown on Figure 1.
- B. On July 6, 1995, drilling and installation of the piezometer at the location shown on Figure 1.
- C. On August 28, 1995, construction of the suction line for TPS-5.
- D. On November 21, 1995, drilling and installation of the TPS-5 pump control well at the location shown on Figure 1.

These construction activities have provided sufficient data to indicate that the leachate level observed in the piezometer is a potentiometric level (Figure 2) due to the semi-confining conditions above and below the sand drainage layer (i.e. ash and phosphatic clay

respectively). During the construction activities A, B, and D mentioned above, leachate was not encountered until the drilling reached the sand drainage layer. In construction activity C, leachate was not encountered until the excavation reached the gravel trench of the leachate collection header.

On October 28, 1995, SCS conducted a hydraulic test of the piezometer in Phase IV. The test was accomplished by evacuating the leachate in the piezometer using a submersible pump and monitoring the piezometer recharge rate. The results of the hydraulic test were analyzed using AQTESOLV™ software to estimate the leachate drainage rate through the drainage layer at the SELF. The results of the AQTESOLV™ analysis indicated that the drainage layer has an average hydraulic conductivity value of 5 feet per day or 1.8×10^{-3} centimeter per second. The data set matched a plot that is characteristic of a confined condition (See Figure 3). The data suggests that the depth in the piezometer is not representative of the depth over the liner across the entire SELF footprint. For example, while the piezometer is showing a potentiometric level of 53 to 55 inches, the leachate level in the Phase III riser averages 4 inches and the leachate level in the Phase IV riser averages 12 inches.

The level in the piezometer has continued to decrease since the continuous leachate removal has been operational at TPS-5. The HCDSW is removing approximately 85,000 gpd which is higher than the estimated generation rate used in the LMP (i.e., 71,300 gpd for an estimated wet year), this is an indication that the TPS-5 system is working and storage is being depleted within the landfill. However, as the leachate depth is lowered, we expect that the leachate removal rates will decrease due to the physical configuration of the LCRS.

OPTIONS

Since the HCDSW began an accelerated leachate removal operation in January 1995, the HCDSW has significantly lowered the leachate storage within the SELF. In January 1995, leachate depth in TPS-3 was 6 feet. Currently, with TPS-5 operating, no leachate flows into TPS-3. As Phases V and VI continue to settle, we anticipate leachate flow into TPS-3 will resume. At that time, the HCDSW should consider initiating the use of the proposed Phase VI Permanent Pump Station "B" (PPS-B). Activation of PPS-B should be followed by the removal of TPS-3, TPS-5, the TPS-5 pump control well, the Phase IV piezometer, and re-definition of the sump area.

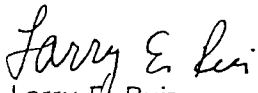
As mentioned above, the TPS-5 currently is working; however, if within the next 90 days the TPS-5 is found to be ineffective at reducing the potentiometric level in the piezometer, SCS recommends that the HCDSW seek a sump exception for the low area under Phase IV (12 acres) as allowed by Rule 62-701.400(3) of the Florida Administrative Code. In the 1994 Permit Application Engineering Report by SCS, sufficient data was provided to justify the approval for a sump area based on the alternative design of the SELF as originally approved by FDEP in 1983 and 1989. Assuming that the sump area is approved by the

Patricia V. Berry
December 19, 1995
Page 4

FDEP and a new operation permit is issued, the leachate depth required in the LMP should continue to be measured at the Phases III and IV risers for the duration of the permit. The leachate depth measured in the Phase IV piezometer can be utilized for estimating the depth of leachate over the liner and storage once the level in the piezometer is lowered below 36 inches.

The objective of the leachate management plan is to remove leachate as it is conveyed to the collection points within the SELF, and not exceed the maximum storage calculated for the SELF using the U.S. Environmental Protection Agency's (U.S. EPA) Hydrological Evaluation of Landfill Performance (HELP) model. The HCDSW currently is exceeding their removal goal and should continue to operate the SELF to maintain the landfill leachate depth over the liner within the values shown in the hydrograph (LMP Figure 2) as measured in the Phase III and IV risers. After the FDEP approves the sump area definition, the LMP should be modified to reflect permit conditions.

Very truly yours,



Larry E. Ruiz
Senior Project Engineer



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

LER/RBG:ikm

Enclosures

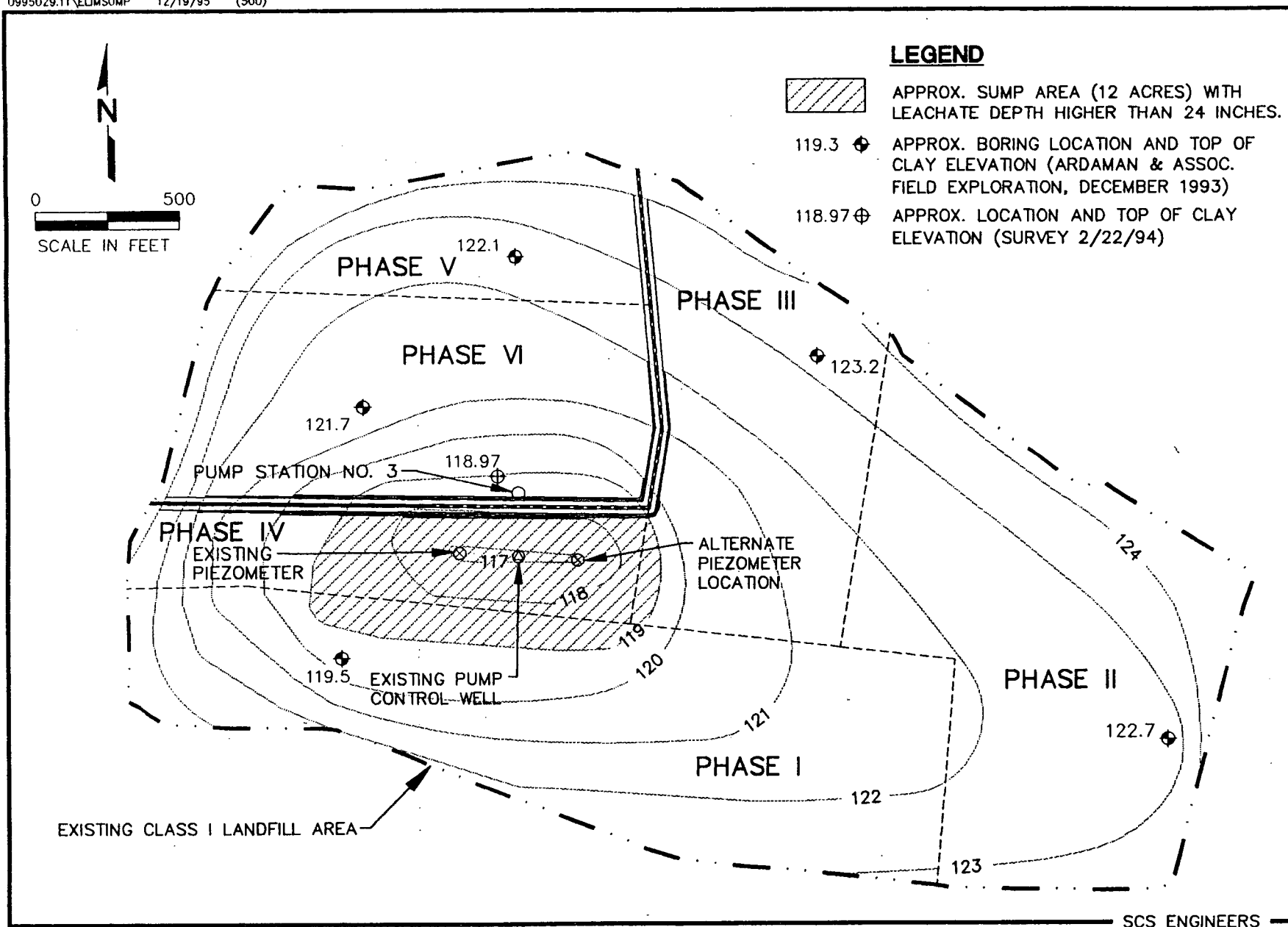


Figure 1. Existing Limit of Sump Area.

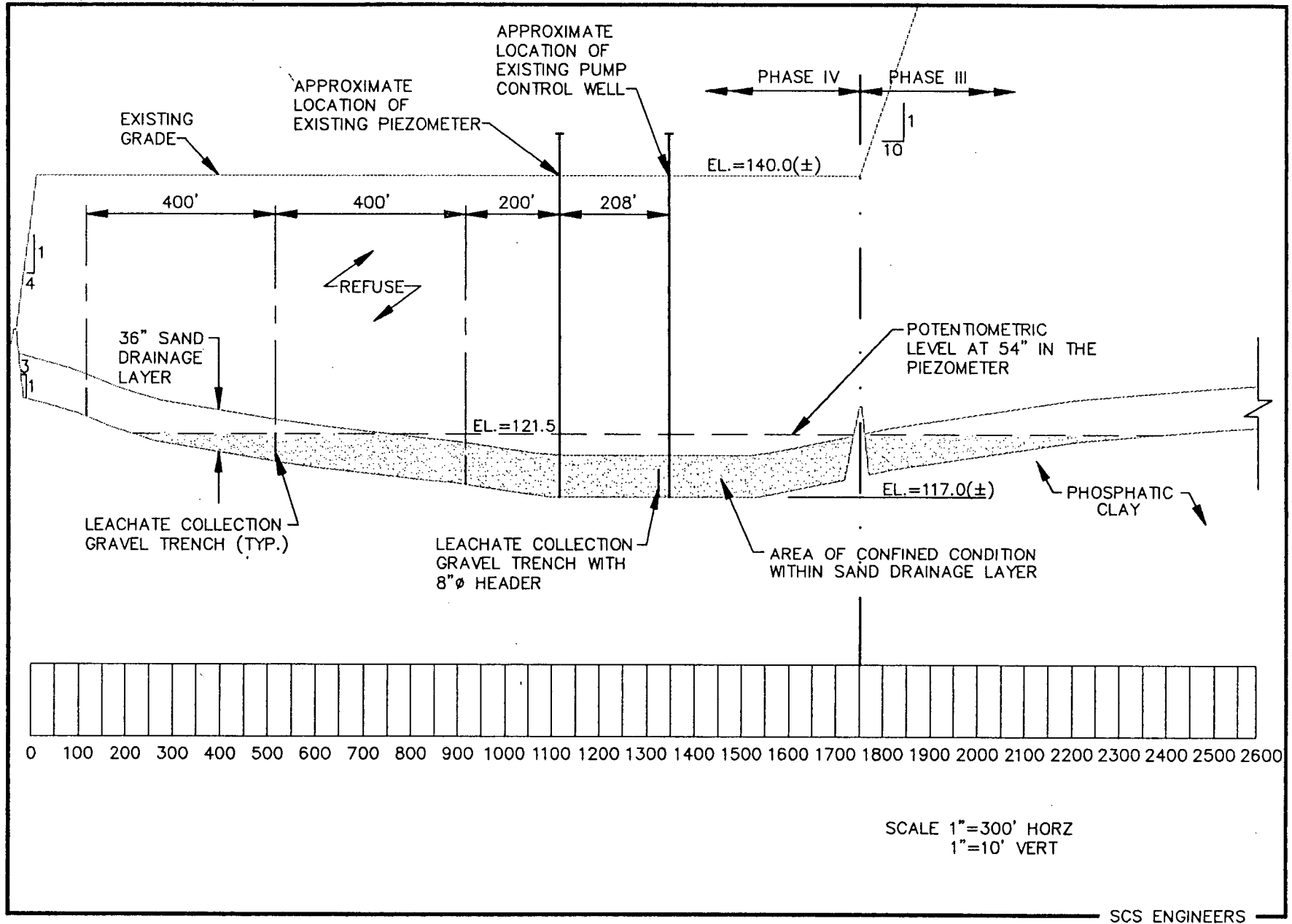
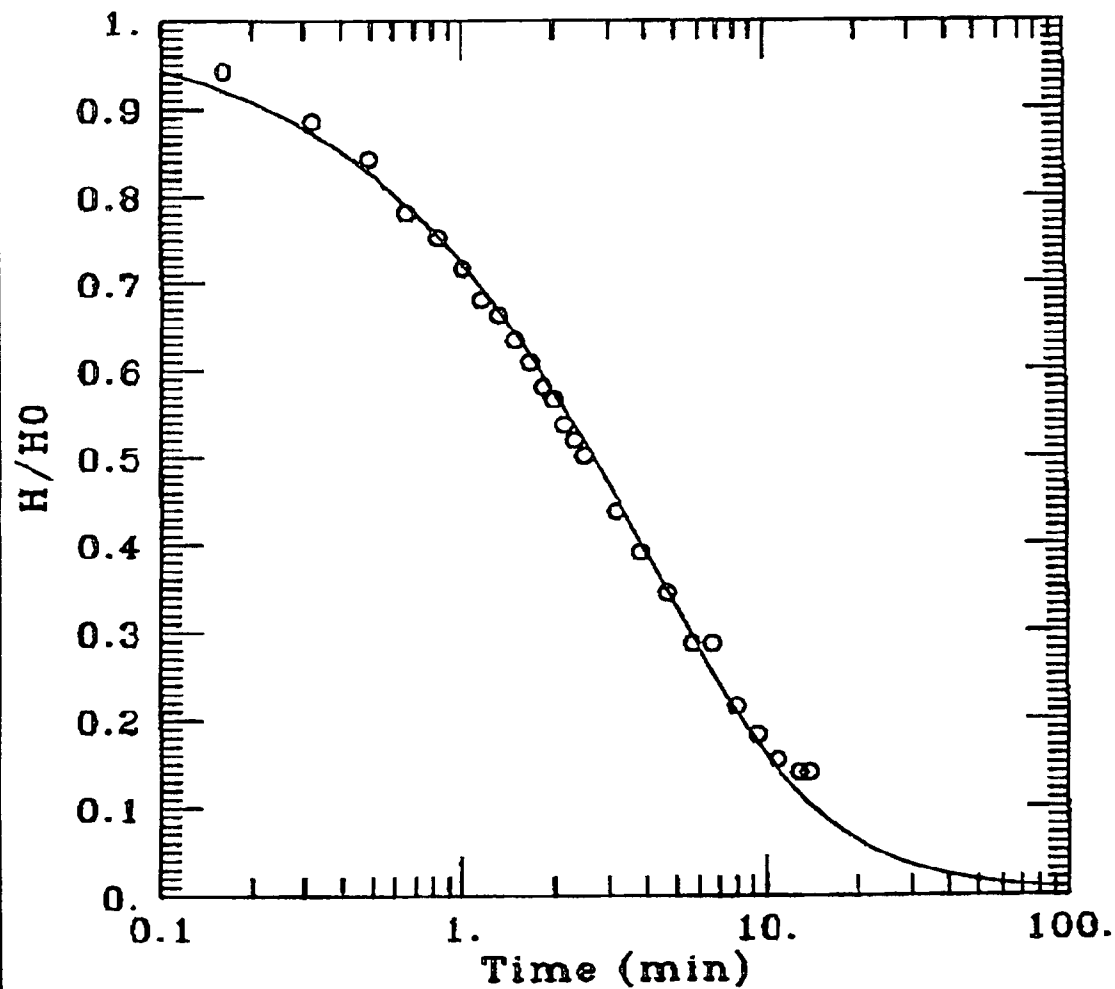


Figure 2. Phase IV Cross Section

**DATA SET:**

test.dat

10/02/95

AQUIFER TYPE:

Confined

SOLUTION METHOD:

Cooper et al.

ESTIMATED PARAMETERS: $T = 0.01033 \text{ ft}^2/\text{min}$ $S = 0.0005276$ **TEST DATA:** $H_0 = 2.79 \text{ ft}$ $r_c = 0.166 \text{ ft}$ $r_w = 0.5 \text{ ft}$

Figure 3. Slug Test Results, Phase IV Piezometer.

ATTACHMENT 1

CDMenvironmental engineers, scientists,
planners, & management consultants

CAMP DRESSER & MCKEE INC.

One Tampa City Center, Suite 1750
Tampa, Florida 33602
813 221 2833

November 14, 1986

Ms. Patricia V. Berry
Projects Engineer
Department of Solid Waste
Hillsborough County
P.O. Box 1110
Tampa, FL 33601

Re: Southeast County Sanitary Landfill -
Extension of Power to Phase IV
Placement of Sand Blanket in Phases V-VI

Dear Ms. Berry:

At your request and that of Al Allen, Landfill Manager, we have investigated the two construction issues referenced above with respect to the ongoing construction at the County's landfill. These two issues are discussed in the following sections.

Extension of Power to Phase IV

With the construction of Phase IV at the landfill, the Phase I temporary leachate sump should be relocated to the Phase IV temporary leachate sump location as shown on the Construction Plans - Phases II to VI, and the Operating Sequence Plans and the Operating Manual. As part of this work, power must be extended to the new Phase IV-temporary leachate sump location. In addition, this effort must be coordinated with installation of the replacement leachate pump and leachate force mains now underway.

The power for this leachate sump should extend from the existing electrical manhole located on the old existing dike, ("Berm Type A" along the western perimeter of the landfill area) where this dike intersects the temporary service roadway to the Phase I leachate sump. From this point, it should be extended along the permanent berm to the intersection with the temporary landfill berm for the Phase IV area. The power should then be extended along this temporary berm to the Phase IV, temporary leachate sump.

The power to the Phase IV temporary sump should not be extended directly from the Phase I-temporary sump under the proposed landfill area. The existing conduit and handholds along the Phase I temporary berm can either be left in place or recovered at the option of the contractor - WMI. The construction should be done in accordance with Contract Documents for the construction of the landfill including all the plans and specifications. In addition, it is the responsibility of WMI to submit to the County for approval shop drawings depicting all the work to be

CAMP DRESSER & MCKEE INC.

performed with respect to the extension of power and the new leachate pump replacement system. The shop drawings should show the pump control system including any transformers or other system requirements, the adequacy of the wire and conduits, the splicing system to tie into the existing line, methods of construction and all other information for the County to assure proper construction of the work.

Placement of Sand Blanket in Phases V and VI

As described in the permit documents and the operating manual and sequence of development for the landfill, following the development of Phase IV and completion of the first stage of landfill development, the landfill operation will continue with the placement of an additional two lifts (Stage II) over the Phase I to IV areas. Only after this filling is complete will the development of the landfill in Phases V and VI take place.

However, during the development of the initial stage of Phase IV, the eight foot sand blanket (depth varies) should be placed in Phases V and VI. During the Stage II development over Phase I to IV, consolidation will occur in Phases V and VI due to the sand blanket before the placement of solid waste in these areas. The design of the site is based upon this operating sequence.

At the request of the County, we have reviewed the timing required for the placement of the sand blanket with Ardaman & Associates. Based upon this review, we recommend that the sand blanket be placed concurrently with the placement of fill in Phase IV and that the placement of the sand blanket be completed within four months of the closure of Phase IV.

During the preparation of the RFP to obtain the site operator, the County decided not to include the placement of this sand blanket as part of the landfill operator's contract. Rather, the decision on construction of this sand blanket would be made later by the County and would include consideration of the following: (1) bidding the job as an earthmoving contract; (2) including the work as part of the next operating bid for the landfill; or, (3) negotiating with the current site operator.

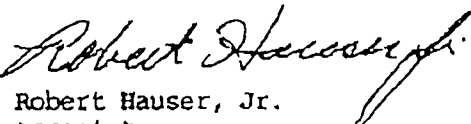
At the current rate of landfiling and given the need to place the sand blanket, we further recommend that the County include in its FY 1988 budget the necessary funds to place the sand blanket.

For budgeting purposes an estimate of \$1,300,000 may be used for his work, including installation of the leachate collection system.

If you have any questions, please call.

Very truly yours,

CAMP DRESSER & MCKEE INC.


Robert Hauser, Jr.
Associate

RH/cj
RH6T.3/13

HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Frederick B. Karl



July 17, 1992

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VIA TELECOPIER AND FIRST CLASS MAIL

Mr. Robert Hauser, P.E.
Camp Dresser and McKee, Inc.
One Tampa City Center
Suite 1750
Tampa, Florida 33602

Subject: Southeast Landfill

Dear Mr. Hauser:

The Department of Solid Waste (DSW) is requesting Camp Dresser & McKee, Inc.'s (CDM) response to a number of issues related to CDM's involvement in the design of the County's Southeast County Landfill.

During June 1991, the DSW met with you, SCS Engineers, and Dr. John Garlanger of Ardaman & Associates, Inc. (Ardaman) at SCS Engineers' office to discuss the sequencing of the Southeast County Landfill (Landfill) and the basis of its design. At that time, you indicated that CDM selected a consolidation period of just over four years versus the seven year period originally recommended by Ardaman. Ardaman still recommends that the DSW follow the seven year consolidation period in filling the Landfill. Ardaman believes that the seven year consolidation period is necessary to provide an adequate factor of safety.

Also, on November 14, 1986, CDM advised the DSW that the DSW could delay pre-loading Phases V and VI to just prior to filling Phase IV. This sequencing is also referenced in the Operating Manual for the Landfill. The November 14, 1986 letter indicates that CDM's pre-loading recommendation was discussed with Ardaman. However, Ardaman's geotechnical report recommends that Phases V and VI be pre-loaded immediately upon the development of the Landfill. Based on Ardaman's current recommendation, the intermediate maximum crest for Phases V and VI must be reduced because pre-loading was not initiated earlier. This change in the crest elevation has a significant impact on the sequencing of the Landfill.

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Mr. Robert Hauser
July 17, 1992
Page Two

Based on these developments, the DSW is requesting that CDM provide a written response to the following questions:

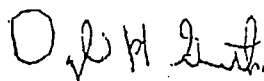
1. What was the design rationale and consolidation period used by CDM in the development of the sequential fill plans for the Landfill?
2. What correspondence and/or discussion transpired between CDM and Ardaman that would explain CDM's recommendation to the County concerning the delay in the pre-loading of Phases V and VI and the discrepancy with Ardaman's original recommendation?

The DSW would appreciate having your response to these questions no later than July 31, 1992. Please advise as soon as possible should you anticipate problems meeting this timeframe.

As previously indicated to you, SCS Engineers has evaluated alternative sequencing plans for the Landfill and has developed an alternative sequencing plan which should provide for uninterrupted disposal at the Landfill through the year 2005. The DSW has no problem with CDM coordinating with SCS Engineers to review the revised plans at SCS Engineer's office. SCS Engineers has indicated that the plans should be finalized within the next month.

Should you have any questions concerning this correspondence, feel free to contact me or Patricia Berry at 272-6674.

Sincerely,



Daryl H. Smith
Director
Department of Solid Waste

DHS:pb

xc: Patricia V. Berry, DSW
Susan Allan, County Attorney's Office
Robert B. Gardner, SCS Engineers

everyone\hauser



*environmental engineers, scientists,
planners, & management consultants*

July 31, 1992

CAMP DRESSER & McKEE INC.

One Tampa City Center, Suite 1750
Tampa, Florida 33602
813 221-2833, Fax 813 221-2279

Mr. Daryl H. Smith, Director
Department of Solid Waste
Hillsborough County
P.O. Box 1110
Tampa, Florida 33601

Subject: Southeast Landfill

Dear Mr. Smith:

As requested in your letter dated July 17, 1992, we are providing the responses to the two questions raised in that letter regarding the development of the operating sequence at the Southeast Landfill. The following is our understanding of the process that was utilized to develop the plans on which work was done eight to ten years ago.

The primary work related to the development and operation of the Southeast Landfill occurred as part of the work to develop the permit application for the site which was submitted in February, 1983. The hydrogeological investigation performed by Ardaman was done in support of this application. At the time the hydrogeological report was prepared, a number of meetings and telephone conversations were made between our staff and Ardaman's staff to discuss Ardaman's recommendations and findings. This was necessary to reconcile their findings with other site development requirements. In discussions with Ardaman, their proposed filling plan was modified to accommodate other considerations while foremost maintaining stability of the clay. Our understanding was that the key issue was maintaining the very shallow side slopes. This requirement to maintain these critical side slopes is reflected in the permit application and operating plan.

The Ardaman report recommended placing a five foot sand blanket over the deep clay depth areas. This recommendation was made prior to our further discussions regarding the development of an operation sequence. The construction of the sand layer would have required the clearing and grubbing of over 100 additional acres and placement of sandfill. This would have delayed the opening of the landfill (for which there was a consent agreement) substantially increased initial construction costs, and created a problem with development of interim site drainage measures. Based upon our understanding, this sand blanket was not required for the stability of the initial landfill phase. Stability would be provided by maintaining the low side slope and height factors.

Mr. Daryl H. Smith
July 31, 1992
Page Two

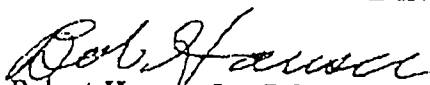
The preloading in this area was changed to be done at the time the CDM Phase IV was filled. Based upon the sequence of operations, it would have been over seven years before the deep clay area was required. Stage II - Phase I-IV would be filled during this time. This would provide the preloading. Also, the sand blanket was increased to eight feet in some areas to address other considerations with respect to settlement and leachate collection. The four year sequence for the Stage I filling in Phase I-IV, was based upon our understanding of the stability issue as presented in Ardaman's report and in our discussions with them. In their report, they anticipated that their Phase I would require about two years to fill at which time all subsequent lifts would require seven years. Therefore, in order to provide sufficient pre-load time in Phase V and IV (CDM nomenclature) an additional lift was placed over Phases I through IV which began the seven year cycle. Again our understanding was the key significant role of maintaining the shallow side slopes as depicted in the Ardaman report. Also the sand layer would have been placed in Phases V and VI further contributing to stability. The above was utilized as the basis to develop the sequencing plan used in the permit application and site design from which the final operating sequence was developed.

The above addresses your first question. With respect to the second question, we need to return to the events at that time. At this time Waste Management Inc. (WMI) was constructing the Phase III area and wanted to construct the Phase IV area at the same time. The County did not have sufficient funds to finance the construction of the sand blanket. As discussed above, our understanding was that the side slopes of the proposed fill were key to maintaining stability. A phone call was made to Ardaman and Associates to confirm this understanding. Therefore, since the county did not have funding and since Phase IV was not scheduled to be filled until 1987-1988, the sand blanket could be placed concurrently with the filling of Phase IV allowing the county time to budget for the sand blanket. Also, based upon the operating sequence, the filling of Stage II - Phases I to IV would allow sufficient time for preloading in Phases V and VI.

As in the past, we continue our offer to assist you in answering and solving any of the issues that have arisen at the Southeast Landfill. I would be pleased to meet with you to discuss our operating sequence and the basis upon which it was developed.

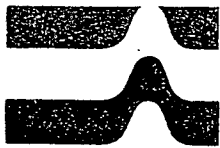
Very truly yours,

CAMP DRESSER & MCKEE INC.


Robert Hauser, Jr., P.E.
Senior Vice President

RH:emd
SWP.2

cc: Patricia V. Berry



Ardaman & Associates, Inc.

985067-15
CORRESP
January 12, 1990
File Number 89-036

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

SCS Engineers
3012 U.S. Highway 301 North
Suite 700
Tampa, Florida 33619

Received

JAN 16 1990

Attention: Mr. Robert B. Gardner, P.E.

Subject: Filling of Phases V and VI Areas, Southeast Sanitary Landfill, Hillsborough County, Florida

Gentlemen:

As requested in your letter dated December 19, 1989, we are submitting this letter to clarify our previous recommendations on preloading and filling of the Phase V and VI areas at the Southeast Sanitary Landfill, in Hillsborough County, Florida. The Southeast Landfill is constructed directly above a waste clay settling area at the former Lonesome Phosphate Mine.

A hydrogeological survey and geotechnical investigation for the Southeast Landfill was previously performed by Ardaman & Associates, Inc. in the early 1980's. The findings and recommendations were documented in an engineering report titled "Hydrogeological and Geotechnical Investigation for Proposed Southeast Hillsborough County Sanitary Landfill", dated February 22, 1983 (Ardaman & Associates's File Number 81-159). Based on updated information related to landfill design sections and operation, and the revised filling schedules, a second engineering report titled "Evaluation of Filling Schedules and Stability Analyses for Southeast Sanitary Landfill, Hillsborough County, Florida" was issued by Ardaman & Associates on July 13, 1989.

The Phase V and VI areas, as delineated on the landfill operating sequence plan prepared by Camp Dresser & McKee, Inc. and referred to as the final filling phase in Ardaman & Associates' 1983 report, are located in the northwestern part of the landfill site. Within these areas, a maximum waste clay thickness of 18 feet was documented.

As indicated in Ardaman & Associates' 1983 report, two lifts of residue were planned to be disposed of in these areas with a recommended side slope of 4 horizontal to 1 vertical and a maximum crest elevation of +141 and +157 feet (NGVD) for the first and second lifts of residue. Each lift of residue was considered to be completed in approximately seven years. The unit weight of the residue, as used in our previous analyses, was taken to be 63 lbs per cubic foot (pcf); and the effective angle of internal friction of the residue was selected to be 30°. As

stated in our 1983 report, filling of the landfill in this area should be preceded by the placement of a 3-foot thick sand tailings drainage blanket for leachate collection. Furthermore, an additional 5 feet of sand tailings were recommended over the area enclosed within the 16-foot clay thickness contour to preload this area with the thickest clay deposit. As recommended in our 1983 report, the 8-foot thick layer of surcharge should be placed in 1984 during the start-up of the landfill.

According to the landfill operating plan and the projected filling rates provided by SCS Engineers, filling of the Phase V and VI areas will begin in November, 1992 with a perimeter side slope of 4 horizontal to 1 vertical. The material received by the landfill will be a mixture of refuse and residue. The first lift of the refuse/residue mixture is planned to be raised to an interim crest elevation of +140 feet (NGVD) over a three-year period after which the second lift of refuse/residue mixture will be placed to a crest elevation of +160 feet (NGVD). Following the completion of the Phase V and VI areas to a crest elevation of +160 feet (NGVD), Stage III filling will begin and involve raising the entire landfill to a crest elevation of +220 feet (NGVD).

A comparison of the current landfill operating plan and schedule to those considered in Ardaman & Associates's 1983 study for the Phases V and VI areas revealed three major differences. First, our previous analyses considered a maximum crest elevation of +157 feet (NGVD)* while the landfill operating plan allows a maximum crest elevation of +220 feet (NGVD)**. Second, our 1983 analyses were based on the assumptions that each lift of residue would require at least seven years to complete instead of the presently projected three-year period. Third, the materials received in the landfill have been changed from residue only to a mixture of refuse and residue, and the recorded densities of the materials are slightly higher than those previously assumed. We have also been informed by SCS Engineers that neither the 3-foot thick sand tailings drainage blanket nor the additional 5-foot high sand tailings surcharge was placed by the county prior to the start-up of the landfill, as recommended in Ardaman & Associates' 1983 report.

It is our understanding that the county decided not to construct the drainage blanket and surcharge within the Phase V and VI areas until late 1989 after the negotiation of a new construction contract. It was also the county's desire to preload the area with the thickest clay deposits (i.e., area enclosed by the 16-foot clay thickness contour) with only 6 feet of sand tailings instead of the 8-foot sand tailings previously recommended by Ardaman & Associates to increase the storage volume of the landfill.

The updated analyses documented in our July, 1989 report indicated that as a result of the delay in surcharging the site, the consolidation of the underlying phosphatic clay deposit will only

* constructed in two lifts with an interim elevation at +140 feet (NGVD).

** constructed in three stages with interim elevations at +140 and +160 feet (NGVD).

be approximately 60 percent at mid-depth of the clay layer in November, 1992 rather than close to 100 percent had the preloading been initiated in 1984. Considering the 6-foot of surcharge to be placed in November, 1989 and using the updated information, the stability analyses, as documented in our July, 1989 report, had indicated that the landfill section in this area could be raised to an interim crest elevation of +140 feet (NGVD) with a side slope of 6 horizontal to 1 vertical. The computed factor of safety for this case was determined to be 1.6. By raising the crest elevation to +160 feet (NGVD) after a three-year consolidation period (rather than after the original seven-year period) after an elevation of +140 feet (NGVD) is reached, the factor of safety of the landfill section in this portion of the landfill site was analyzed to be only 1.2. To maintain an adequate margin for landfill stability, a minimum factor of safety of about 1.5 should be provided for the design section. Accordingly, as stated in our July, 1989 report, we do not recommend raising of the landfill in the Phase V and VI areas beyond a crest elevation of +140 feet (NGVD) in early 1996 unless future field data indicate that the foundation clays consolidate and gain strength faster than anticipated.

As requested by Mr. Robert Gardner of SCS Engineers, we have analyzed the effects of retaining the 8 feet of surcharge instead of the 6 feet previously requested by the county. As shown in Figure 1 and as expected, the factor of safety will increase from 1.6 to about 1.9 for the first lift of refuse/residue mixture. The additional 2 feet of surcharge, had they been placed in November, 1989, is expected to raise the undrained shear strength of the foundation clay at mid-depth from about 110 pounds per square foot (psf) to 130 psf. For the second lift of refuse/residue mix, the undrained shear strength is expected to increase from 180 to 220 psf with a resulting increase in the safety factor from 1.2 to 1.4 for the landfill design section (Figure 2). In our opinion, this factor of safety is not adequate, or at best marginal, for the proposed construction. However, if a seven-year consolidation period is provided as originally planned rather than the three-year period currently projected, the foundation clay will be close to 100 percent consolidated and the average undrained shear strength along the failure surface will be approximately 270 psf. According to our analyses, this scenario yields a factor of safety slightly greater than 1.5 and is acceptable.

Note that the required reduction in crest height and flattening of the perimeter side slope from our 1983 analyses for this portion of the landfill site are primarily the result of the delay in placement of the surcharge by over six years and a decrease in the consolidation period of the foundation clays from seven to three years between lifts.

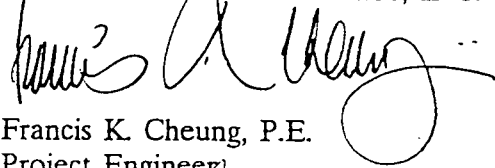
The raising of the entire landfill to a crest elevation of +220 feet (NGVD), as indicated on the landfill operating plan for the Stage 3 filling even after 100 percent consolidation under the previous filling stage (i.e., to an elevation of +160 feet (NGVD)), is expected to result in a factor of safety close to unity for the landfill section, as documented in Figure 14 of our July, 1989 report. Note that filling of the Southeast Landfill to this elevation has never been recommended by Ardaman & Associates. As shown in Figure 3, raising of the landfill to a crest elevation of +180 feet (NGVD) after 100 percent consolidation under the previous lifts results in a marginal factor of safety of 1.4.

SCS Engineers, Inc.
File Number 89-036

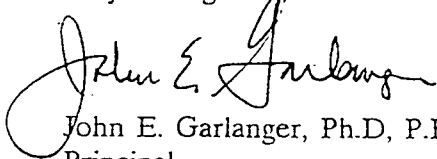
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If you have any questions concerning the above or require additional assistance, please do not hesitate to contact us.

Very truly yours,
ARDAMAN & ASSOCIATES, INC.



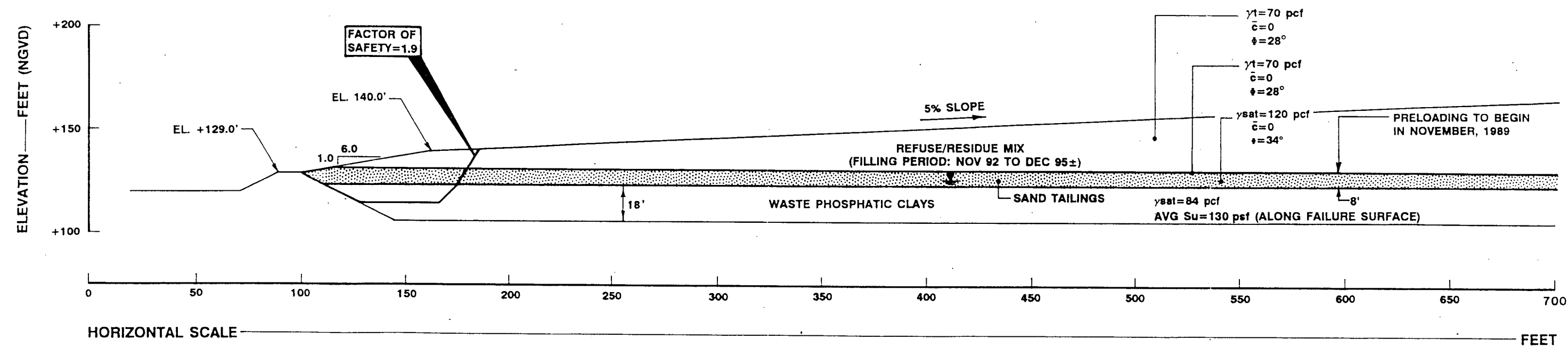
Francis K. Cheung, P.E.
Project Engineer



John E. Garlanger, Ph.D, P.E.
Principal
Florida Registration No. 19782



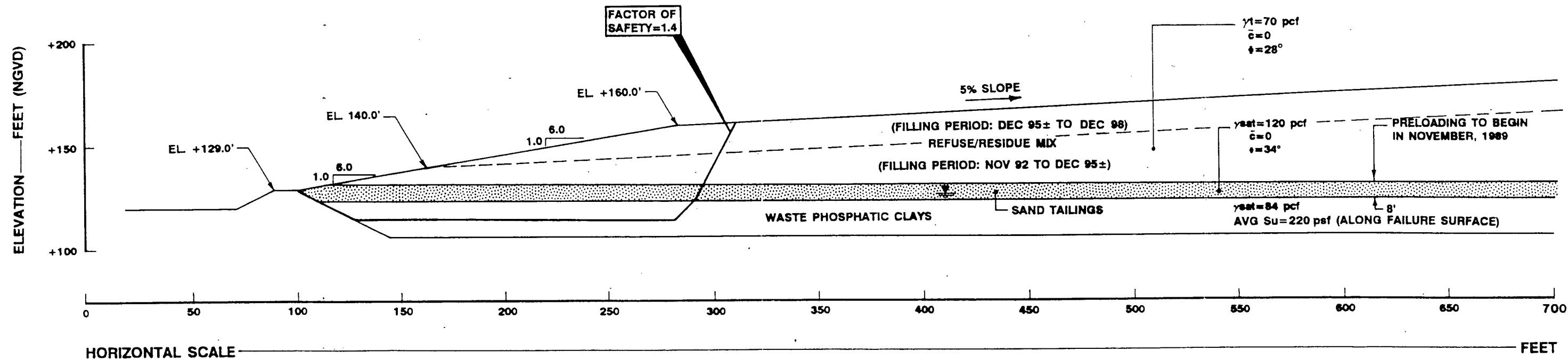
STABILITY ANALYSES FOR
PHASES V AND VI AREAS
TO EL. +140 FT.



Ardaman & Associates, Inc. Consulting Engineers in Soils, Hydrogeology, Foundations, and Materials Testing		
EVALUATION OF FILLING ALTERNATIVES SOUTHEAST COUNTY LANDFILL HILLSBOROUGH COUNTY, FLORIDA		
DRAWN BY: SEF	CHECKED BY: FCC	DATE: 06/06/89
FILE NO: 89-036	APPROVED BY: <i>John J. Ardaman</i>	

FIGURE 1

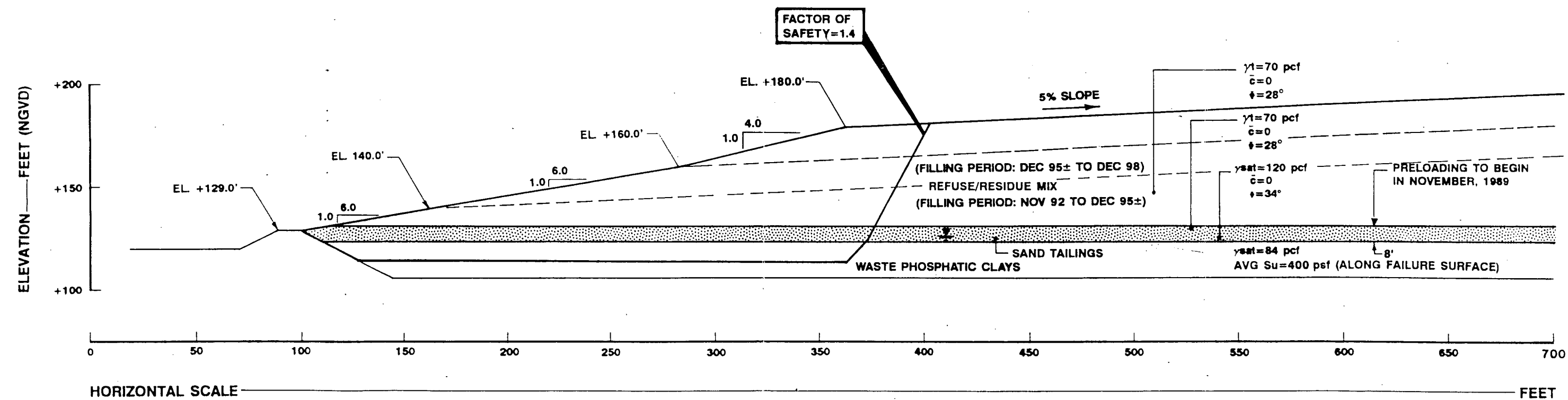
STABILITY ANALYSES FOR
PHASES V AND VI AREAS
TO EL. +160 FT.



Ardaman & Associates, Inc. Consulting Engineers in Soils, Hydrogeology, Foundations, and Materials Testing		
EVALUATION OF FILLING ALTERNATIVES SOUTHEAST COUNTY LANDFILL HILLSBOROUGH COUNTY, FLORIDA		
DRAWN BY: SEP	CHECKED BY: FKC	DATE: 06/06/89
FILE NO: 89-036	APPROVED BY: <i>John E. Ardaman</i>	

FIGURE 2

STABILITY ANALYSES FOR
PHASES V AND VI AREAS
TO EL. +180 FT.



Ardaman & Associates, Inc.
Consulting Engineers in Soils, Hydrogeology,
Foundations, and Materials Testing

EVALUATION OF FILLING ALTERNATIVES
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

DRAWN BY	SEF	CHECKED BY	ENC	DATE	06/06/89
FILE NO	89-036	APPROVED BY	<i>John E. Ardaman</i>		

FIGURE 3

ATTACHMENT 2

**LEACHATE WATER BALANCE REPORT FORM
NOVEMBER 1995**

SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII
Day	Area (acres)			Rainfall (in.)	Depth in Effluent Pond (in.)	Est. Depth Over Liner (in.)	Est. Landfill Storage (gal.)	Pumped From Sta. No 3 (gal.)	Pumped From Sta. No. 5 (gal.)	Leachate Pumped to LTRF (gal.)	Leachate in 500K Tank (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Recirculation (gal.)	Effluent Pond Storage (gal.)	Effluent Sprayed (gal.)	Effluent Recirculation (gal.)	Total Effluent Hauled (gal.)	Landfill Evapor. (gal.)
1	23.2	5.0	92.2	0.0	29.0	56.5	8,953,000	0	91,900	91,900	317,000	60,000	37,170	0	92,000	42,900	0	12,000	35,000
2	23.2	5.0	92.2	0.0	27.0	56.3	8,837,000	4,000	80,200	84,200	302,000	60,000	0	0	85,000	42,900	0	56,000	35,000
3	23.2	5.0	92.2	NR	NR	NR	NR	5,020	79,180	84,200	NR	60,000	0	0	NR	NR	0	0	0
4	23.2	5.0	92.2	0.0	28.0	56.0	8,721,000	3,020	88,980	92,000	331,000	60,000	54,393	0	88,000	42,900	8,500	37,000	42,000
5	23.2	5.0	92.2	0.0	25.0	55.0	8,258,000	0	89,400	89,400	317,000	60,630	43,484	0	78,000	42,900	8,500	31,000	42,000
6	23.2	5.0	92.2	0.0	30.0	55.8	8,606,000	0	82,200	82,200	288,000	60,100	66,164	0	95,000	42,900	8,500	12,000	42,000
7	23.2	5.0	92.2	0.0	25.0	56.0	8,721,000	0	85,900	85,900	245,000	60,290	49,613	0	78,000	0	0	12,000	0
8	23.2	5.0	92.2	0.0	29.0	55.0	8,258,000	0	88,500	88,500	230,000	60,230	16,500	0	92,000	30,450	1,700	62,000	26,000
9	23.2	5.0	92.2	0.0	29.0	55.0	8,258,000	0	82,400	82,400	245,000	60,620	0	0	92,000	0	1,700	62,000	1,000
10	23.2	5.0	92.2	NR	NR	NR	NR	0	82,400	82,400	NR	60,000	0	0	NR	NR	0	0	0
11	23.2	5.0	92.2	0.0	44.0	53.0	7,331,000	0	82,600	82,600	259,000	60,340	18,577	0	146,000	42,900	0	43,000	35,000
12	23.2	5.0	92.2	0.0	36.0	53.0	7,331,000	0	34,500	34,500	230,000	60,200	37,174	0	116,000	10,525	0	25,000	9,000
13	23.2	5.0	92.2	0.0	31.0	54.0	7,794,000	0	120,800	120,800	230,000	60,250	0	0	99,000	0	0	0	0
14	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total				0.00	333.0	605.5	91,068,000	12,040	1,088,960	1,101,000	2,994,000	782,660	323,075	0	1,061,000	298,375	28,900	352,000	267,000
Average				0.00	30.3	55.0	8,279,000	4,000	84,000	85,000	230,000	60,000	40,000	0	96,000	27,000	6,000	35,000	30,000

1295BALA.WB2 Revised by BLJ 12/18/95

Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, estimated from depth in Phase IV Piezometer.
5. Column VI, estimated from Column V and approximate volume with top of clay elevation at 117.0 feet.
6. Column VII calculated based on average 180 gpm and hour conversion.
7. Column VIII calculated by subtracting VII from flow meter reading.
8. Column IX, quantity from flow meter.
9. Column X, calculated from depth in 500,000 gal. leachate tank.
10. Columns XI and XV, quantities from flow meters.
11. Columns XII, XIII, XVI, and XVII, quantities calculated from truck weight.
12. Column XVIII, 80.8% of the daily values from Columns XIII, XV and XVI.
13. Values in italic are substitute for missing data and are based on averaged values.

**FIELD DATA ENTRY FORM
NOVEMBER 1995**

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
Day	Active Area (ac.)	Depth in Effl. Pond (in.)	Stormwater In Sump No. 4 (in.)	Phase III Riser (in.)	Phase IV Riser (in.)	Phase IV Piezometer (in.)	Rainfall (in.)	Leachate Hauled		Leachate Recirc. (gal.)	Effluent Hauled		Effluent Recirc. (gal.)	Leachate Treated at LTRF (gal.)	Effluent Sprayed (gal.)	Depth in 500K Tank (ft.)	Pumped to LTRF Reading (gal.)	Sta. No. 3 Reading (hours)
								Contractor (gal.)	County (gal.)		Contractor (gal.)	County (gal.)						
1	5.0	29.0	71.0	3.5	13.00	56.50	0.0	18,230	18,940	0	12,200	0	0	60,000	42,900	11.0	2,533,000	3,100.77
2	5.0	27.0	71.0	4.0	13.50	56.25	0.0	0	0	0	55,654	0	0	60,000	42,900	10.5	2,624,900	3,100.77
3	5.0	NR	NR	NR	NR	NR	NR	NR	NR	0	NR	NR	0	60,000	NR	NR	<i>2,709,100</i>	<i>3,100.96</i>
4	5.0	28.0	70.0	4.0	16.00	56.00	0.0	37,393	17,000	0	36,887	0	8,500	60,000	42,900	11.5	2,793,300	3,101.14
5	5.0	25.0	70.0	9.0	15.00	55.00	0.0	43,484	0	0	30,887	0	8,500	60,630	42,900	11.0	2,885,300	3,101.42
6	5.0	30.0	70.0	3.5	12.25	55.75	0.0	49,664	16,500	0	12,300	0	8,500	60,100	42,900	10.0	2,974,700	3,101.42
7	5.0	25.0	NR	3.0	12.00	56.00	0.0	49,613	0	0	12,300	0	0	60,290	0	8.5	3,056,900	3,101.42
8	5.0	29.0	NR	3.5	12.00	55.00	0.0	0	16,500	0	61,670	0	1,700	60,230	30,450	8.0	3,142,800	3,101.42
9	5.0	29.0	NR	3.5	12.00	55.00	0.0	0	0	0	61,982	0	1,700	60,620	0	8.5	3,231,300	3,101.42
10	5.0	NR	NR	NR	NR	NR	NR	NR	NR	0	NR	NR	0	60,000	NR	NR	<i>3,313,700</i>	<i>3,101.42</i>
11	5.0	44.0	NR	4.0	12.00	53.00	0.0	18,577	0	0	43,236	0	0	60,340	42,900	9.0	3,396,100	3,101.42
12	5.0	36.0	NR	4.0	12.00	53.00	0.0	37,174	0	0	24,661	0	0	60,200	10,525	8.0	3,478,700	3,101.42
13	5.0	31.0	NR	3.5	12.00	54.00	0.0	0	0	0	0	0	0	60,250	0	8.0	3,513,200	3,101.42
14	0.0																3,634,000	3,101.42
15	0.0																	3,101.42
16	0.0																	3,101.42
17	0.0																	3,101.42
18	0.0																	3,101.42
19	0.0																	3,101.42
20	0.0																	3,101.42
21	0.0																	3,101.42
22	0.0																	3,101.42
23	0.0																	3,101.42
24	0.0																	3,101.42
25	0.0																	3,101.42
26	0.0																	3,101.42
27	0.0																	3,101.42
28	0.0																	3,101.42
29	0.0																	3,101.42
30	0.0																	3,101.42
31	0.0																	3,101.42

Notes:

1. NR = No Records.
2. Columns II-VIII, field measured. Column VIII, Trace is less than 0.01 inches.
3. Column VI, if level exceeds 24 inches, leachate withdrawal from landfill must increase.
4. Column VII, Phase IV piezometer began monitoring on 7/10/95.
5. Columns IX-XIV, quantities calculated from truck weight.
6. Columns XV and XVI, quantities from flow meters.
7. Column XVII, field measured.
8. Column XVIII, reading from flow meter.
9. Column XIX, Hour reading from TPS-3.
10. Values in italic are substitute for missing data and are based on averaged values.

APPROXIMATE TOP OF CLAY ELEVATIONS
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FL

[illegible]

SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FL

[illegible]

**SOUTHEAST LANDFILL
TEMPORARY PUMP STATION NO. 5 CONTROL WELL
DECEMBER 1995**

DAY	DEPTH (Inches)
1	well purged
2	NR
3	NR
4	20.04
5	25.50
6	25.00
7	25.50
8	23.50
9	24.00
10	NR
11	23.50
12	23.50
13	23.00
14	25.50

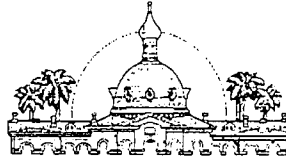
HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS

Dottie Berger
Phyllis Busansky
Joe Chillura
Chris Hart
Jim Norman
Ed Turanchik
Sandra Helen Wilson



Senior Assistant County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Cretta Johnson

RECEIVED
DEC 12 1995

Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

December 7, 1995

Mr. Ron Cope
Waste Management Division
Hillsborough County Environmental Protection Commission
1900 9th Avenue
Tampa, Florida 33605

RE: Analysis Related to Southeast Landfill Effluent Discharge

Dear Mr. Cope:

Please find attached copies of the analysis of samples taken at TH-26 and from Basin A in response to the September 21, 1995 incident of minor leachate effluent discharge at the Southeast County Landfill referenced in the Department of Solid Waste's (DSW) November 1, 1995 correspondence.

Samples were collected on November 2, 1995 immediately following the DSW's confirmation of the incident and again during the regularly scheduled quarterly analysis on November 13, 1995.

The analysis results indicate that the minor discharge had no impact on either the surrounding surface or groundwater.

Please advise should you require any additional information concerning this incident at this time.

Sincerely,

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

Attachment

xc: Kim Ford, DEP
Steve Morgan, DEP
Steve Hamilton, SCS

Sept 21, 1995 leachate Q

Ncr 2 sampled well TH26
+ pond

TH26

TDS 350
pH 5.25
Cond 496

Basin A outfall from A
sampled

TDS 230
pH 6.42
Cond 426

11/13

TDS ~~200~~ 310
pH 5.07F
Cond 544

208
6.28
420

Notes.
AA

November 15, 1995 14:32

CERTIFICATE OF ANALYSIS

SAMPLE SUMMARY

WORKORDER:
9511054

SENT *HILLSBOROUGH COUNTY SOLID*
TO: *WASTE DEPARTMENT*
PO BOX 1110
TAMPA, FL 33601
JAMES G. CLAYTON
813/272-5680 FAX 276-2960

ANALYZED BY: PBS&J Environmental Laboratories
6635 East Colonial Drive
Orlando, Florida 32807
Phone: (407) 277-4443
Fax: (407)382-8794

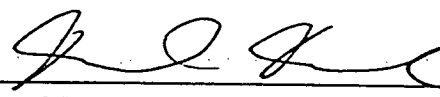
PROJECT: 21 000 07A
PBS&J CONTACT: FRENCH
RECEIVED DATE: 11/03/95
REPORTED DATE: 11/15/95

WORK DESCRIPTION: SOUTHEAST LANDFILL
TAKEN BY:
TRANSPORTED:
SAMPLE TYPES:
PO#:

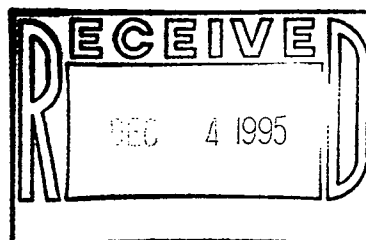
State of Florida Certifications: E83011-Environmental, 83170-Drinking Water and Radiochemistry
CompQAP 860044G

SAMPLE DESCRIPTION	LAB ID	COLLECTED DATE/TIME
TH-26	01	11/02/95 12:20:00
TH-26 DUP	02	11/02/95 12:20:00
PRE EQUIP BLANK	03	11/02/95 11:20:00
SURF SITE -BASIN A	04	11/02/95 11:50:00

Sample data qualifiers are reported as outlined in 17-160 F.A.C



Laboratory Manager



November 15, 1995 14:32

CERTIFICATE OF ANALYSIS RESULTS BY SAMPLE

Page 1

SENT **HILLSBOROUGH COUNTY SOLID**
TO: **WASTE DEPARTMENT**
PO BOX 1110
TAMPA, FL 33601
JAMES G. CLAYTON
813/272-5680 FAX 276-2960

ANALYZED BY: **PBS&J Environmental Laboratories**
6635 East Colonial Drive
Orlando, FL 32807

Phone: (407) 277-4443
Fax: (407) 382-8794

This is to certify that the following samples were analyzed using good laboratory practices to show the following results.

Sample ID: TH-26

Lab ID: **9511054-01**

Collected: 11/02/95 12:20:00

TEST	RESULT	UNITS	METHOD	EXTRACTED	ANALYZED	BY
TOTAL DISSOLVED SOLIDS	356	mg/l	EPA 160.1		11/07/95	gm
pH IN FIELD	5.25	ph units	FIELD			
TEMPERATURE IN FIELD	26.8	oc	FIELD			
CONDUCTIVITY IN FIELD	496	umhos/cm	umhos/cm			

Sample ID: TH-26 DUP

Lab ID: **9511054-02**

Collected: 11/02/95 12:20:00

TEST	RESULT	UNITS	METHOD	EXTRACTED	ANALYZED	BY
TOTAL DISSOLVED SOLIDS	344	mg/l	EPA 160.1		11/07/95	gm
pH IN FIELD	5.25	ph units	FIELD			
TEMPERATURE IN FIELD	26.8	oc	FIELD			
CONDUCTIVITY IN FIELD	496	umhos/cm	umhos/cm			

Sample ID: PRE EQIP BLANK

Lab ID: **9511054-03**

Collected: 11/02/95 11:20:00

TEST	RESULT	UNITS	METHOD	EXTRACTED	ANALYZED	BY
TOTAL DISSOLVED SOLIDS	<4 U	mg/l	EPA 160.1		11/07/95	gm

Sample ID: SURF SITE -BASIN A

Lab ID: **9511054-04**

Collected: 11/02/95 11:50:00

TEST	RESULT	UNITS	METHOD	EXTRACTED	ANALYZED	BY
TOTAL DISSOLVED SOLIDS	230	mg/l	EPA 160.1		11/07/95	gm
pH IN FIELD	6.42	ph units	FIELD			
TEMPERATURE IN FIELD	24.1	oc	FIELD			
CONDUCTIVITY IN FIELD	426	umhos/cm	umhos/cm			

**HILLSBOROUGH COUNTY DEPT. OF SOLID WASTE
COC SHEET SOUTHEAST LANDFILL WELL MONITORING PROGRAM**

PRECLEANED SAMPLE CONTAINERS: 9511 054-01

RELINQUISHED BY: _____ REP. OF CONTRACT LAB.
ACCEPTED BY: N REP. OF COMMON CARRIER
RELINQUISHED BY: JA REP. OF COMMON CARRIER
ACCEPTED BY: _____ REP. OF SOLID WASTE DEPT.

DATE	TIME
<u>11/2/95</u>	<u>12:00P</u>
<u>11/2/95</u>	<u>12:00P</u>
<u>11/2/95</u>	<u>12:00P</u>

LOCATION: TH-26 SAMPLE MATRIX: WATER OTHER MATRIX: _____
PERSONAL ENGAGED IN SAMPLE COLLECTION: D. J. Bullen

WELL DIAMETER: 2.0 INCH:
TOTAL DEPTH OF WELL: 20.60 Ft.
DEPTH TO WATER: 12.90 Ft.
LENGTH OF WATER COL: 7.70 Ft.
VOLUME TO PURGE: 3.9 Gal.

DATE	TIME
<u>11-2-95</u>	<u>12:04P</u>
<u>0.5</u>	<u>GPM.</u>
DATE	TIME
<u>11-2-95</u>	<u>12:19P</u>
<u>14.5</u>	<u>GAL.</u>

FIELD PARAMETERS:

BY	TIME	TEMP	COND	PH	OTHER
<u>DJ</u>	<u>12:12P</u>	<u>27.0</u>	<u>497</u>	<u>5.28</u>	
<u>DJ</u>	<u>12:17P</u>	<u>26.8</u>	<u>496</u>	<u>5.25</u>	

CONTAINER CODE:

NO. COL.	TYPE	PRESERVATIVE	CONTAINER TYPE	COLLECTED DATE	TIME
<u>1</u>	BACTERIA	<u>NA2SO4</u> NONE	100 ml. POLY BAG	<u>11-2-95</u>	<u>12:20P</u>
	GENERAL	NONE	32 oz. PLASTIC		
	METALS	2 ml. HNO3	1000 ml. PLASTIC		
	NUTRIENTS	2 ml. H2SO4	500 ml. PLASTIC		
	OIL & GREASE	5 ml. H2SO4	1 ltr. AMBER GLASS		
	ORGANICS	NONE	4 ltr. AMBER GLASS		
	RADIOLOGY	10 ml. HNO3	1 gal. PLASTIC		
	VOC	1:1 HCL	40 ml. SEPTUM VIAL		

1 TOTAL No. OF SAMPLES COLLECTED:

ANALYSES REQUESTED:

TDS _____

PRESERVED SAMPLES PH < 2.0 ☒ SAMPLE STORAGE: COOLER & ICE TO 4.0 c

ABOVE LISTED SAMPLES:

RELINQUISHED BY: D. J. Bullen REP. OF SOLID WASTE DEPT. 11-2-95 12:00P
ACCEPTED BY: D. J. Bullen REP. OF COMMON CARRIER 11-2-95 12:00P
RELINQUISHED BY: Andrew All REP. OF COMMON CARRIER _____
ACCEPTED BY: Andrew All REP. OF CONTRACT LAB. 11-3-95 11:30A

COMMON CARRIER UTILIZED: GREYHOUND BUS LINES OTHER: _____

COMMENT'S: _____

**HILLSBOROUGH COUNTY DEPT. OF SOLID WASTE
COC SHEET SOUTHEAST LANDFILL WELL MONITORING PROGRAM**

PRECLEANED SAMPLE CONTAINERS: 951105402

RELINQUISHED BY: _____ REP. OF CONTRACT LAB.
ACCEPTED BY: W/A REP. OF COMMON CARRIER
RELINQUISHED BY: _____ REP. OF COMMON CARRIER
ACCEPTED BY: _____ REP. OF SOLID WASTE DEPT.

DATE	TIME
<u>11/2</u>	<u>11A</u>
<u>11/2</u>	<u>11A</u>

LOCATION: TH-26-1-DUP SAMPLE MATRIX: WATER OTHER MATRIX: _____

PERSONAL ENGAGED IN SAMPLE COLLECTION: D. J. Ballan

WELL DIAMETER: 2.0 INCH:
TOTAL DEPTH OF WELL: 90.60 Ft.
DEPTH TO WATER: 12.90 Ft.
LENGTH OF WATER COL: 7.70 Ft.
VOLUME TO PURGE: 3.9 Gal.

DATE	TIME
<u>11-2-95</u>	<u>1204P</u>
<u>0.5</u>	<u>GPM.</u>
DATE	TIME
<u>11-2-95</u>	<u>14.5</u>
<u>14.5</u>	<u>GAL.</u>

FIELD PARAMETERS:

BY	TIME	TEMP	COND	PH	OTHER
<u>DJ</u>	<u>1212P</u>	<u>27.0</u>	<u>497</u>	<u>5.28</u>	
<u>DJ</u>	<u>1217P</u>	<u>26.8</u>	<u>496</u>	<u>5.25</u>	

CONTAINER CODE:

NO. COL.	TYPE	PRESERVATIVE	CONTAINER TYPE	COLLECTED DATE	TIME
	BACTERIA	<u>NA2SO4</u> NONE	100 ml. POLY BAG	<u>11-2-95</u>	<u>1220P</u>
<u>1</u>	GENERAL	NONE	32 oz. PLASTIC		
	METALS	2 ml. HNO3	1000 ml. PLASTIC		
	NUTRIENTS	2 ml. H2SO4	500 ml. PLASTIC		
	OIL & GREASE	5 ml. H2SO4	1 ltr. AMBER GLASS		
	ORGANICS	NONE	4 ltr. AMBER GLASS		
	RADIOLOGY	10 ml. HNO3	1 gal. PLASTIC		
	VOC	1:1 HCL	40 ml. SEPTUM VIAL		

1 TOTAL No. OF SAMPLES COLLECTED:

ANALYSES REQUESTED:

TDS _____
PRESERVED SAMPLES PH < 2.0 ✓ SAMPLE STORAGE: COOLER & ICE TO 4.0 c

ABOVE LISTED SAMPLES:

RELINQUISHED BY: D. J. Ballan REP. OF SOLID WASTE DEPT. 11-2-95 120P
ACCEPTED BY: D. J. Ballan REP. OF COMMON CARRIER 11-2-95 120P
RELINQUISHED BY: Andy REP. OF COMMON CARRIER
ACCEPTED BY: Andy REP. OF CONTRACT LAB. 11-3-95 11:30A

COMMON CARRIER UTILIZED: GREYHOUND BUS LINES OTHER: _____

COMMENT'S: _____

HILLSBOROUGH COUNTY DEPT. OF SOLID WASTE
COC SHEET SOUTHEAST LANDFILL WELL MONITORING PROGRAM

9511054-03

PRECLEANED SAMPLE CONTAINERS:

RELINQUISHED BY: _____ REP. OF CONTRACT LAB.
ACCEPTED BY: MA REP. OF COMMON CARRIER
RELINQUISHED BY: _____ REP. OF COMMON CARRIER
ACCEPTED BY: _____ REP. OF SOLID WASTE DEPT.

DATE	TIME
<u>11/2/95</u>	<u>11:20A</u>
<u>11/2/95</u>	<u>11:20A</u>

LOCATION: PRE EQIP BLANK SAMPLE MATRIX: WATER OTHER MATRIX: _____
PERSONAL ENGAGED IN SAMPLE COLLECTION: D. J. Bell C. Bell

FIELD PARAMETERS N/A:

CONTAINER CODE:

NO.	COL.	TYPE	PRESERVATIVE	CONTAINER TYPE	COLLECTED DATE	TIME
1		GENERAL	NONE	32 oz. PLASTIC	11-2-95	11:20A
		METALS	2 ml. HNO ₃	1000 ml. PLASTIC		
		NUTRIENTS	2 ml. H ₂ SO ₄	500 ml. PLASTIC		
		OIL & GREASE	5 ml. H ₂ SO ₄	4 ltr. AMBER GLASS		
		ORGANICS	NONE	4 ltr. AMBER GLASS		
		RADIOLOGY	10 ml. HNO ₃	1 gal. PLASTIC		
		VOC	1:1 HCL	40 ml. SEPTUM VIAL		
1		TOTAL No. OF SAMPLES COLLECTED:				

ANALYSES REQUESTED:

TDS _____
PRESERVED SAMPLES PH < 2.0 ☒ SAMPLE STORAGE: COOLER & ICE TO 4.0 C

ABOVE LISTED SAMPLES:
RELINQUISHED BY: D. J. Bell REP. OF SOLID WASTE DEPT. 11-2-95 120P
ACCEPTED BY: C. Bell REP. OF COMMON CARRIER 11-2-95 120P
RELINQUISHED BY: Andy Bell REP. OF COMMON CARRIER
ACCEPTED BY: _____ REP. OF CONTRACT LAB. 11-3-95 11:30A

COMMON CARRIER UTILIZED: GREYHOUND BUS LINES OTHER: _____

COMMENT'S: _____

HILLSBOROUGH COUNTY DEPT. OF SOLID WASTE
COC SHEET SOUTHEAST LANDFILL WELL MONITORING PROGRAM

9511054-04

PRECLEANED SAMPLE CONTAINERS:

RELINQUISHED BY: _____
ACCEPTED BY: _____
RELINQUISHED BY: _____
ACCEPTED BY: _____

REP. OF CONTRACT LAB.
REP. OF COMMON CARRIER
REP. OF COMMON CARRIER
REP. OF SOLID WASTE DEPT.

DATE	TIME
11/1	11/1
11/1	11/1

LOCATION: SURF. SITE-^{OUTFALL FROM} 80511 A SAMPLE MATRIX: WATER OTHER MATRIX: _____

PERSONAL ENGAGED IN SAMPLE COLLECTION: Dph | A Ballan

FIELD PARAMETERS:

BY	TIME	TEMP	COND	PH	DO	OTHER
Df	1150A	24.1	426	6.42		

CONTAINER CODE:

NO. COL.	TYPE	PRESERVATIVE	CONTAINER TYPE	COLLECTED DATE	TIME
1	BACTERIA	NA2SO4	100 ml. POLY BAG	11-2-95	1150A
	GENERAL	NONE	32 oz. PLASTIC		
	METALS	2 ml. HNO3	1000 ml. PLASTIC		
	NUTRIENTS	2 ml. H2SO4	500 ml. PLASTIC		
	OIL & GREASE	5 ml. H2SO4	1 ltr. AMBER GLASS		
	ORGANICS	NONE	4 ltr. AMBER GLASS		
	RADIOLOGY	10 ml. HNO3	1 gal. PLASTIC		
	VOC	1:1 HCL	40 ml. SEPTUM VIAL		

1 TOTAL No. OF SAMPLES COLLECTED:

ANALYSES REQUESTED:

TDS _____

PRESERVED SAMPLES PH < 2.0 ☒ SAMPLE STORAGE: COOLER & ICE TO 4.0 c

ABOVE LISTED SAMPLES:

	DATE	TIME
RELINQUISHED BY: <u>Dph</u> REP. OF SOLID WASTE DEPT.	11-2-95	120P
ACCEPTED BY: <u>[Signature]</u> REP. OF COMMON CARRIER	11-2-95	120P
RELINQUISHED BY: <u>[Signature]</u> REP. OF COMMON CARRIER		
ACCEPTED BY: <u>[Signature]</u> REP. OF CONTRACT LAB.	11-3-95	1130A

COMMON CARRIER UTILIZED: GREYHOUND BUS LINES OTHER: _____

COMMENT'S: _____

Facility GMS #: 4029C30075

Sample Date/Time: 11/2/95 12:20:00 PM

Test Site ID #:

Report Period: 95/4

Well Name: TH-26

951105401

Well Purged (Y/N): Y

Classification of Ground Water: G-II

Well Type:

- ☐ Background
☐ Intermediate
☐ Compliance
☒ Other

Ground Water Elevation (NGVD):

Depth to Water (ft.):

STORET Code	Parameter	Sampling Method	Field Filtered Y/N	Analysis Method	Analysis Results/Units		Detection Limits/Units
406	pH IN FIELD	GRAB	N	EPA150.1	5.25	pH UNITS	Fld pH UNITS
70300	TOTAL DISSOLVED SOLIDS	GRAB	N	EPA160.1	356	mg/l	* mg/l
10	TEMPERATURE IN FIELD	GRAB	N	EPA170.1	26.8	oC	Fld oC
94	CONDUCTIVITY IN FIELD	GRAB	N	FIELD	496	umhos/cm	Fld umhos/cm

Facility GMS #: 4029C30075

Sample Date/Time: 11/2/95 12:20:00 PM

Test Site ID #:

Report Period: 95/4

Well Name: TH-26 DUP

951105402

Well Purged (Y/N): Y

Classification of Ground Water: G-II

Well Type: ☐ Background

Ground Water Elevation (NGVD):

☐ Intermediate

Depth to Water (ft.):

☐ Compliance

☒ Other

STORET Code	Parameter	Sampling Method	Field Filtered Y/N	Analysis Method	Analysis Results/Units		Detection Limits/Units
406	pH IN FIELD	GRAB	N	EPA150.1	5.25	pH UNITS	Fld pH UNITS
70300	TOTAL DISSOLVED SOLIDS	GRAB	N	EPA160.1	344	mg/l	* mg/l
10	TEMPERATURE IN FIELD	GRAB	N	EPA170.1	26.8	oC	Fld oC
94	CONDUCTIVITY IN FIELD	GRAB	N	FIELD	496	umhos/cm	Fld umhos/cm

Facility GMS #: 4029C30075

Sample Date/Time: 11/2/95 11:20:00 AM

Test Site ID #:

Report Period: 95W

Well Name: PRE EQUIP BLANK

951105403

Well Purged (Y/N): N

Classification of Ground Water:

Well Type:

☐

Background

☐

Intermediate

☐

Compliance

☒

Other

Ground Water Elevation (NGVD):

Depth to Water (ft.):

STORET Code	Parameter	Sampling Method	Field Filtered Y/N	Analysis Method	Analysis Results/Units		Detection Limits/Units
70300	TOTAL DISSOLVED SOLIDS	GRAB	N	EPA160.1	< 4	mg/l	* mg/l

Facility GMS #: 4029C30075

Sample Date/Time: 11/2/95 11:50:00 AM

Test Site ID #:

Report Period: 95W

Well Name: SURF SITE -BASIN A

951105404

Well Purged (Y/N): N

Classification of Ground Water:

Well Type:

☐

Background

☐

Intermediate

☐

Compliance

☒

Other

Ground Water Elevation (NGVD):

Depth to Water (ft.):

STORET Code	Parameter	Sampling Method	Field Filtered Y/N	Analysis Method	Analysis Results/Units		Detection Limits/Units
406	pH IN FIELD	GRAB	N	EPA150.1	6.42	pH UNITS	Fld pH UNITS
70300	TOTAL DISSOLVED SOLIDS	GRAB	N	EPA160.1	230	mg/l	• mg/l
10	TEMPERATURE IN FIELD	GRAB	N	EPA170.1	24.1	oC	Fld oC
94	CONDUCTIVITY IN FIELD	GRAB	N	FIELD	426	umhos/cm	Fld umhos/cm

November 30, 1995 08:31

CERTIFICATE OF ANALYSIS

SAMPLE SUMMARY

WORKORDER:
9511176

SENT *HILLSBOROUGH COUNTY SOLID*
TO: *WASTE DEPARTMENT*
PO BOX 1110
TAMPA, FL 33601
JAMES G. CLAYTON
813/272-5680 FAX 276-2960

ANALYZED BY: PBS&J Environmental Laboratories
6635 East Colonial Drive
Orlando, Florida 32807

Phone: (407) 277-4443
Fax: (407) 382-8794


PROJECT: 21 000 07A
PBS&J CONTACT: FRENCH
RECEIVED DATE: 11/14/95
REPORTED DATE: 11/30/95

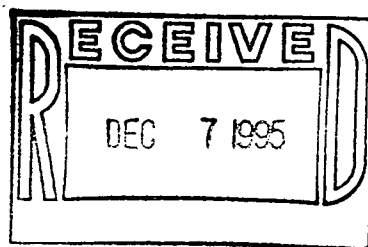
WORK DESCRIPTION: SOUTHEAST LANDFILL WELL
TAKEN BY:
TRANSPORTED:
SAMPLE TYPES:
PO#:

State of Florida Certifications: E83011-Environmental, 83170-Drinking Water and Radiochemistry
CompQAP 860044G

SAMPLE DESCRIPTION	LAB ID	COLLECTED DATE/TIME
TH-26	01	11/13/95 08:05:00
SURF SITE OUTFALL BASIN A	02	11/13/95 07:55:00
SURF SITE BASIN A-DUP	03	11/13/95 07:55:00

Sample data qualifiers are reported as outlined in 17-160 F.A.C


Laboratory Manager



CERTIFICATE OF ANALYSIS
RESULTS BY SAMPLE

SENT **HILLSBOROUGH COUNTY SOLID**
TO: **WASTE DEPARTMENT**
PO BOX 1110
TAMPA, FL 33601
JAMES G. CLAYTON
813/272-5680 FAX 276-2960

ANALYZED BY: **PBS&J Environmental Laboratories**
6635 East Colonial Drive
Orlando, FL 32807

Phone: (407) 277-4443

Fax: (407) 382-8794

This is to certify that the following samples were analyzed using good laboratory practices to show the following results.

Sample ID: TH-26Lab ID: **9511176-01**

Collected: 11/13/95 08:05:00

TEST	RESULT	UNITS	METHOD	EXTRACTED	ANALYZED	BY
TOTAL DISSOLVED SOLIDS	390	mg/l	EPA 160.1		11/20/95	gm
pH IN FIELD	5.07	ph units	FIELD			
TEMPERATURE IN FIELD	24.3	oc	FIELD			
CONDUCTIVITY IN FIELD	544	umhos/cm	umhos/cm			

Sample ID: SURF SITE OUTFALL BASIN ALab ID: **9511176-02**

Collected: 11/13/95 07:55:00

TEST	RESULT	UNITS	METHOD	EXTRACTED	ANALYZED	BY
TOTAL DISSOLVED SOLIDS	208	mg/l	EPA 160.1		11/20/95	gm
pH IN FIELD	6.28	ph units	FIELD			
TEMPERATURE IN FIELD	16.5	oc	FIELD			
CONDUCTIVITY IN FIELD	420	umhos/cm	umhos/cm			

Sample ID: SURF SITE BASIN A-DUPLab ID: **9511176-03**

Collected: 11/13/95 07:55:00

TEST	RESULT	UNITS	METHOD	EXTRACTED	ANALYZED	BY
TOTAL DISSOLVED SOLIDS	256	mg/l	EPA 160.1		11/20/95	gm
pH IN FIELD	6.28	ph units	FIELD			
TEMPERATURE IN FIELD	16.5	oc	FIELD			
CONDUCTIVITY IN FIELD	420	umhos/cm	umhos/cm			

**HILLSBOROUGH COUNTY DEPT. OF SOLID WASTE
COC SHEET SOUTHEAST LANDFILL WELL MONITORING PROGRAM**

PRECLEANED SAMPLE CONTAINERS: 9511176-01

RELINQUISHED BY: _____	REP. OF CONTRACT LAB.	DATE	TIME
ACCEPTED BY: <u>1/A</u>	REP. OF COMMON CARRIER	<u>11/13</u>	<u>12/1</u>
RELINQUISHED BY: _____	REP. OF COMMON CARRIER		
ACCEPTED BY: _____	REP. OF SOLID WASTE DEPT.		

LOCATION: TH-26 SAMPLE MATRIX: WATER OTHER MATRIX: _____
 PERSONAL ENGAGED IN SAMPLE COLLECTION: D. J. Ballan

WELL DIAMETER: <u>2.0</u> INCH:		DATE	TIME
TOTAL DEPTH OF WELL: <u>20.60</u> Ft.	PURGE STARTED:	<u>11-13-95</u>	<u>750A</u>
DEPTH TO WATER: <u>12.86</u> Ft.	PURGE RATE:	<u>0.5</u>	GPM.
LENGTH OF WATER COL: <u>7.74</u> Ft.		DATE	TIME
VOLUME TO PURGE: <u>3.9</u> Gal.	PURGE ENDED:	<u>11-13-95</u>	<u>804A</u>
	ACT. VOL. PURGED:	<u>4.5</u>	GAL.

FIELD PARAMETERS:

BY	TIME	TEMP	COND	PH	OTHER
<u>DJ</u>	<u>758A</u>	<u>24.3</u>	<u>546</u>	<u>5.07</u>	
<u>DJ</u>	<u>803A</u>	<u>24.3</u>	<u>544</u>	<u>5.05</u>	

CONTAINER CODE:

NO. COL.	TYPE	PRESERVATIVE	CONTAINER TYPE	COLLECTED	
				DATE	TIME
<u>1</u>	BACTERIA	<u>NA2SO4</u> NONE	100 ml. POLY BAG		
	GENERAL	NONE	32 oz. PLASTIC	<u>11-13-95</u>	<u>805A</u>
	METALS	2 ml. HNO3	1000 ml. PLASTIC		
	NUTRIENTS	2 ml. H2SO4	500 ml. PLASTIC		
	OIL & GREASE	5 ml. H2SO4	1 ltr. AMBER GLASS		
	ORGANICS	NONE	4 ltr. AMBER GLASS		
	RADIOLOGY	10 ml. HNO3	1 gal. PLASTIC		
	VOC	1:1 HCL	40 ml. SEPTUM VIAL		

1 TOTAL No. OF SAMPLES COLLECTED:

ANALYSES REQUESTED:

TDS _____
 PRESERVED SAMPLES PH < 2.0 ✓ SAMPLE STORAGE: COOLER & ICE TO 4.0 c

ABOVE LISTED SAMPLES:
 RELINQUISHED BY: D. J. Ballan REP. OF SOLID WASTE DEPT. 11-13-95 1245P
 ACCEPTED BY: D. J. Ballan REP. OF COMMON CARRIER 11-13-95 1245P
 RELINQUISHED BY: Andy REP. OF COMMON CARRIER 11-14-95 9:00A
 ACCEPTED BY: Andy REP. OF CONTRACT LAB.

COMMON CARRIER UTILIZED: GREYHOUND BUS LINES OTHER: _____

COMMENT'S: _____

HILLSBOROUGH COUNTY DEPT. OF SOLID WASTE
COC SHEET SOUTHEAST LANDFILL WELL MONITORING PROGRAM

9511176-02

PRECLEANED SAMPLE CONTAINERS:

RELINQUISHED BY: _____ REP. OF CONTRACT LAB.
ACCEPTED BY: _____ REP. OF COMMON CARRIER
RELINQUISHED BY: _____ REP. OF COMMON CARRIER
ACCEPTED BY: _____ REP. OF SOLID WASTE DEPT.

DATE	TIME
W/A	W/A
W/A	W/A

LOCATION: SURF. SITE- ^{OUTFALL FROM BASIN A} SAMPLE MATRIX: WATER OTHER MATRIX: _____
PERSONAL ENGAGED IN SAMPLE COLLECTION: D. J. Ballan | A. Ballan

FIELD PARAMETERS:

BY	TIME	TEMP	COND	PH	DO	OTHER
DJ	755A	16.5	420	6.28	—	

CONTAINER CODE:

NO. COL.	TYPE	PRESERVATIVE	CONTAINER TYPE	COLLECTED	
				DATE	TIME
1	BACTERIA	NA2SO4 NONE	100 ml. POLY BAG	11-13-95	755A
	GENERAL	NONE	32 oz. PLASTIC		
	METALS	2 ml. HNO3	1000 ml. PLASTIC		
	NUTRIENTS	2 ml. H2SO4	500 ml. PLASTIC		
	OIL & GREASE	5 ml. H2SO4	1 ltr. AMBER GLASS		
	ORGANICS	NONE	4 ltr. AMBER GLASS		
	RADIOLOGY	10 ml. HNO3	1 gal. PLASTIC		
	VOC	1:1 HCL	40 ml. SEPTUM VIAL		

1 TOTAL No. OF SAMPLES COLLECTED:

ANALYSES REQUESTED:

TDS _____

PRESERVED SAMPLES PH < 2.0 ☒ SAMPLE STORAGE: COOLER & ICE TO 4.0 C

ABOVE LISTED SAMPLES:

	DATE	TIME
RELINQUISHED BY: <u>D. J. Ballan</u>	11-13-95	1245P
ACCEPTED BY: <u>[Signature]</u>	11-13-95	1245P
RELINQUISHED BY: <u>[Signature]</u>		
ACCEPTED BY: <u>[Signature]</u>	11-14-95	900

COMMON CARRIER UTILIZED: GREYHOUND BUS LINES OTHER: _____

COMMENT'S: _____

HILLSBOROUGH COUNTY DEPT. OF SOLID WASTE
COC SHEET SOUTHEAST LANDFILL WELL MONITORING PROGRAM

051176-03

PRECLEANED SAMPLE CONTAINERS:

RELINQUISHED BY: _____ REP. OF CONTRACT LAB.
ACCEPTED BY: M/A REP. OF COMMON CARRIER
RELINQUISHED BY: _____ REP. OF COMMON CARRIER
ACCEPTED BY: _____ REP. OF SOLID WASTE DEPT.

DATE	TIME
<u>M/A</u>	<u>M/A</u>
<u>M/A</u>	<u>M/A</u>

LOCATION: SURF. SITE ^{OUTFALL FROM} Basin A Dup SAMPLE MATRIX: WATER OTHER MATRIX: _____
PERSONAL ENGAGED IN SAMPLE COLLECTION: D. J. Ballan

FIELD PARAMETERS:

BY	TIME	TEMP	COND	PH	DO	OTHER
<u>DJ</u>	<u>755A</u>	<u>16.5</u>	<u>420</u>	<u>6.28</u>	<u>—</u>	

CONTAINER CODE:

NO. COL.	TYPE	PRESERVATIVE	CONTAINER TYPE	COLLECTED	
				DATE	TIME
	BACTERIA	NA2SO4 NONE	100 ml. POLY BAG		
<u>1</u>	GENERAL	NONE	32 oz. PLASTIC	<u>11-13-95</u>	<u>755A</u>
	METALS	2 ml. HNO3	1000 ml. PLASTIC		
	NUTRIENTS	2 ml. H2SO4	500 ml. PLASTIC		
	OIL & GREASE	5 ml. H2SO4	1 ltr. AMBER GLASS		
	ORGANICS	NONE	4 ltr. AMBER GLASS		
	RADIOLOGY	10 ml. HNO3	1 gal. PLASTIC		
	VOC	1:1 HCL	40 ml. SEPTUM VIAL		
<u>1</u>	TOTAL No. OF SAMPLES COLLECTED:				

ANALYSES REQUESTED:

TDS _____

PRESERVED SAMPLES PH < 2.0 ✓ SAMPLE STORAGE: COOLER & ICE TO 4.0 C

ABOVE LISTED SAMPLES:

	DATE	TIME
RELINQUISHED BY: <u>D. J. Ballan</u>	<u>11-13-95</u>	<u>1245P</u>
ACCEPTED BY: <u>[Signature]</u>	<u>11-13-95</u>	<u>1245P</u>
RELINQUISHED BY: <u>[Signature]</u>		
ACCEPTED BY: <u>[Signature]</u>	<u>11-14-95</u>	<u>9.00</u>

COMMON CARRIER UTILIZED: GREYHOUND BUS LINES OTHER: _____

COMMENT'S: _____

Facility GMS #: 4029C30075

Sample Date/Time: 11/13/95 8:05:00 AM

Test Site ID #:

Report Period: 95/4

Well Name: TH-26

951117601

Well Purged (Y/N): Y

Classification of Ground Water: G-II

Well Type:

☐

Background

☐

Intermediate

☐

Compliance

☒

Other

Ground Water Elevation (NGVD):

Depth to Water (ft.): 12.86

STORET Code	Parameter	Sampling Method	Field Filtered Y/N	Analysis Method	Analysis Results/Units		Detection Limits/Units
406	pH IN FIELD	GRAB	N	EPA150.1	5.07	pH UNITS	Fld pH UNITS
70300	TOTAL DISSOLVED SOLIDS	GRAB	N	EPA160.1	390	mg/l	* mg/l
10	TEMPERATURE IN FIELD	GRAB	N	EPA170.1	24.3	oC	Fld oC
94	CONDUCTIVITY IN FIELD	GRAB	N	FIELD	544	umhos/cm	Fld umhos/cm

Facility GMS #: 4029C30075

Sample Date/Time: 11/13/95 7:55:00 AM

Test Site ID #:

Report Period: 95/4

Well Name: SURF SITE OUTFALL BASIN A

951117602

Well Purged (Y/N):

Classification of Ground Water: G-II

Well Type:

- ☐ Background
☐ Intermediate
☐ Compliance
☒ Other

Ground Water Elevation (NGVD):

Depth to Water (ft.):

STORET Code	Parameter	Sampling Method	Field Filtered Y/N	Analysis Method	Analysis Results/Units		Detection Limits/Units
406	pH IN FIELD	GRAB	N	EPA150.1	6.28	pH UNITS	Fld pH UNITS
70300	TOTAL DISSOLVED SOLIDS	GRAB	N	EPA160.1	208	mg/l	* mg/l
10	TEMPERATURE IN FIELD	GRAB	N	EPA170.1	16.5	oC	Fld oC
94	CONDUCTIVITY IN FIELD	GRAB	N	FIELD	420	umhos/cm	Fld umhos/cm

Facility GMS #: 4029C30075

Sample Date/Time: 11/13/95 7:55:00 AM

Test Site ID #:

Report Period: 9514

Well Name: SURF SITE BASIN A-DUP

951117603

Well Purged (Y/N): Y

Classification of Ground Water: G-II

Well Type: ☐ Background

Ground Water Elevation (NGVD):

☐ Intermediate

Depth to Water (ft.):

☐ Compliance

☒ Other

STORET Code	Parameter	Sampling Method	Field Filtered Y/N	Analysis Method	Analysis Results/Units		Detection Limits/Units
406	pH IN FIELD	GRAB	N	EPA150.1	6.28	pH UNITS	Fld pH UNITS
70300	TOTAL DISSOLVED SOLIDS	GRAB	N	EPA160.1	256	mg/l	* mg/l
10	TEMPERATURE IN FIELD	GRAB	N	EPA170.1	16.5	oC	Fld oC
94	CONDUCTIVITY IN FIELD	GRAB	N	FIELD	420	umhos/cm	Fld umhos/cm

COMMISSION

DOTTIE BERGER
PHYLLIS BUSANSKY
JOE CHILLURA
CHRIS HART
JIM NORMAN
ED TURANCHIK
SANDRA WILSON

EXECUTIVE DIRECTOR

ROGER P. STEWART



ADMINISTRATIVE OFFICES, LEGAL &
WATER MANAGEMENT DIVISION
1900 - 9TH AVENUE
TAMPA, FLORIDA 33605
TELEPHONE (813) 272-5960
FAX (813) 272-5157

AIR MANAGEMENT DIVISION
TELEPHONE (813) 272-5530

WASTE MANAGEMENT DIVISION
TELEPHONE (813) 272-5788

WETLANDS MANAGEMENT DIVISION
TELEPHONE (813) 272-7104

CERTIFIED MAIL #012 861 011

December 11, 1995

Mr. James G. Clayton
Environmental Supervisor
Hillsborough County Department of Solid Waste
P.O. Box 1110
Tampa, FL 33601

Dear Mr. Clayton:

SUBJECT: SOUTHEAST COUNTY SANITARY LANDFILL, PERMIT #SO29-1580504,
HILLSBOROUGH COUNTY - WATER QUALITY MONITORING RESULTS
(MAY 1, 1995 THROUGH JULY 31, 1995 AND AUGUST 1, 1995 THROUGH
OCTOBER 31, 1995)

The water quality monitoring results for the period of May 1, 1995 through July 31, 1995 for the Southeast County Sanitary Landfill do not include monitoring results for monitoring well TH-36, which is the surficial aquifer background well.

The water quality monitoring results for the period of August 1, 1995 through October 31, 1995 also do not include results for monitoring well TH-36.

Under specific condition #24 of permit #SO29-158504, groundwater monitoring well TH-36 is listed as an active well. Within ten (10) days of your receipt of this certified letter, please explain why monitoring results for monitoring well TH-36 are not being submitted.

If you wish to discuss this matter, please call me at 272-5788. Thank you.

Sincerely,

Carl J. Heintz

Carl J. Heintz
Hydrogeologist

cjh/drc

*The well
is damaged.
See 10/26/95
phone memo.*

AH

D.E.P.

DEC 13 1995

SOUTHWEST DISTRICT
TAMPA

xc: Allison Amram, FDEP Southwest District
Southeast County Landfill permit file (general correspondence)

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 12-11-95 Subject SOUTHEAST LF PERMIT REVIEW
Time 1:00 P.M. Permit No. _____
County HILLSBOROUGH
M.S. PAT BERRY Telephone No. _____

Representing HILLSBOROUGH COUNTY SOLID WASTE

☒ Phoned Me [] Was Called [] Scheduled Meeting [] Unscheduled Meeting

Other Individuals Involved in Conversation/Meeting _____

NOTE: RETURNED CALL FROM 12-7-95

Summary of Conversation/Meeting IN ORDER TO SUPPORT THE WAIVER

REQUESTED IN THE DEC. 5, 1995 HCD SW MEMO I REQUESTED THE
FOLLOWING: (1) WATER-BALANCE SPREAD SHEET THROUGH DEC. 10, 1995

(2) SCS'S PROFESSIONAL OPINION AS TO AN ALTERNATIVE TO
LACK OF RESOLUTION OF THE LINER HEAD (E.G. - LAND
CELL COVERS ETC.)

(3) SUBMITTAL OF ARDAMAN & CONN'S PROFESSIONAL OPINION
RELATIVE TO LOADING OF PHASES WHEN THE LF LINER
WAS PERMITTED. (1987-1988)?

(4) INFORMED PAT THAT THE WAIVER WOULD PROBABLY
ONLY BE GRANTED IN 60 DAYS AND I WOULD
NEED SUPPORTING INFORMATION REQUESTED BY END OF
NEXT WEEK.

(continue on another
sheet, if necessary)

Signature Robert J. Buten

Title P.E. III

NOTE: ALSO DISCUSSED USE OF C.O. ON SITE.

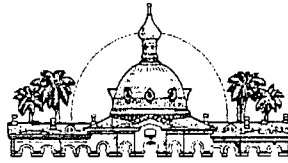
HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS

Dottie Berger
Phyllis Busansky
Joe Chillura
Chris Hart
Jim Norman
Ed Turanchik
Sandra Helen Wilson



RECEIVED
DEC - 8 1995
Department of Environmental Protection
BY _____
SOUTHWEST DISTRICT

Senior Assistant County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Cretta Johnson
Jimmie Keel
Robert Taylor

December 5, 1995

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

RE: Southeast County Landfill Pending Permit #SO29-256427- Permit Time Limit Waiver

Dear Mr. Butera:

The Hillsborough County Department of Solid Waste (DSW) has had its landfill engineering consultants, SCS Engineers, reevaluate the predicted drawdown of leachate within Phase IV of the County's Southeast County Landfill (Landfill). Based on the information provided in the attached letter from SCS Engineers, the DSW is providing the Florida Department of Environmental Protection (DEP) with a second Waiver of 90 Day Time Limit (Waiver) for the referenced pending permit for the Landfill. In accordance with Sections 120.60 (2) and 403.0876, F.S., the DSW waives the right to have the referenced pending permit application approved or denied by the DEP within the 90 day time period prescribed by law.

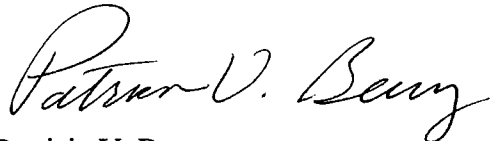
The DSW has recently made significant strides in providing continuous pumping of Phase IV with the rental of a Sykes 4" Univac Insta-Prime pump for Temporary Pump Station No. 5. The Sykes pump has the capability to run dry and handle air with no harm and has automatic priming and repriming, thereby facilitating round-the-clock pumping. In addition, the DSW has purchased and installed two additional totalizers for the leachate and effluent discharge points. However, the totalizers are being returned to the manufacturer for recalibration and will be reinstalled once received. On November 21, 1995, the construction of the pump control well was completed in accordance with the Leachate Management Plan (LMP). A complete report on the installation of this well will be provided to the DEP once it is received from the drilling company. This control well will also be utilized as a settling plate for Phase IV as outlined in the LMP and as discussed with the DEP in previous correspondence. Finally, the settling plate designated in the LMP for Phase VI will be installed by the end of the week.

Mr. Robert Butera
December 5, 1995
Page Two

Based on the information provided by SCS Engineers, the DSW is submitting the Waiver with a March 31, 1996 expiration date to provide sufficient time for the DSW to demonstrate that the leachate depth within Phase IV of the Landfill conforms to the levels shown in the LMP. However, should the leachate depth reach the values shown in the LMP prior to that date, the DSW intends to request that the DEP reevaluate the Landfill's leachate collection and removal system performance and issue the permit based on compliance with the LMP.

The DSW appreciates working with the DEP on this and other issues related to the Landfill. Should you have any questions concerning this submittal, please call at 276-2908.

Sincerely,

A handwritten signature in cursive script that reads "Patricia V. Berry".

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

Attachment

xc: Patricia V. Berry, DSW
Steve Hamilton, SCS
Kim Ford, DEP
Steve Morgan, DEP
Paul Schipfer, EPC

WAIVER OF 90 DAY TIME LIMIT
UNDER SECTIONS 120.60(2) AND 403.0876, FLORIDA STATUTES

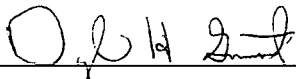
License (Permit, Certification) Application No. SO29-256427

Applicant's Name: Hillsborough County Department of Solid Waste

With regard to the above referenced application, the applicant hereby, with full knowledge and understanding of applicant's rights under Sections 120.60(2) and 403.0876, Florida Statutes, waives the right to have the application approved or denied by the State of Florida Department of Environmental Protection within the 90 day time period prescribed by law. Said waiver is made freely and voluntarily by the applicant, with full knowledge, and without any pressure or coercion by anyone employed by the State of Florida Department of Environmental Protection.

This waiver shall expire on the 31 day of March 19 96.

The undersigned is authorized to make this waiver on behalf of the applicant.



Signature

Daryl H. Smith

Name (Please Type or Print)

SCS ENGINEERS

December 5, 1995
File No. 0995029.11

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



Subject: Southeast County Landfill Piezometer Depth Reduction Projections

Dear Patty:

On August 10, 1995, the Hillsborough County Department of Solid Waste (HCDSW) provided a waiver for the 90-day time limit to approve or deny the permit application by the Florida Department of Environmental Protection (FDEP). The waiver allowed an extension until December 31, 1995, to provide time for the HCDSW to lower the leachate depth in the Phase IV piezometer to conform to the values shown in the Leachate Management Plan (LMP).

The HCDSW has continued the removal of leachate from temporary pump station No. 3 (TPS-3). However, due to pumps malfunction, the HCDSW has not been able to maintain a continuous leachate removal operation from the temporary pump station No. 5 (TPS-5). The HCDSW must maintain a continuous leachate removal operation from the low area under Phase IV through TPS-5 in order to have an impact on the piezometer potentiometric level. Continuous leachate removal from TPS-5 began on November 21, 1995 at an average rate of 85,000 gallons per day. Since the continuous pumping began at TPS-5, leachate flow into TPS-3 has stopped and the potentiometric level in the piezometer has been lowered from 57-inches to 55-inches.

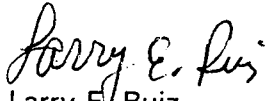
SCS believes that the change in the potentiometric level in the piezometer to 56-inches does not represent a significant change and that the current time period of continuous pumping (12 days) is insufficient to assess the performance of the existing removal system at TPS-5. However, the initial results are encouraging. In addition, we suspect the observed piezometric levels are in part due to the semi-confining conditions above and below the sand drainage layer (i.e., ash and phosphatic clay, respectively). As such, we are reluctant at this time to provide an estimate of the time required to bring the leachate depth to 24 inches above the clay liner. We recommend that an empirical approach (i.e., direct measurement) be taken over the next couple of months to assess the performance of the system before providing estimates of the quantity of leachate stored and time required to bring the leachate levels to those required by the LMP. We suggest that the HCDSW issue a second waiver extending the FDEP's 90-day time limit to approve or deny the permit application by another 90 days.



Patricia V. Berry
December 5, 1995
Page 2

Please do not hesitate to call if you have any questions.

Very truly yours,



Larry E. Ruiz
Senior Project Engineer



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

LER/RBG:ikm

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 12/6/95 Subject SE Lawton

Time 11 Am Permit No. _____

County Hills

MS Patty Brown Telephone No. _____

Representing Hills Co

[☒] Phoned Me [] Was Called [] Scheduled Meeting [] Unscheduled Meeting

Other Individuals Involved in Conversation/Meeting _____

Summary of Conversation/Meeting We discussed

Her recent fax correspondence

She said SCS does not know "when" for

A compliance projection. She said new pump
order has been cancelled.

I asked if by March the compliance
projection extends beyond June 1996,

if she would place ram covers over

Phase IV. She said that sounds reasonable.

I explained DEP will meet with her to
discuss all issues then call her.

(continue on another
sheet, if necessary)

Signature [Signature]

Title _____



Department of Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

SITE INSPECTION REPORT

NAME OF SITE: SE Landfill DATE: 11/21/95
SITE ADDRESS/LOCATION: South Hills County
CITY: _____ PERMIT #: _____

REASON FOR VISIT:

- COMPLIANCE INSPECTION ☒
- PERMITTING INSPECTION ☐
- COMPLAINT INVESTIGATION ☐

PERSONS PRESENT: Larry Ewing, Kim Ford
ETC

SUMMARY REPORT:

OBSERVED installation of new
control well for new pump and
set up of temporary pump.
City encouraged by DHEM.
Well returned to 13+ feet in
2 hours with pump off. New
temporary pump will operate
24 hr, 7 days (will return by coming
for (month \$1000)

VIOLATIONS NOTED: _____

DEP REPRESENTATIVE: [Signature]

HILLSBOROUGH COUNTY

Florida

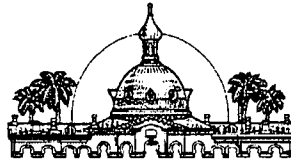
Office of the County Administrator
Daniel A. Kleman

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Edwin Hunzeker
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Jimmie Keel
Robert Taylor



November 16, 1995

RECEIVED
NOV 21 1995

Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

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

RE: Southeast County Landfill - Leachate Management

Dear Mr. Ford:

As previously indicated in the Department of Solid Waste's (DSW) November 9, 1995 correspondence, the DSW intends to install a pump control well in Phase IV of the Southeast County Landfill (Landfill) to eventually automate Temporary Pump Station No. 5 (TPS5) and allow it to cycle based on leachate flow rates. This well and controls will be utilized with the new pump and control relay which are being purchased for TPS5. Although the pump and control relay have not yet been purchased (as discussed in my November 1, 1995 letter), the DSW is proceeding with the construction of the pump control well to have it ready and available once the pump is purchased. The well construction is scheduled for Tuesday, November 21, 1995. The DSW is inviting the Department of Environmental Protection (DEP) to visit the Landfill and observe the installation of this well.

As you are aware, the DSW has been utilizing a temporary diesel pump at TPS5 since the permanent electric pump and control relay have not yet been purchased. It is necessary that the DSW oversee the temporary pump operation to ensure that the pump does not run dry and become damaged. Due to this manpower requirement, the DSW has been operating this pump on a daylight schedule only and observing the piezometer to determine the impact on the leachate depth. However, the inconsistent pumping schedule has had little to no affect on the leachate depth in the piezometer. Due to this fact and sharing the DEP's concern that the January waiver deadline is approaching, the DSW realizes it must increase the leachate removal rate from Phase IV. Therefore, the DSW is making the necessary staffing schedule changes to implement the 24 hour operation of the temporary pump at TPS5 beginning Friday, November 17, 1995.

The DSW intends to maintain this 24 hour pumping operation and have SCS Engineers reevaluate the predicted drawdown schedule for leachate depth based on the performance of the flow rate metered at TPS5 and the change in depth observed in the piezometer. The revised drawdown schedule will be submitted to the DEP on December 4, 1995 following the collection of over two weeks of data.

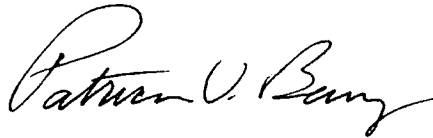
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Mr. Kim Ford
November 16, 1995
Page Two

In addition, the DSW wanted to notify the DEP that one of the three proposed flow meters has been installed in the line leading from TPS5 and Pump Station No. 3 to the main pump station. The DSW has been monitoring the flow meter on a daily basis by taking a reading in the morning and a second reading the following morning and comparing the gallon totals for the two days. The flow meters for the plant loading station and effluent basin loading station will be installed before the end of the month as will the settling plate in Phase VI. As discussed with SCS Engineers, the pump control well that will be constructed on November 21, 1995 will be used in lieu of the planned settling plate for Phase IV. The elevations of the well will be monitored and reported to the DEP on a quarterly basis as indicated in the Leachate Management Plan.

Should the DEP have any other questions at this time, please advise. We look forward to seeing you at the Landfill on Tuesday.

Sincerely,

A handwritten signature in black ink, appearing to read "Patricia V. Berry". The signature is fluid and cursive, with the first name "Patricia" being more prominent than the last name "Berry".

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

Attachments

xc: Matt Matthews, DSW
Steve Hamilton, SCS
Steve Morgan, DEP
Paul Schipfer, EPC

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 11/17/95

Subject SE C-

Time 10am

Permit No. _____

County Hills

M/S Patty Barry

Telephone No. _____

Representing Hill Co

[] Phoned Me [☒] Was Called [] Scheduled Meeting [] Unscheduled Meeting

Other Individuals Involved in Conversation/Meeting _____

Summary of Conversation/Meeting _____

WE DISCUSSED RECORDS KEEPING FOR
PERFORMANCE EVALUATION FOR NEW SECTION LINE.
INTERESTED:

① RECORDS FOR EACH START/STOP TIME FOR THE PUMP
(CONNECTED TO THE NEW SECTION LINE (24 HRS/DAY)
(TO DETERMINE CHANGE IN RECHARGE RATE INTO HEADER LINE)

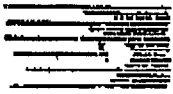
② DIRECTION OF FLOW FOR EACH PUMP TIPS 3 & THE
NEW PUMP ON THE SECTION LINE (TO COMPARE THE
PERFORMANCE OF THE NEW SECTION LINE VS TIPS 3)

③ REVISED SPREADSHEETS TO SHOW ② FOR NOVEMBER
PATTY SAID OK

(continue on another
sheet, if necessary)

Signature [Signature]

Title _____

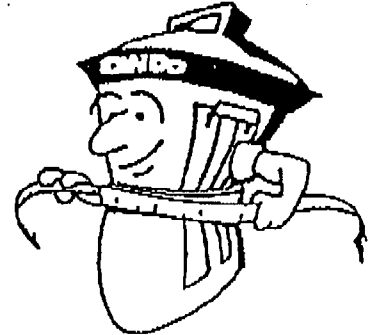


Hillsborough County

Department of Solid Waste * P.O. Box 1110
Tampa, FL 33601

Sender's Telephone Number: 276-2908

24-Hour FAX Line — (813) 276-2960



"Together We CAN-DO It"

DATE: Nov. 17, 1995

TO: Kim Ford / Bob Butera, DEP

FAX: 744-6125 SUBJECT: SELF - leachate mgmt.

FROM: P.V. Berry

COMMENTS (If Any): As we discussed. Call me with
any questions. Patty

Total Pages Sent (including cover sheet) 3

Serving our customers with:

Residential & Commercial Collection Services • Curbside Recycling • Resource Recovery
Household Chemical Collection • Adopt-A-Road & Adopt-A-Shore
Environmental Enforcement • Yard & Wood Waste Processing • Landfill Services
Community Collection Centers • Environmental Testing

HILLSBOROUGH COUNTY

Florida

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Robert Taylor

November 16, 1995

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

RE: Southeast County Landfill - Leachate Management

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As you are aware, the DSW has been utilizing a temporary diesel pump at TPS5 since the permanent electric pump and control relay have not yet been purchased. It is necessary that the DSW oversee the temporary pump operation to ensure that the pump does not run dry and become damaged. Due to this manpower requirement, the DSW has been operating this pump on a daylight schedule only and observing the piezometer to determine the impact on the leachate depth. However, the inconsistent pumping schedule has had little to no affect on the leachate depth in the piezometer. Due to this fact and sharing the DEP's concern that the January waiver deadline is approaching, the DSW realizes it must increase the leachate removal rate from Phase IV. Therefore, the DSW is making the necessary staffing schedule changes to implement the 24 hour operation of the temporary pump at TPS5 beginning Friday, November 17, 1995.

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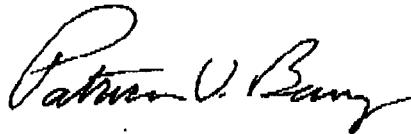
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Mr. Kim Ford
November 16, 1995
Page Two

In addition, the DSW wanted to notify the DEP that one of the three proposed flow meters has been installed in the line leading from TPS5 and Pump Station No. 3 to the main pump station. The DSW has been monitoring the flow meter on a daily basis by taking a reading in the morning and a second reading the following morning and comparing the gallon totals for the two days. The flow meters for the plant loading station and effluent basin loading station will be installed before the end of the month as will the settling plate in Phase VI. As discussed with SCS Engineers, the pump control well that will be constructed on November 21, 1995 will be used in lieu of the planned settling plate for Phase IV. The elevations of the well will be monitored and reported to the DEP on a quarterly basis as indicated in the Leachate Management Plan.

Should the DEP have any other questions at this time, please advise. We look forward to seeing you at the Landfill on Tuesday.

Sincerely,



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

Attachments

xc: Matt Matthews, DSW
Steve Hamilton, SCS
Steve Morgan, DEP
Paul Schipfer, EPC

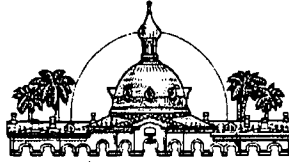
HILLSBOROUGH COUNTY

Florida

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Senior Assistant County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Cretta Johnson
Jimmie Keel
Robert Taylor

November 9, 1995

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

RECEIVED
NOV 16 1995

Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

RE: Southeast County Landfill - Leachate Management

Dear Mr. Ford:

In accordance with the Hillsborough County Department of Solid Waste's (DSW) Leachate Management Plan for the Southeast County Landfill (Landfill), the DSW is providing the Landfill's Water Balance Report Form for the month of October 1995. In addition, the DSW is providing the October 1995 field data forms for the Landfill, the daily leachate and collection system evaluation reports, the treatment plant operator's form, and the Year-to-Date Leachate Balance Summary. As requested during our recent telephone conversation, the DSW is also providing the hand written data through November 8, 1995.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as an update on the DSW's leachate management efforts for the Landfill. This information is being provided in response to both the permitting and enforcement issues at hand.

As indicated on the Temporary Pump Station No. 5 drawings, the DSW intends to install a pump control well to include electrodes with cables to connect to the control panel for the new pump. The pump control well will be utilized to automate Temporary Pump Station No. 5 and allow it to cycle based on leachate flow rates. This well and controls will be utilized with the new pump and intrinsically safe control relay which are being purchased for Temporary Pump Station No. 5. Although the pump and control relay have not yet been purchased (as discussed in my November 1, 1995 letter), the DSW is proceeding with the construction of the pump control well. It is anticipated that the well construction will be scheduled for next Wednesday or Thursday, November 15 or 16, 1995. The DSW is inviting the DEP to visit the Landfill and observe the installation of this well and meet with the DSW and SCS Engineers to discuss the status of the County's leachate management efforts. Once a firm date and time is scheduled, the DSW will notify the DEP.

Mr. Kim Ford
November 9, 1995
Page Two

RECEIVED
NOV 16 1995

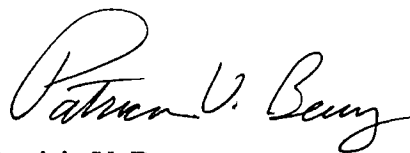
Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

To clarify the DSW's November 1, 1995 correspondence referencing pumping limitations, the DSW offers the following information.

While the DSW has been working to purchase the pump and control panel designated for the Temporary Pump Station No. 5, the DSW has been utilizing pumps from the DSW's and County's pump inventory. During this process, several pumps have broken down, requiring the DSW to substitute pumps while the other pump was in the shop. However, even with the pump problems, the DSW has been pumping from Temporary Pump Station No. 5, in addition to continuing to pump from Pump Station No 3. Since the current system is not automated, Temporary Pump Station No. 5 is only being operated during daylight hours. However, Pump Station No. 3 operates around the clock removing leachate from the Landfill. As indicated in the DSW's November 1, 1995 letter, the DSW most recently attached a six inch pump to the system anticipating that the pump would be able to run continuously at an idle speed. However, due to the leachate flow rate within the collection system, the pump is also cycling and is unable to run 24 hours a day without being manned. The limitation referenced in the DSW's November 1, 1995 correspondence pertains to hours of pumping and pump breakdowns. With the installation of the new pump, control panel and pump control well, the system will be fully automated and will be able to operate 24 hours a day thereby removing leachate at a more constant rate.

Should the DEP have any other questions at this time, please advise. The DSW will notify the DEP of the upcoming well construction date once it is finalized.

Sincerely,



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

Attachments

xc: Matt Matthews, DSW
Steve Hamilton, SCS
Steve Morgan, DEP
Paul Schipfer, EPC

**1995 YEAR TO DATE LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA**

Month	Rainfall (in.)	Leachate Arriving at LTRF	Leachate/Effluent Leaving LTRF					Inflow/Outflow Balance For LTRF		
		Leachate Pumped to LTRF (gal.)	Total Leach. Hauled From LTRF (gal.)	Total Eff. Hauled (gal.)	Leachate Rec. From LTRF (gal.)	Effluent Rec. (gal.)	Effluent Sprayed (gal.)	Total Inflow To LTRF (gal.)	Total Outflow From LTRF (gal.)	Balance For Month (gal.)
Jan	4.60	3,104,000	3,166,000	(1) 0	0	0	0	3,104,000	3,166,000	(62,000)
Feb	2.40	4,063,000	2,942,000	(1) 0	0	0	650,000	4,063,000	4,062,000	1,000
March	1.90	3,467,000	2,320,000	(1) 0	0	113,000	932,000	3,467,000	3,705,000	(238,000)
April	1.60	2,625,000	1,124,000	393,000	60,000	0	700,000	2,625,000	2,528,000	97,000
May	2.40	2,331,000	865,725	652,689	0	0	1,000,270	2,331,000	2,255,439	75,561
June	8.30	2,369,000	904,543	758,000	0	0	568,520	2,369,000	2,252,277	116,723
July	17.90	2,296,000	845,087	1,185,000	0	0	319,750	2,296,000	2,236,821	59,179
August	15.80	2,940,000	1,620,842	1,050,000	0	0	398,520	2,940,000	2,997,072	(57,072)
September	8.80	2,939,000	1,696,897	783,000	0	25,500	507,500	2,939,000	3,168,909	(229,909)
October	5.40	3,130,000	972,984	865,000	0	76,500	600,480	3,130,000	2,763,129	366,871
YTD Total	69.10	29,264,000	16,458,078	5,686,689	60,000	215,000	5,677,040	29,264,000	29,134,647	129,353

Notes:

1. Effluent quantities not measured separately.
2. If the effluent bypass is ever used to pump effluent back to the LTRF, this table must be modified.

LEACHATE WATER BALANCE REPORT FORM

October 1995

SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FL

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI
Day	Area (acres)			Rainfall (in.)	Depth in Effluent Pond (in.)	Est. Depth Over Liner (in.)	Est. Landfill Storage (gal.)	Leachate Pumped to LTRF (gal.)	Leachate in 500K Tank (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Recirculation (gal.)	Effluent Pond Storage (gal.)	Effluent Sprayed (gal.)	Effluent Recirculation (gal.)	Total Effluent Hauled (gal.)	Landfill Evapor. (gal.)
	final	active	int.														
1	23.2	5.0	92.2	0.0	NR	NR	NR	69,000	216,000	55,040	0	0	NR	0	0	0	0
2	23.2	5.0	92.2	0.0	24.0	59.0	10,112,000	132,000	230,000	55,100	62,047	0	75,000	42,900	17,000	18,000	48,000
3	23.2	5.0	92.2	0.1	24.0	60.0	10,576,000	93,000	202,000	55,305	66,928	0	75,000	42,900	0	18,000	35,000
4	23.2	5.0	92.2	0.6	26.0	61.0	11,039,000	68,000	202,000	55,200	12,431	0	81,000	0	0	68,000	0
5	23.2	5.0	92.2	0.2	25.0	60.0	10,576,000	125,000	259,000	55,405	12,295	0	78,000	0	0	62,000	0
6	23.2	5.0	92.2	1.8	26.0	60.0	10,576,000	61,000	259,000	54,820	6,000	0	81,000	0	0	74,000	0
7	23.2	5.0	92.2	1.0	25.0	60.0	10,576,000	84,000	288,000	55,630	0	0	78,000	0	0	37,000	0
8	23.2	5.0	92.2	0.0	NR	NR	NR	NR	NR	54,920	0	0	NR	0	0	0	0
9	23.2	5.0	92.2	0.0	28.0	59.0	10,112,000	230,000	345,000	55,170	62,478	0	88,000	42,900	0	12,000	35,0
10	23.2	5.0	92.2	0.5	29.0	59.0	10,112,000	45,000	317,000	55,230	18,500	0	92,000	0	0	61,000	0
11	23.2	5.0	92.2	0.4	30.0	59.0	10,112,000	171,000	345,000	55,320	87,351	0	95,000	42,900	0	12,000	35,000
12	23.2	5.0	92.2	0.0	27.0	59.0	10,112,000	<i>70,000</i>	202,000	55,275	67,786	0	85,000	40,600	0	6,000	33,000
13	23.2	5.0	92.2	0.0	28.0	59.0	10,112,000	142,000	202,000	55,230	86,467	0	88,000	20,400	0	6,000	16,000
14	23.2	5.0	92.2	0.2	28.0	59.0	10,112,000	33,000	173,000	55,620	6,200	0	88,000	0	8500	74,000	7,000
15	23.2	5.0	92.2	0.0	NR	NR	NR	NR	NR	59,970	0	0	NR	0	0	0	0
16	23.2	5.0	92.2	0.0	24.0	59.0	10,112,000	314,000	288,000	60,060	78,738	0	75,000	37,110	8500	12,000	37,000
17	23.2	5.0	92.2	0.0	27.0	59.0	10,112,000	<i>70,000</i>	173,000	60,370	0	0	85,000	0	0	38,000	0
18	23.2	5.0	92.2	0.0	30.0	59.0	10,112,000	128,000	230,000	52,850	17,200	0	95,000	0	8500	74,000	7,000
19	23.2	5.0	92.2	0.6	28.0	59.0	10,112,000	60,000	230,000	60,340	0	0	88,000	0	0	37,000	0
20	23.2	5.0	92.2	0.0	28.0	60.0	10,576,000	127,000	230,000	60,030	67,167	0	88,000	42,170	8500	19,000	41,000
21	23.2	5.0	92.2	0.0	24.0	59.0	10,112,000	31,000	202,000	60,110	0	0	75,000	0	0	56,000	0
22	23.2	5.0	92.2	0.0	NR	NR	NR	NR	NR	59,840	0	0	NR	0	0	0	0
23	23.2	5.0	92.2	0.0	28.0	59.0	10,112,000	374,000	374,000	60,190	80,732	0	88,000	42,900	0	12,000	35,000
24	23.2	5.0	92.2	0.0	27.0	57.0	9,185,000	<i>70,000</i>	202,000	60,020	31,048	0	85,000	37,600	0	25,000	30,000
25	23.2	5.0	92.2	0.0	20.0	58.0	9,649,000	88,000	173,000	60,260	56,146	0	61,000	42,900	8500	25,000	42,000
26	23.2	5.0	92.2	0.0	27.0	57.0	9,185,000	116,000	173,000	59,720	55,983	0	85,000	42,000	0	19,000	34,000
27	23.2	5.0	92.2	0.0	24.0	56.0	8,721,000	50,000	144,000	60,080	18,697	0	75,000	36,000	0	25,000	29,000
28	23.2	5.0	92.2	0.0	24.0	59.0	10,112,000	63,000	144,000	62,900	0	0	75,000	0	0	31,000	0
29	23.2	5.0	92.2	0.0	NR	NR	NR	NR	NR	59,480	0	0	NR	0	0	0	0
30	23.2	5.0	92.2	0.0	32.0	58.0	9,649,000	260,000	230,000	60,490	53,809	0	102,000	42,900	8500	25,000	42,000
31	23.2	5.0	92.2	0.0	30.0	58.0	9,649,000	56,000	173,000	60,170	24,981	0	95,000	44,300	8500	19,000	43,0
Total				5.40	693.0	1531.0	261,525,000	3,130,000	6,206,000	1,790,145	972,984	0	2,176,000	600,480	76,500	865,000	549,000
Average				0.17	26.7	58.9	10,059,000	101,000	200,000	58,000	46,000	0	84,000	40,000	10,000	33,000	32,000

10-95BAL.WB2 Revised by RLC 11/8/95

Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured. Column III, Trace is less than 0.01 inches and is not included in total.
4. Column V, estimated from depth in Phase IV Piezometer.
5. Column VI, estimated from Column V and approximate volume with top of clay elevation at 117.0 feet.
6. Column VII, calculated from Column IX + Column X + Change in Storage of 500,000 gal. tank.
7. Column VIII, calculated from depth in 500,000 gal. leachate tank.
8. Columns IX and XIII, quantities from flow meters.
9. Columns X, XI, XIV, and XV, quantities calculated from truck weight.
10. Column XVI, 80.8% of the daily values from Columns XI, XIII and XIV.
11. Values in italic are substitute for missing data and are based on averaged values.

FIELD DATA ENTRY FORM
October 1995
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FL

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
Day	Active Area (ac.)	Depth in Effl. Pond (in.)	Stormwater In Sump No. 4 (in.)	Phase III Riser (in.)	Phase IV Riser (in.)	Phase IV Piezometer (in.)	Rainfall (in.)	Leachate Hauled Contractor (gal.)	Leachate Hauled County (gal.)	Leachate Recirc. (gal.)	Effluent Hauled Contractor (gal.)	Effluent Hauled County (gal.)	Effluent Recirc. (gal.)	Leachate Treated at LTRF (gal.)	Effluent Sprayed (gal.)	Depth in 500K Tank (ft.)
1	5.0	NR	NR	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55040.0	0.0	7.5
2	5.0	24.0	62.0	3.0	16.0	59.0	0.0	56047.0	6000.0	0.0	18400.0	0.0	17000.0	55100.0	42900.0	8.0
3	5.0	24.0	62.0	3.0	16.0	60.0	0.1	49484.0	17444.0	0.0	18325.0	0.0	0.0	55305.0	42900.0	7.0
4	5.0	26.0	64.0	3.0	16.0	61.0	0.6	6134.0	6297.0	0.0	67931.0	0.0	0.0	55200.0	0.0	7.0
5	5.0	25.0	NR	3.0	15.0	60.0	0.2	12295.0	0.0	0.0	61915.0	0.0	0.0	55405.0	0.0	9.0
6	5.0	26.0	NR	4.0	15.0	60.0	1.8	0.0	6000.0	0.0	74332.0	0.0	0.0	54820.0	0.0	9.0
7	5.0	25.0	NR	6.0	17.0	60.0	1.0	0.0	0.0	0.0	36744.0	0.0	0.0	55630.0	0.0	10.0
8	5.0	NR	NR	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	54920.0	0.0	NR
9	5.0	28.0	53.0	3.0	16.0	59.0	0.0	62478.0	0.0	0.0	12222.0	0.0	0.0	55170.0	42900.0	12.0
10	5.0	29.0	71.0	3.0	19.0	59.0	0.5	18500.0	0.0	0.0	61366.0	0.0	0.0	55230.0	0.0	11.0
11	5.0	30.0	NR	7.0	16.0	59.0	0.4	68329.0	19022.0	0.0	12206.0	0.0	0.0	55320.0	42900.0	12.0
12	5.0	27.0	69.0	6.0	29.0	59.0	0.0	67786.0	0.0	0.0	6100.0	0.0	0.0	55270.0	40600.0	7.0
13	5.0	28.0	70.0	7.0	14.0	59.0	0.0	73932.0	12535.0	0.0	6100.0	0.0	0.0	55230.0	20400.0	7.0
14	5.0	28.0	70.0	3.0	16.0	59.0	0.2	6200.0	0.0	0.0	73928.0	0.0	8500.0	55620.0	0.0	6.0
15	5.0	NR	NR	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	59970.0	0.0	NR
16	5.0	24.0	70.0	3.0	17.0	59.0	0.0	62038.0	16700.0	0.0	12300.0	0.0	8500.0	60060.0	37110.0	10.0
17	5.0	27.0	70.0	7.0	18.0	59.0	0.0	0.0	0.0	0.0	37525.0	0.0	0.0	60370.0	0.0	6.0
18	5.0	30.0	70.0	6.0	17.0	59.0	0.0	0.0	17200.0	0.0	74136.0	0.0	8500.0	52850.0	0.0	8.0
19	5.0	28.0	71.0	5.0	16.0	59.0	0.6	0.0	0.0	0.0	37409.0	0.0	0.0	60340.0	0.0	8.0
20	5.0	28.0	71.0	3.0	15.0	60.0	0.0	55667.0	11500.0	0.0	18612.0	0.0	8500.0	60030.0	42170.0	8.0
21	5.0	24.0	71.0	3.0	15.0	59.0	0.0	0.0	0.0	0.0	55734.0	0.0	0.0	60110.0	0.0	7.0
22	5.0	NR	NR	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	59840.0	0.0	NR
23	5.0	28.0	69.0	4.0	15.0	59.0	0.0	61846.0	18886.0	0.0	12300.0	0.0	0.0	60190.0	42900.0	13.0
24	5.0	27.0	68.0	3.0	18.0	57.0	0.0	31048.0	0.0	0.0	24829.0	0.0	0.0	60020.0	37600.0	7.0
25	5.0	20.0	69.0	4.0	16.0	58.0	0.0	37167.0	18979.0	0.0	24600.0	0.0	8500.0	60260.0	42900.0	6.0
26	5.0	27.0	69.0	3.0	16.0	57.0	0.0	43330.0	12653.0	0.0	18500.0	0.0	0.0	59720.0	42000.0	6.0
27	5.0	24.0	60.0	3.0	15.0	56.0	0.0	12340.0	6357.0	0.0	24673.0	0.0	0.0	60080.0	36000.0	5.0
28	5.0	24.0	70.0	3.0	9.0	59.0	0.0	0.0	0.0	0.0	31168.0	0.0	0.0	62900.0	0.0	
29	5.0	NR	NR	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	59480.0	0.0	NR
30	5.0	32.0	68.0	5.0	16.0	58.0	0.0	37309.0	16500.0	0.0	24868.0	0.0	8500.0	60490.0	42900.0	8.0
31	5.0	30.0	59.0	4.0	17.0	58.0	0.0	24981.0	0.0	0.0	18500.0	0.0	8500.0	60170.0	44300.0	6.0

Notes:

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

**DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL
(Month/Year) Oct. 95**

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

Comments/Remedial Action: _____

Prepared by: M. Matthews

**DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM
EVALUATION REPORT
SOUTHEAST COUNTY LANDFILL**
(Month/Year) Oct. 1995

Action	Date															
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Piezometer Phase IV																
Low Level Operation, depth less than or equal to 12 inches.					NR	NR						NR	NR			
Normal Operation, depth greater than 12 inches and less than or equal to 24 inches.																
High Level Operation, depth greater than 24 inches and less than or equal to 30 inches. Increase leachate removal and contact supervisor immediately.	✓	✓	✓	✓			✓	✓	✓	✓	✓			✓	✓	
Sump No. 4 Phase VI (Stormwater)																
Normal Operation, level is greater than or equal to 6 inches above level measured in Phase IV piezometer.	✓	✓	✓	✓	NR	NR	✓	✓	✓	✓	✓	NR	NR	✓	✓	
If level is more than 6 inches below the level measure in Phase IV piezometer, stop pumping to Basin D.																
5,000 Gallon Tank at LTRF																
Normal Operation.		✓	✓	✓	NR	NR		✓	✓	✓		NR	NR	✓	✓	
If level is greater than 11 feet, increase treatment, hauling, or recirculation.							✓									
If level is less than 6 feet, decrease or stop hauling, recirculation.	✓										✓					
Effluent Pond																
Normal Operation.	✓	✓	✓	✓	NR	NR	✓	✓	✓	✓	✓	NR	NR	✓	✓	
If level is 6 inches or less, stop irrigation, recirculation, hauling.																
If level is greater than 4 feet, increase irrigation, recirculation, hauling.																
Observed runoff of effluent to stormwater basins?																
No.	✓	✓	✓	✓	NR	NR	✓	✓	✓	✓		NR	NR	✓	✓	
If yes, contact supervisor immediately. Stop spray irrigation. Identify Basin and type.																
Runoff Type 1 = Severe 2 = Moderate 3 = Minor																
To Basin A, B, C, D																

Comments/Remedial Action: _____

Prepared by: M. Matthews

LEACHATE DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Oct. 95

Date	Active Area (acres)	(1) Phase IV Piezometer (inches)	Station No. 3 (inches)	Phase IV Riser (inches)	Phase III Riser (inches)	Station No. 4 (inches)	Depth in 500K Tank (feet)	Storage 500K Tank (gallons)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		NR	NR	NR	NR	NR	NR	NR	NR	NR	—	0
2		59	12	11e	3	62	8	240K	56,047	6,000	—	0
3		60	12	11e	3	62	7	210K	49,484	17,444	—	.1
4		61	12	11e	3	64	7	210K	6,134	6,297	—	.6
5		60	12	15	3	Pumping	9	270K	12,295	—	—	.2
6		60	12	15	4	Pumping	9	270K	—	6,000	—	1.8
7		60	12	17	6	Pumping	10	300K	—	—	—	1.0
8		NR	NR	NR	NR	NR	NR	NR	—	—	—	0
9		59	12	11e	3	53	12	360K	62,478	—	—	.0
10		59	12	19	3	71	11	330K	18,500	—	—	.5
11		59	12	11e	7	Pumping	12	360K	68,329	19,022	—	.4
12		59	12	29	6	69	7	210K	67,786	—	—	0
13		59	12	14	7	70	7	210K	73,932	12,535	—	0
14		59	12	11e	3	70	6	180K	6,200	—	—	.2
15		NR	NR	NR	NR	NR	NR	NR	—	—	—	0
16		59	12	17	3	70	10	300K	62,038	16,700	—	0
Leachate Hauled Subtotal												

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

Comments: _____

Prepared by: M. Matthews

LEACHATE DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Oct. 95

Date	Active Area (acres)	(1) Phase IV Piezometer (inches)	Station No. 3 (inches)	Phase IV Riser (inches)	Phase III Riser (inches)	Station No. 4 (inches)	Depth in 500K Tank (feet)	Storage 500K Tank (gallons)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
17		59	12	18	7	70	6		—	—	—	0
18		59	12	17	6	70	8	240K	—	17,200	—	0
19		59	12	16	5	71	8	240K	—	—	—	.6
20		60	12	15	3	71	8	240K	55,667	11,500	—	0
21		59	12	15	3	71	7	210K	—	—	—	0
22		NR	NR	NR	NR	NR	NR	NR	—	—	—	0
23		59	12	15	4	69	13	390K	61,846	18,886	—	0
24		57	12	18	3	68	7	210K	31,048	—	—	0
25		58	12	16	4	69	6	180K	37,167	18,979	—	0
26		57	12	16	3	69	6	180K	43,330	12,653	—	0
27		56	12	15	3	60	5	150K	12,340	6,357	—	0
28		59	12	9	3	70	5	150K	—	—	—	0
29		NR	NR	NR	NR	NR	NR	NR	—	—	—	0
30		58	12	16	5	68	8	240K	37,309	16,500	—	0
31		58	12	17	4	59	6	180K	24,981	—	—	0
Leachate Hauled Subtotal												

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

Comments: _____

Leachate Hauled Month Total: _____

Prepared by: M. Matthews

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Oct. 95

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
1	NR	55,040	—	—	—	—	55,040	—	—
2	24	55,100	42,900	18,400	—	17,000	12,200	—	N
3	24	55,305	42,900	18,325	—	—	12,405	—	N
4	26	55,200	—	67,931	—	—	55,200	—	—
5	25	55,405	—	61,915	—	—	55,405	—	—
6	26	54,820	—	74,332	—	—	54,820	—	—
7	25	55,630	—	36,744	—	—	55,630	—	—
8	NR	54,920	—	—	—	—	54,920	—	—
9	28	55,170	42,900	12,222	—	—	12,270	—	N
10	29	55,230	—	61,366	—	—	55,230	—	—
11	30	55,320	42,900	12,206	—	—	12,420	—	N
12	27	55,270	40,600	6,100	—	—	14,670	—	N
13	28	55,230	20,400	6,100	—	—	34,830	—	N
14	28	55,620	—	75,928	—	8,500	55,620	—	—
15	NR	59,970	—	—	—	—	59,970	—	—
16	24	60,060	37,110	12,300	—	8,500	22,950	—	N

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

Comments: _____

Prepared by: M. Matthews

EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL
 (Month/Year) Oct. 95

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
17	27	60,370	—	37,525	—	—	60,370	—	—
18	30	52,850	—	74,136	—	8,500	52,850	—	—
19	28	60,340	—	37,409	—	—	60,340	—	—
20	28	60,030	42,170	18,612	—	8,500	17,860	—	N
21	24	60,110	—	55,734	—	—	60,110	—	—
22	NR	59,840	—	—	—	—	59,840	—	—
23	28	60,190	42,900	12,300	—	—	17,290	—	N
24	27	60,020	37,600	24,829	—	—	22,420	—	N
25	20	60,260	42,900	24,600	—	8,500	17,360	—	N
26	27	59,720	42,000	18,500	—	—	17,720	—	N
27	24	60,080	36,000	24,673	—	—	24,080	—	N
28	24	62,900	—	31,168	—	—	62,900	—	—
29	NR	59,480	—	—	—	—	59,480	—	—
30	32	60,490	42,900	24,868	—	8,500	17,590	—	N
31	30	60,170	44,300	18,500	—	8,500	15,870	—	N

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

Comments: _____

Prepared by: M. Matthews

DAILY LEACHATE COLLECTION AND RECOVERY SYSTEM

EVALUATION REPORT

SOUTHEAST COUNTY LANDFILL

(Month/Year) November 1995

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

Comments/Remedial Action:

Prepared by: M. Matthews

**EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL**

(Month/Year) Nov. 1995

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)
				Contractor (gallons)	County (gallons)				
1	34	44,640	42,900	37,395		8,500	1,740		
2	36	60,130	—	37,456			60,130		
3	37	60,040	42,900	43,437			17,140		
4	24	60,150	42,900	30,853			17,250		
5	NR	59,900	—	—	—		59,900		
6	42 (EST)	42,810	42,900	30,734			—		
7	36	60,590	42,900	30,742			17,690		
8	24	55,020	—	68,075			55,020		
9	31								
10									
11									
12									
13									
14									
15									
16									

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

Comments: 11/2, 8, 9 - No Effluent Sprayed due To Rain

Prepared by: Jol. Matthews

LEACHATE DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) Nov. 1995

Date	Active Area (acres)	(1) Phase IV Piezometer (inches)	Station No. 3 (inches)	Phase IV Riser (inches)	Phase III Riser (inches)	Station No. 4 (inches)	Depth in 500K Tank (feet)	Storage 500K Tank (gallons)	Leachate Hauled		Leachate Rectification (gallons)	Rainfall (inches)
									Contractor (gallons)	County (gallons)		
1		59	12	16	3	75	5	150 K	—			1.9
2		58	12	15	4	74	7	210 K	—			.0
3		59	12	15	3	74	7	210 K	18,647			.0
4		59	12	17	3	72	9	270 K	—			.0
5		NR	NR	NR	NR	NR	NR	—	—			.0
6		59	12	22	6	72	10	300 K	31,168	19,167		.0
7		59	12	13	3	71	9	270 K	31,070			.0
8		58	12	16	4	84	9	270 K	—			.4
9		59	12	16	5	78	9	270 K				1.5
10												
11												
12												
13												
14												
15												
16												
Leachate Hauled Subtotal:												

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

Comments: CONTRACTOR AND COUNTY TRUCKS HAULING EFFLUENT due TO LOW TANK
DEPTH AND INCREASED LEACHATE TREATED

Prepared by: M. Matthews

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 11/15/95 Subject SE L²
Time 3:15 Permit No. _____
County Hill
M R Larry Roll Telephone No. 6210080
Representing SES

[] Phoned Me [☒] Was Called [] Scheduled Meeting [] Unscheduled Meeting
Other Individuals Involved in Conversation/Meeting _____

Summary of Conversation/Meeting _____

WE DISCUSSED PROGRESS ON ~~CONCRETE~~ REMEDIATION
LARRY WILL SEND A SITEPLAN FOR DRILLING
INSTALLATION FOR FLOAT SWITCH FOR NEW PUMP
AND BY DEC 1ST WILL PROVIDE A LETTER WITH:
① PERFORMANCE EVALUATION FOR NEW SYSTEM
② PROJECTION FOR COMPLIANCE

(continue on another
sheet, if necessary)

Signature [Signature]
Title _____

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 11/14/95 Subject SE LF
Time 2:30 Permit No. _____
County Hills
MR CARLY RUIZ Telephone No. 621 0080
Representing SES

[☒ Phoned Me [] Was Called [] Scheduled Meeting [] Unscheduled Meeting
Other Individuals Involved in Conversation/Meeting _____

Summary of Conversation/Meeting _____

WE DISCUSSED DRILLING AND INSTALLATION OF
FLOAT SWITCH FOR NEW PUMP

I ASKED WHY WE SHOULD EXPECT TO OBSERVE
URACATE OVER THE HEADLINE AND SUGGESTED

ALL PUMPS BE TURNED OFF PRIOR TO DRILLING

CARLY SAID HE WILL FIND OUT WHAT DAY TO DRILL

AND WILL CONSIDER TURNING PUMPS OFF FOR

24 HR PRIOR TO DRILLING

CARLY SAID HE WOULD PROVIDE SPREADSHEET FOR

SURVEY TOP OF CITY AND PLANS TO INSTALL SETTLEMENT

PLATE BY NOV. 30

(continue on another
sheet, if necessary)

Signature [Signature]

Title _____

SE Hills Permit
file



GREAT MONUMENT CONSTRUCTION COMPANY
MECHANICAL CONTRACTORS

D.E.P.

NOV 13 1995

SOUTHWEST DISTRICT
TAMPA

November 9, 1995

To: Hillsborough County Department Of Solid Waste
24th Floor
601 E. Kennedy Blvd.
Tampa, Florida 33601

Att: Mr. John Johnson

Re: Leachate Treatment And Reclamation Facility

Subject: Monitoring Well TH-36

Dear Mr. Johnson:

On October 27, 1995, representatives of GMCC and Diversified Drilling Corporation inspected well TH-36. Mr. James Clayton with Hillsborough County Environmental Services witnessed the inspection.

Listed below are the procedures and findings of the inspection:

* The 2" pvc riser pipe installed by county forces was noticeably out of plumb. Measurements showed the pipe to be 2" out of plumb West to East and 7/8" and South to North.

* An attempt was made to lower a 2" stainless steel bailer into the well, the bailer stopped approximately 4' down.

* The soil was excavated from around the well to where the county had installed a coupling. It was observed that the coupling joint had not been sealed properly.

* The 2" riser pipe was staightened as much as possible by gently pulling and holding. The 2" bailer was lowered into the well. The bailer was inserted and retrieved from the well a total of three (3) times without problem. The well yielded water.

* Before backfilling, the area around the well was probed to a depth of approximately six (6) feet. No grout or cement was found.

* The area was backfilled, county forces locked the well and the cover pipe was placed over the well.

Page 2
November 9, 1995
Mr. John Johnson

CONCLUSION:

The problems experienced by County forces with sampling the well in November, 1994 was caused by the improperly installed riser pipe. Reference Mr. James Clayton's November 17, 1994 memorandum, a copy is attached as exhibit "A".

The crooked riser pipe and unsealed joint created the county's problems with the well.

Therefore, none of GMCC's activities with the well have harmed the well. This includes our initial repair on January 6, 1994, Re: Mr. Clayton's memorandum mentioned earlier.

We cite the following chain of events for this issue:

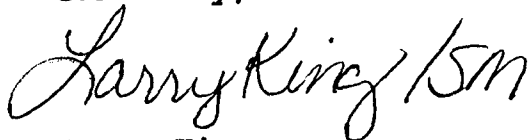
- * In September, 1993, GMCC modified well TH-36 to a ground level well in accordance with contract drawing C-9.
- * At the October 1, 1993 progress, the County asked GMCC to contact Mr. Clayton regarding the modifications made to the well.
- * A phone discussion with Mr. Clayton revealed that the county did not have monitoring equipment to test ground level wells. The well must be raised.
- * At the October 29, 1993 progress meeting, GMCC was advised by SCS engineers that the well needs to be retrofitted and a redesign was forthcoming.
- * On January 6, 1994, the well cover was broken off by a concrete truck. GMCC repaired the well the same day.
- * On January 26, 1994, County workers cut the well cover from well, extended the well above grade and locked it.
- * On May 31, 1994, County workers made repairs to the well upon discovery that the well was damaged by an unknown party over the Memorial holiday period from May 28th through May 30th, 1994. GMCC was not on site during that period.
- * The County's monitoring report for the sample date of August 22, 1994 shows no problems with the well.
- * Mr. Clayton's November 14, 1994 memorandum states that GMCC's repairs had no effect on the ground water.

Page 3
November 9, 1995
Mr. John Johnson

GMCC does not consider this item as punch list work. We are attaching an inspection report from Diversified Drilling Corporation identified as exhibit "B". Diversified has also offered a recommended repair. Should the county agree with the repair scope, GMCC will perform the work as a change order for \$1350.50.

If you have any questions, please call.

Cordially,

A handwritten signature in cursive script that reads "Larry King / SM".

Larry King
Project Manager

LAK:kcs

cc: W. Frye
Allison Amram-FDEP
COR-67

HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Frederick B. Karl

AD HOC COUNTY COMMISSIONERS

Ayllis Busansky
Joe Chullura
Lydia Miller
Jim Newman
Jan Piner
Ed Turanchuk
Sandra Wilson



MEMORANDUM

Senior Assistant County Administrator
Parricia Bean

Assistant County Administrators
Edwin Hunsaker
Cresta Johnson
Jimmie Keel
Robert Taylor

DATE: November 17, 1994

TO: Patty Berry, Executive Manager
Department of Solid Waste

FROM: James G. Clayton, Environmental Supervisor *JAC*
Department of Solid Waste

SUBJECT: Monitor Well TH-36

During the November, 1994 sampling event at the Southeast County Landfill, the sampling team experienced difficulty sampling TH-36. At about 4 feet below land surface, silt inhibited placing the sampling pump down the well. The sampling team managed to get the pump down the well but experienced greater difficulty during retrieval. I recommend that we no longer sample this well. TH-36 should be abandoned and replaced with a new well.

In response to the GMC letter of November 14, 1994:

- The temporary repair of the well by GMC has had no apparent effect on the groundwater quality to date. However, the well has started to leak silt into the well casing and at this point is unusable as a monitor well.
- The testing parameters required for the initial sampling and testing of the replacement well should be the complete Florida Primary and Secondary Drinking Water Standards (62-550) with the omission of Asbestos.

Should you have any questions or comments, let me know.

JGC/jc

XC: Tom Smith, Department of Solid Waste
John Johnson, Department of Solid Waste



DIVERSIFIED DRILLING CORPORATION

Our strengths go deep.

October 30, 1995

Great Monument Construction Co.
Attn: Larry King

Re: S.E. Landfill Monitor Well TH36

As per my inspection, I found the following:

1. 2" PVC Riser Pipe approximately 2' above ground with 5" pipe over top.
2. Riser was at an angle
3. No pad
4. Ants around well
5. Asked county sampler what problems he had with well
Reply: Got pump stuck in well
Asked: How deep
Reply: I don't know

I attempted to lower a stainless steel bailer which stopped at 4' down. We dug around well and found 2" coupling installed approximately 2 1/2' down. We straightened the PVC pipe, then I bailed the well three times. The water looked clean but yellow-tinted. I took metal rod and probed around 2" well looking for cement. None was found to depth of 6'. We placed fill back around the well, the county people locked the well up and set 5" pipe over it again.

Conclusion:

This well yields water. I question its integrity due to the lack of cement grout. I had no problem lowering the bailer into well, once PVC was straightened.

Recommended Repair:

1. Dig out around well a 3" annular space to a depth of 4'
2. Pack bentonite around coupling at 2.5' depth to prevent cement intrusion
3. Pour cement around well
4. Re-install manhole or protective casing
5. Pour new pad and insure the extension pipe is straight

Any questions, please contact me.

William McCarty
William McCarty

EXHIBIT 'B'

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 10-26-95 Subject SE Hillsborough wells
Time 9:00 Permit No. _____
County Hillsborough
M Larry King Telephone No. 247-3777
Representing Great Mprument
[] Phoned Me ☒ Was Called [] Scheduled Meeting [] Unscheduled Meeting
Other Individuals Involved in Conversation/Meeting _____

Summary of Conversation/Meeting _____
top knocked off the well (TH-36) a year ago -

He wants to inspect the well, & remediated. He has contracted w/ Diversified to look @ the well tomorrow at 9am. I asked Larry to call me again after Diversified has examined the well. All construction/well remediation must be approved by the County (well owner) & FDEP (for the landfill permit)

(continue on another sheet, if necessary)

Signature Allison Annam
Title PGI

PA-01
1/93
hjs

11/3/95 I called Larry to follow up on Diversified's well inspection. He thinks the riser was crooked - they fixed it just by pulling - backfilled around the edge. Mac w/ Diversified will be sending me a report.

Permit File

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 10/26/95 Subject TH-36 - @ SE Hills Landfill
Time 9 Permit No. _____

County _____

M Jim Clayton Telephone No. 276-2920
Representing Hills Co. Solid Waste

[] Phoned Me [X] Was Called [] Scheduled Meeting [] Unscheduled Meeting

Other Individuals Involved in Conversation/Meeting _____

Summary of Conversation/Meeting _____

Called to find out the problem w/ well TH-36
- casing is cracked below ground surface
sand is entering well, having trouble
getting the pump by 4' 6 1/2

Jim will be @ the site tomorrow when Diversified
inspects the well.

(continue on another
sheet, if necessary)

Signature Allison Amram
Title PGI

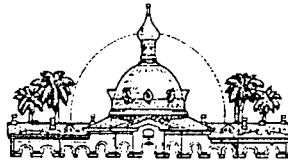
HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS

Dottie Berger
Phyllis Busansky
Joe Chillura
Chris Hart
Jim Norman
Ed Turanchik
Sandra Helen Wilson



Senior Assistant County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Cretta Johnson

RECEIVED
SEP 14 1995

September 13, 1995

Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

Mr. Fred Wick
Environmental Specialist
Florida Department of Environmental Protection
Twin Tower Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Cost Estimates for the Hillsborough County Southeast County Landfill (SO29-158504)

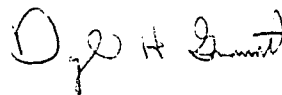
Dear Mr. Wick:

In accordance with Rule 62-701.630, F.A.C., Financial Responsibility, the Hillsborough County Department of Solid Waste (DSW) is submitting its estimated annual closure and long-term care costs for the Southeast County Landfill.

The estimated costs are certified by a Professional Engineer in accordance with the provisions of Chapter 476, F.S. and are listed separately for closure and long-term care.

Should you have any questions concerning the information provided, please contact Patricia V. Berry of the DSW at (813) 272-5680.

Sincerely,



Daryl H. Smith
Director
Department of Solid Waste

DHS/pb
Enclosure

xc: Patricia V. Berry, DSW
Frank Harrelson, DSW
Larry Ruiz, SCS
Susan Pelz, DEP

SCS ENGINEERS

September 11, 1995
File No. 0990018.35

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



Subject: Hillsborough County Southeast Landfill, Landfill Capacity and Closure and Long-Term Care Cost Update.

Dear Patty:

As of July, 1995, the estimated remaining capacity of the Southeast Landfill (SELF) was approximately 14,209,000 Cubic Yards (CY). Table 1 shows that a total of approximately 4,274,000 CY of wastes has been disposed of at the SELF. The remaining capacity was calculated by subtracting the reported used volumes (4,274,000 CY) from the estimated total capacity of 20,063,000 CY (minus 10 percent allowance for daily cover).

Enclosed also find the Closure and Long-Term Care Cost forms with an update of the estimated closure cost and the annual estimated cost of long-term care of the SELF in accordance with Rule 62-701.630 of the Florida Administrative Code (FAC). The estimated costs are as follows:

- Closure cost is \$11,898,000.
- Annual long-term care cost is \$1,024,000.

These costs are based on assumptions of a worst case scenario as required by 62-701 (FAC). Please note that the closure cost has increased over last year's estimate. This increase is due to the new temporary closure sequence which requires extensive regrading, and upgrades to final closure plan technology, therefore increasing the closure cost.

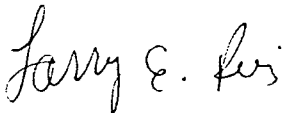
Additionally, the active gas collection system was replaced with a passive venting system as SELF is not likely to require the more expensive active system. The annual cost estimates provided by SCS are subject to change due to inflation, deflation, technology and potential changes in environmental laws.



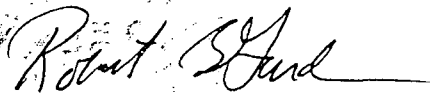
Ms. Patricia Berry
September 11, 1995
Page 2

If you have any questions or need additional information, please do not hesitate to call us.

Very truly yours,



Larry E. Ruiz
Senior Project Engineer



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

RBG/LER:rr
Enclosure

TABLE 1. SOUTHEAST LANDFILL MONTHLY TONNAGE

DESCRIPTION	YEAR	TOTAL	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sept
VOLUMES(cy) TONNAGE(ton) AVG. DENSITY(lb/cy)	1984	104,563 104,563 2,000		52,729 52,729	51,834 51,834									
VOLUMES TONNAGE AVG. DENSITY	1985	661,126 661,126 2,000	49,487 49,487	43,359 43,359	49,514 49,514	55,652 55,652	53,837 53,837	65,433 65,433	62,914 62,914	59,846 59,846	56,296 56,296	57,319 57,319	53,331 53,331	54,138 54,138
VOLUMES TONNAGE AVG. DENSITY	1986	629,888 629,888 2,000	54,402 54,402	46,449 46,449	50,264 50,264	47,270 47,270	42,959 42,959	49,356 49,356	52,036 52,036	52,137 52,137	54,349 54,349	61,058 61,058	58,985 58,985	60,622 60,622
VOLUMES TONNAGE AVG. DENSITY	1987	442,095 442,095 2,000	33,718 33,718	29,087 29,087	32,100 32,100	48,629 48,629	42,778 42,778	46,824 46,824	36,869 36,869	36,004 36,004	33,117 33,117	36,649 36,649	34,630 34,630	31,690 31,690
VOLUMES TONNAGE AVG. DENSITY	1988	420,183 420,183 2,000	34,168 34,168	34,303 34,303	36,289 36,289	31,609 31,609	32,428 32,428	36,622 36,622	43,230 43,230	34,613 34,613	42,661 42,661	30,377 30,377	33,905 33,905	29,978 29,978
VOLUMES TONNAGE AVG. DENSITY	1989	382,021 383,454 2,008	29,795 29,795	28,040 28,040	22,100 23,533	33,589 33,589	30,212 30,212	36,084 36,084	36,063 36,063	39,903 39,903	33,260 33,260	30,695 30,695	32,217 32,217	30,063 30,063
VOLUMES TONNAGE AVG. DENSITY	1990	446,573 352,501 1,579	28,372 28,001	41,308 25,481	31,089 23,128	40,317 29,695	40,408 32,218	54,205 38,634	41,380 30,129	35,649 29,073	32,548 29,210	35,276 28,195	34,813 30,941	31,208 27,797
VOLUMES TONNAGE AVG. DENSITY	1991	293,736 268,059 1,825	29,651 21,140	22,507 20,033	28,017 22,478	18,786 24,579	32,008 21,865	21,743 25,033	32,591 22,843	23,521 22,475	20,843 20,780	19,428 23,323	20,916 23,790	23,725 19,720
VOLUMES TONNAGE AVG. DENSITY	1992	219,244 243,832 2,224	13,483 20,133	21,853 18,314	20,075 20,138	10,988 22,133	18,811 17,569	25,133 22,374	22,198 22,228	22,995 19,916	15,916 20,879	19,308 20,278	13,287 20,021	15,197 19,849
VOLUMES TONNAGE AVG. DENSITY	1993	233,783 246,899 2,112	18,633 19,823	25,905 20,026	18,198 20,917	18,237 18,278	19,729 16,952	20,259 19,877	29,600 25,777	17,322 22,720	18,594 21,813	14,825 21,354	18,617 19,848	13,864 19,514
VOLUMES TONNAGE AVG. DENSITY	1994	273,886 278,642 2,035	14,903 22,228	22,668 22,791	25,855 23,976	17,229 19,159	21,207 22,361	33,118 27,232	35,728 25,785	22,487 23,759	14,633 24,880	20,066 21,390	21,923 22,504	24,069 22,577
VOLUMES TONNAGE AVG. DENSITY	1995	167,267 176,694 2,113				35,641 24,862	17,954 22,904	20,638 31,913	25,504 23,715	24,575 26,586	18,317 23,913	24,638 22,801		

TOTAL TO DATE CY

4,274,365

F:\PROJECT\990018.35\SELIFE.WB2 (page B)

Note: The actual volumes are not available for years 1984 to 1989; assume the average density is 2000 lb/cy for those years.
 Revised (8/26/94) to use tonnage as recorded by WMI.

FINANCIAL ASSURANCE COST ESTIMATES

Date of FDEP Approval:

Closure Plan Approved: Yes / No

____ Financial Guarantee Bond X Other (Explain) Financial Test

III. ESTIMATED CLOSING COST

For the time period in the landfill operation when the extent and manner of its operation makes closing most expensive.

- ** Third Party Estimate/Quote must be provided for each item.
- ** Costs must be for a third party providing all material and labor.
- ** All totals rounded to nearest \$1,000.

All items must be addressed. Attach a detailed explanation for all items marked not applicable (N/A).

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL**
-------------	------	----------	-----------	---------

1. Monitoring Wells: (11 existing wells active)

Borehole Excavation	CY	0	0	0
Backfill	CY	0	0	0
Gravel Pack	CY	0	0	0
Casing	LF	0	0	0
Screen	EA	0	0	0
Cap	EA	0	0	0

Subtotal Monitor Wells 0

2. Slope and Fill:

Excavation	CY	359,000	1.89	679,000
Placement/Spreading	CY	103,646	5.10	529,000
Compaction	CY	0	0	0
Delivery-Off Site Material	CY	0	0	0

*Note: Grades are well maintained at the site.
Additional costs reflect regrading areas under
temporary cover prior to membrane placement.*

Subtotal Slope and Fill 1,208,000

3. Cover Material:

Clay Admixture	CY	0	0	0
Synthetic Material	SY	798,116	4.78	3,813,000
On-Site Clay/Soil	CY	438,964	5.20	2,283,000

*Note: Both perimeter sideslope and topslope will be
covered with a 40 mil synthetic liner and 24 inches
of protective soil. The protective soil includes 6 inches
of topsoil to be imported (included in Item No. 4), the
remaining soil needed for protective cover is available on site.*

Subtotal Cover Material 6,096,000

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL**
-------------	------	----------	-----------	---------

4. Top Soil Cover: (6", 165 acres, off-site)

On-Site Material	CY	0	0	0
Off-Site Material	CY	146,321	5.10	746,000
Delivery	CY	146,321	3.10	454,000
Spreading	CY	146,321	1.10	161,000
Compaction	CY	0	0	0

Note: All soil quantities include compaction.

Subtotal Top Soil Cover 1,361,000

5. Stormwater Control:

Excavation, Grading & Recontouring ,	CY	0	0	0
Stormwater Sideslope Conveyances	LF	7,115	13.50	96,000
Downchute Construction	LF	2,745	118	323,000
Drainage Toe Construction	CY	3,000	38.89	117,000

Note: The site has 8 existing stormwater basins which are maintained regularly. Therefore, new construction will not be required. Additional costs reflect removing temporary stormwater controls for permanent controls, as well as the addition of a rip-rap drainage toe.

Subtotal Stormwater Control 536,000

6. Gas Migration Control:

Wells	LF	1,460	128	187,000
Pipe and Fittings	LF	0	0	0
Traps	EA	0	0	0
Sump	EA	0	0	0
Flare Assembly	EA	0	0	0
Flame Arrestor	EA	0	0	0
Mist Eliminator	EA	0	0	0
Flow Meter	EA	0	0	0
Blowers	EA	0	0	0
Monitoring Probes	EA	0	0	0

Note: Includes excavation, drilling, backfill, installation and fittings for 146 wells each at 10 feet deep.

Subtotal Gas Migration Control 187,000

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL**
7. Revegetation:				
Sodding	SY	0	0	0
Soil Preparation/Grading	SY	0	0	0
Hydroseeding (including mulch & fertilizer)	AC	164.9	1,895	312,000
Fertilizer	AC	0	0	0
Mulch	AC	0	0	0
			Subtotal Revegetation	<u>312,000</u>
8. Landscape Irrigation System:				
Pipe and Fittings	LF	0	0	0
Pumps	EA	0	0	0
<i>Note: Bahia grass mixture will germinate and remain established with the normal rainfall in this area. The County has constructed a treatment plant with an effluent irrigation system at the landfill. This system could be used for landscape irrigation and there will be no cost associated with this item during closure.</i>				
			Subtotal Landscape Irrigation System	<u>0</u>
9. Security System: (existing)				
Fencing	LF	0	0	0
Gate(s)	EA	0	0	0
Sign(s)	EA	0	0	0
			Subtotal Security System	<u>0</u>
10. Engineering:				
Closure Plan Report	LS	1	41,000	41,000
Certified Engineering Drawings (for construction)	LS	1	391,000	391,000
Closure Permit	LS	1	92,000	92,000
Other (Detail):				0
				0
			Subtotal Engineering	<u>524,000</u>

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL **
11. Benchmark Installation: (existing)	EA	0	0	0
Benchmark Survey	LS	0	0	0
Subtotal Benchmark Installation				0
12. Certification of Closure	LS		1	5,000
Subtotal Certification of Closure				5,000
13. Administrative:				
P.E. Supervisor	HR	420	75	32,000
On-Site Engineer	HR	1680	45	76,000
Office Engineer	HR	840	60	50,000
On-Site Technician	HR	0	0	0
Other - (explain):				0
				0
Note: The estimated construction time for final system closure is 10.5 months.				
Subtotal Administrative				158,000
14. Quality Assurance:				
P.E. Supervisor	HR	420	75	32,000
On-Site Engineer	HR	0	0	0
Office Engineer	HR	840	60	50,000
On-Site Technician	HR	1680	45	76,000
Other - (explain):				0
				0
Subtotal Quality Assurance				158,000
15. Site Specific Costs(explain):				
Waste Tire Facility Closure				271,000
Subtotal Site Specific Costs				271,000

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL**
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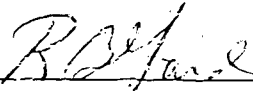
16. Contingency 10% of Total

1,082,000

TOTAL CLOSING COSTS 11,898,000

CERTIFICATION BY ENGINEER

This is to certify that the Financial Assurance Cost Estimates pertaining to the engineering features of this solid waste management facility have been examined by me and found to conform to engineering principals applicable to such facilities. In my professional judgement, the Cost Estimates are a true, correct and complete representation of the financial liabilities for closing and long-term care of the facility, and comply with the requirements of Florida Administrative Code (FAC), Rule 62-701.630 and all other Department of Environmental Protection rules, and statutes of the State of Florida. It is understood that the Financial Assurance Cost Estimates shall be revised and submitted to the Department annually as required by FAC 62-701.630(4).


Signature

3012 U.S. Hwy 301 N., Suite 700
Mailing Address

Robert B. Gardner, P.E.
Name and Title (please type)

Tampa, FL 33619
City, State, Zip Code

39233
Florida Registration Number (please affix seal)

(813) 621-0080
Telephone Number

Date: 9/11/95

IV. ANNUAL COST FOR LONG-TERM CARE

(for 20 or 30 yrs., see 62-701.600(1)a.1.)

(circle one)

****Third Party Estimate/Quote must be provided for each item**

****Costs must be for a third party providing material and labor.**

****All Annual Costs rounded to nearest \$1,000.**

All items must be addressed. Attach a detailed explanation for all items marked not applicable (N/A).

DESCRIPTION	UNIT (A)	QUANTITY (B)	UNIT COST (C)	ANNUAL COST** (D) = (A)x(B)x(C)	
1. Groundwater Monitoring 62-701.510(6), (8)(a)	sampling frequency events/yr	# of wells	\$/well/event	\$/yr	
Monthly	0	0	0	0	
Quarterly	0	0	0	0	
Semi-Annual	2	11	1,300	29,000	
Annual	0	0	0	0	
Subtotal Groundwater Monitoring					29,000
2. Gas Monitoring 62-701.400(10)	sampling frequency events/yr	# of locations	\$/location/ event	\$/yr	
Monthly	0	0	0	0	
Quarterly	4	3	250	3,000	
Semi-Annual	0	0	0	0	
Annual	0	0	0	0	
Subtotal Gas Migration Monitoring					3,000
3. Leachate Monitoring 62-701.510(5), (6)(b), 62-701.510(8)(c)	sampling frequency events/yr	# of locations	\$/location/ event	\$/yr	
Weekly	52	1	130	7,000	
Monthly	12	1	583	7,000	
Quarterly	4	1	280	1,000	
Semi-Annual	2	1	400	1,000	
Annual	1	1	5,000	5,000	
Subtotal Leachate Monitoring					21,000

DESCRIPTION	UNIT (A)	QUANTITY (B)	UNIT COST (C)	ANNUAL COST** (D) = (A)x(B)x(C)	
-------------	-------------	-----------------	------------------	---------------------------------------	--

4. Surface Water Monitoring 62-701.510(4),(8)(b)	sampling frequency events/yr	# of locations	\$/location/ event	\$/yr	
Monthly	0	0	0	0	
Quarterly	0	0	0	0	
Semi-Annual	2	5	550	6,000	
Annual	0	0	0	0	
Subtotal Surface Water Monitoring					6,000

5. Maintenance of Leachate Collection/Treatment Systems					
Collection Pipes	LF	13,000	1	13,000	
Sumps, Traps	EA	1	1,000	1,000	
Lift Stations	EA	1	3,000	3,000	
Impoundments-					
Liner Repair	SF	0	0	0	
Sludge Removal	DAY	0	0	0	
Aeration Systems-					
Floating Aerator	EA	0	0	0	
Spray Aerator	EA	0	0	0	
Off-Site Disposal	1000gal	0	0	0	
On-Site Pretreatment System Maint. (Describe) _____				0	
<u>Leachate Treatment O&M Cost (includes maintenance supplies carbon, methanol, polyelectrolyte, sludge removal, and miscellaneous parts.)</u>			1	170,000	

Subtotal Leachate Collection/Treatment System Maintenance 187,000

DESCRIPTION	UNIT (A)	QUANTITY (B)	UNIT COST (C)	ANNUAL COST** (D) = (A)x(B)x(C)	
-------------	-------------	-----------------	------------------	---------------------------------------	--

6.	Maintenance of Groundwater Monitoring Wells	LF	840	4	3000
----	---	----	-----	---	------

Subtotal Groundwater Monitoring Well Maintenance 3,000

7. Maintenance of Gas Migration System

Piping, Vents	LF	1,460	7	10000
Blowers	EA	0	0	0
Flaring Units	EA	0	0	0
Meters, Valves	EA	0	0	0

Subtotal Gas Migration System Maintenance 10,000

8. Landscape Maintenance

Mowing	AC	164.9	300	49,000
Fertilizer	AC	0	0	0
Irrigation	AC	0	0	0

Subtotal Landscape Maintenance 49,000

9. Benchmark Maintenance

EA		2,000
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Subtotal Benchmark Maintenance 2,000

10. Administrative/Overhead-

P.E. Supervisor	HR	208	75	16,000
On-Site Engineer	HR	1,040	60	62,000
(1)Equip. Operator	HR	2,080	25	52,000
On-Site Technician	HR	2,080	45	94,000
Other (explain):	HR	0	0	0

Electricity-include:
Leachate Pumps,
Blowers, Lighting, etc.

LS	1	155,000	155,000
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Subtotal Administrative 379,000

DESCRIPTION	UNIT (A)	QUANTITY (B)	UNIT COST (C)	ANNUAL COST** (D) = (A)x(B)x(C)	
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11. Maintenance of Cover

Sodding, Soil	AC	8.2	7,300	60,000	
Regrading	AC	0	0	0	
Liner Repair- Synthetic	SY	7,980	5.98	48,000	
Clay	CY	0	0	0	

Note: *Regrading is included in sodding/soil costs.*
Liner repairs reflect repair cost of 125% installation cost.

Subtotal Cover Integrity Maintenance 108,000

12. Surface Water Drainage Maintenance

Ditch Cleaning	LF	7,115	0.42	3,000	
Stormwater Conveyance Maint.	CY	12,800	5	64,000	

Subtotal Drainage Maintenance 67,000

13. Security System Maintenance

Fences	LF	500	7.71	4,000	
Gate(s)	EA	0	0	0	
Sign(s)	EA	0	0	0	

Subtotal Security System Maintenance 4,000

14. Remedial Actions	LS	1	10,000	10,000	
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Subtotal Remedial Actions 10,000

15. Site Specific Costs (explain):

Fleet Maintenance	53,000	
Contingency @ 10% (Items 1 through 15)	93,000	

Subtotal Site Specific Costs 146,000

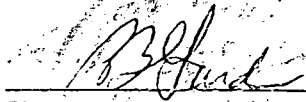
LONG-TERM CARE COSTS (\$/yr) 1,024,000

TOTAL LONG-TERM CARE COSTS (\$)

30,720,000

CERTIFICATION BY ENGINEER

This is to certify that the Financial Assurance Cost Estimates pertaining to the engineering features of this solid waste management facility have been examined by me and found to conform to engineering principals applicable to such facilities. In my professional judgement, the Cost Estimates are a true, correct and complete representation of the financial liabilities for closing and long-term care of the facility, and comply with the requirements of Florida Administrative Code (FAC), Rule 62-701.630 and all other Department of Environmental Protection rules, and statutes of the State of Florida. It is understood that the Financial Assurance Cost Estimates shall be revised and submitted to the Department annually as required by FAC 62-701.630(4).



Signature

3012 U.S. Hwy 301 N., Suite 700

Mailing Address

Robert B. Gardner, P.E.

Name and Title (please type)

Tampa, FL 33619

City, State, Zip Code

39233

Florida Registration Number (please affix seal)

(813) 621-0080

Telephone Number

Date: 9/11/95

SCS ENGINEERS

File No. 0990018.35

August 17, 1995

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

RECEIVED
AUG 18 1995
Department of Environmental Protection

Subject: Temporary Pump Station #5 Construction, Southeast County Landfill
Hillsborough County, Florida.

Dear Mr. Ford:

Please be advised that the Hillsborough County Department of Solid Waste (HCDSW) is planning to begin construction activities for the Temporary Pump Station #5 (TPS-5) on August 21, 1995. The construction schedule will be as follows:

- August 16, 1995 - County surveyor was on site to stake the approximate location of the leachate collection header.
- August 21, 1995 - HCDSW personnel will begin the excavation to locate the header. SCS Engineers will be on-site to monitor excavation activities.
- August 23, 1995 - County plumber will be on-site to clean the header.
- August 25, 1995 - Fife Industrial Pipe Company (FIFE), will be on-site to install the suction line and connections to the existing force main. County surveyor will be on-site to document "as-built" conditions.
- August 26, 1995 - HCDSW personnel will backfill the construction area.

After these activities are completed, the HCDSW will install a temporary pump to the system. Final connections and pump controls will be installed when the permanent pump arrives.



Mr. Kim B. Ford, P.E.

August 17, 1995

Page 2

Please call if you have any questions.

Very truly yours,



Larry E. Ruiz

Senior Project Engineer



Robert B. Gardner, P.E.

Vice President

SCS ENGINEERS

LER/RBG:ikm

cc: Patricia Berry, HCDSW

Matt Mathews, HCDSW

Robert Butera, P.E., FDEP - Tampa

Paul Schipfer, HCEPC

I N T E R O F F I C E M E M O R A N D U M

Date: 17-Aug-1995 02:48pm EST
From: Allison Amram TPA
AMRAM_A
Dept: Southwest District Offi
Tel No: 813/744-6100, ext. 336
SUNCOM: 542-6100, ext. 336

TO: Gnanamony Thabaraj TPA (THABARAJ_G)

CC: Kim Ford TPA (FORD_K)

CC: Robert Butera TPA (BUTERA_R)

Subject: ZIMPRO PLANT AT SE HILLSBOROUGH

Jay-

I just thought I'd let you know that we are receiving leachate treatment data from the SE Hillsborough landfill. Their leachate is treated by a ZIMPRO plant. A quick summary of their June COD:BOD5 results:

COD	BOD5
270	<1
295	52

This is substantially greater than the 2.8 to 3.6 ratio that you have advised us for leachate biodegradation at Citrus. I would think that the same ratios would apply to all wastewaters, as an indication of biodegradation? Just wanted to let you know about this. If you have any comments on this, just give me a ring!

Allison

813 621-0080
FAX 813 623-6757

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

ROUTING AND TRANSMITTAL SLIP

TO: (NAME, OFFICE, LOCATION)

1.

FATY ANDERSON

2.

SOLID WASTE MANAGER

3.

TALLAHASSEE

4.

SE LANDFILL
HILL COUNTY
PERMIT DOCUMENTS
FOR YOUR FILES

NBT ISSUED YET,
MUST WAIT UNTIL

MOIST LEACHATE
IS REMOVED

(YOU MAY ALREADY HAVE
MANY OF THESE DOCUMENTS)

FROM:

fm

DATE

PHONE

8/17/95

08-18-93

RECEIVED
14 1995

DEPARTMENT OF ENVIRONMENTAL PROTECTION

ion's Letter
County, Florida,

atter from the
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piezometer was
July 7, 1995,
Department of
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f the landfill
as shown in

Figure 6 of the LMP. We believe this is a temporary condition and that the final low point will still occur in Phase VI as originally projected by Ardaman and Associates, Inc. The current condition is preventing some leachate from being conveyed to TPS-3. In order to achieve the objectives of the LMP, the HCSW will install a Temporary Pump Station No. 5 (TPS-5) in Phase IV with a suction line that will reach the leachate within the low area. The design for TPS-5 is presented in Appendix B of the LMP. The revised LMP for the SELF is attached, the LMP was revised to include operation with the piezometer and the proposed TPS-5.



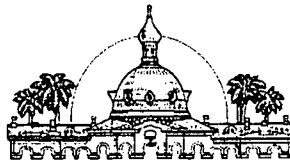
HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS

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Sandra Helen Wilson



Senior Assistant County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Cretta Johnson
Jimmie Keel
Robert Taylor

August 10, 1995

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

RE: Southeast County Landfill Pending Permit #SO29-256427- Permit Time Limit Waiver

Dear Mr. Butera:

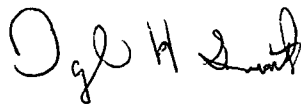
As discussed during the August 1, 1995 meeting between the Hillsborough County Department of Solid Waste (DSW), SCS Engineers, and the Florida Department of Environmental Protection (DEP), the DSW is providing the attached Waiver of 90 Day Time Limit for the referenced pending permit for the Southeast County Landfill (SELF). In accordance with Sections 120.60 (2) and 403.0876, F.S., the DSW waives the right to have the referenced pending permit application approved or denied by the DEP within the 90 day time period prescribed by law.

The DSW is submitting the waiver with a December 31, 1995 expiration date to provide sufficient time for the DSW to demonstrate that the leachate depth within the SELF conforms to the values shown in the Leachate Management Plan (LMP). However, should the leachate depth reach the values shown in the LMP prior to that date, the DSW intends to request that the DEP reevaluate the Landfill's leachate collection and removal system performance and issue the permit based on compliance with the LMP.

Mr. Robert Butera
August 10, 1995
Page Two

Should you have any questions concerning this submittal, please contact Patricia V. Berry of this office at 276-2908.

Sincerely,

A handwritten signature in dark ink, appearing to read "Daryl H. Smith". The signature is fluid and cursive, with the first name "Daryl" being the most prominent.

Daryl H. Smith
Director
Department of Solid Waste

Attachment

xc: Patricia V. Berry, DSW
Steve Hamilton, SCS
Kim Ford, DEP
Steve Morgan, DEP
Paul Schipfer, EPC

WAIVER OF 90 DAY TIME LIMIT
UNDER SECTIONS 120.60(2) AND 403.0876, FLORIDA STATUTES

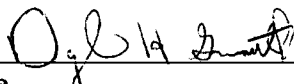
License (Permit, Certification) Application No. SO29-256427

Applicant's Name: Hillsborough County Department of Solid Waste

With regard to the above referenced application, the applicant hereby, with full knowledge and understanding of applicant's rights under Sections 120.60(2) and 403.0876, Florida Statutes, waives the right to have the application approved or denied by the State of Florida Department of Environmental Protection within the 90 day time period prescribed by law. Said waiver is made freely and voluntarily by the applicant, with full knowledge, and without any pressure or coercion by anyone employed by the State of Florida Department of Environmental Protection.

This waiver shall expire on the 31 day of December 19 95

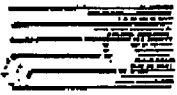
The undersigned is authorized to make this waiver on behalf of the applicant.



Signature

Daryl H. Smith

Name (Please Type or Print)

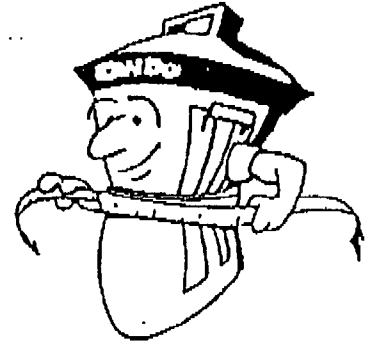


Hillsborough County

Department of Solid Waste * P.O. Box 1110
Tampa, FL 33601

Sender's Telephone Number: 276-2908

✓ 24-Hour FAX Line -- (813) 276-2960



"Together We CAN-DO It"

DATE: 8-10-95

TO: Robert Butera

FAX: 744-6125 SUBJECT: _____

FROM: Patty Berry

COMMENTS (If Any): _____

Total Pages Sent (including cover sheet) 4

Serving our customers with:

Residential & Commercial Collection Services • Curbside Recycling • Resource Recovery
Household Chemical Collection • Adopt-A-Road & Adopt-A-Shore
Environmental Enforcement • Yard & Wood Waste Processing • Landfill Services
Community Collection Centers • Environmental Testing

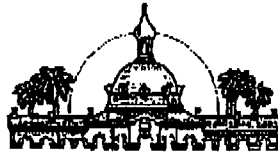
HILLSBOROUGH COUNTY

Florida

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Robert Taylor

August 10, 1995

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

RE: Southeast County Landfill Pending Permit #SO29-256427- Permit Time Limit Waiver

Dear Mr. Butera:

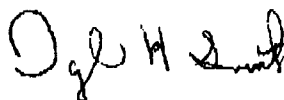
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Mr. Robert Butera
August 10, 1995
Page Two

Should you have any questions concerning this submittal, please contact Patricia V. Berry of this office at 276-2908.

Sincerely,

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Daryl H. Smith
Director
Department of Solid Waste

Attachment

xc: Patricia V. Berry, DSW
Steve Hamilton, SCS
Kim Ford, DEP
Steve Morgan, DEP
Paul Schipfer, EPC

**WAIVER OF 90 DAY TIME LIMIT
UNDER SECTIONS 120.60(2) AND 403.0876, FLORIDA STATUTES**

License (Permit, Certification) Application No. SO29-256427

Applicant's Name: Hillsborough County Department of Solid Waste

With regard to the above referenced application, the applicant hereby, with full knowledge and understanding of applicant's rights under Sections 120.60(2) and 403.0876, Florida Statutes, waives the right to have the application approved or denied by the State of Florida Department of Environmental Protection within the 90 day time period prescribed by law. Said waiver is made freely and voluntarily by the applicant, with full knowledge, and without any pressure or coercion by anyone employed by the State of Florida Department of Environmental Protection.

This waiver shall expire on the 31 day of December 19 95

The undersigned is authorized to make this waiver on behalf of the applicant.


Signature

Daryl H. Smith
Name (Please Type or Print)



Department of Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

August 4, 1995

Ms. Patricia Berry
Hillsborough County
Department of Solid Waste
Post Office Box 1110
Tampa, FL 33601

Re: Southeast Landfill Temporary Pump Station
Pending Permit #SO29-256427, Hillsborough County

Dear Ms. Berry:

The Department has no objections to the proposed temporary pump station in Phase IV as requested in your August 4, 1995 letter. Please provide all record drawings with elevations of the system including the existing leachate collection header system. DEP requests an engineer be present to monitor all excavation activities to insure that there is no damage to the liner. If you have any questions you may call me at (813) 744-6100, extension 382.

Sincerely,

Kim B. Ford, P.E.
Solid Waste Section
Division of Waste Management

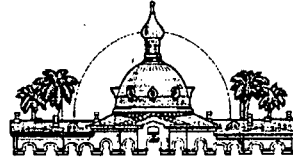
KBF/pp

cc: Robert Gardner, P.E., SCS Engineers
Paul Schipfer, HCEPC
Robert Butera, P.E., FDEP-Tampa

HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman



BOARD OF COUNTY COMMISSIONERS

Dottie Berger
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Ed Turanchik
Sandra Helen Wilson

RECEIVED
AUG 08 1995

Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

Senior Assistant County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Cretta Johnson
Jimmie Keel
Robert Taylor

August 4, 1995

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

RE: Southeast County Landfill - Leachate Management

Dear Mr. Ford:

As discussed during our August 1, 1995 meeting concerning the Southeast County Landfill (Landfill), the Hillsborough County Department of Solid Waste (DSW) is submitting the installation plan and drawings (hand delivered separately by SCS Engineers) for construction of the new Temporary Pump Station No. 5 in Phase IV of the Landfill.

Although the same information is being provided as part of the DSW's response to the Florida Department of Environmental Protection's (DEP) most recent request for additional information for the permit renewal, the DSW is also presenting the plan separately to facilitate the timely construction of the new temporary pump station.

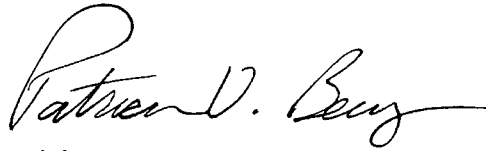
Specifically, the DSW is requesting that the DEP advise the DSW of any objections and/or recommended changes to the proposed concept so that the DSW may proceed to address the leachate management issue in Phase IV.

Once the DEP's concurrence is received, the DSW intends to immediately proceed to implement the plan and, barring any unforeseen circumstances, to have the system installed and pumping within three weeks. As indicated in the attached plan, the DSW will monitor the time meter to calculate the leachate quantity removal separately for Temporary Pump Station No. 3 and Temporary Pump Station No. 5.

Mr. Kim Ford
August 4, 1995
Page Two

Please contact me at 276-2908 should you need any additional information or have any questions concerning this submittal.

Sincerely,

A handwritten signature in black ink, appearing to read "Patricia V. Berry". The signature is fluid and cursive, with a large initial "P" and a long, sweeping underline.

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

Attachment

xc: Matt Matthews, DSW
Larry Ruiz, SCS
Steve Morgan, DEP
Paul Schipfer, EPC

Environmental Consultants

3011 U.S. Highway 1 South
Suite 200
Tampa, FL 33619-2241813-281-1111
FAX: 813-281-1112**SCS ENGINEERS**

August 3, 1995

File No. 0990018.35

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

Subject: Installation Plan for the Temporary Pump Station No. 5 in Phase IV
at the Southeast Landfill, Hillsborough County, Florida

Dear Patty:

On August 1, 1995, a meeting was held with the Hillsborough County Department of Solid Waste (HCDSW), the Florida Department of Environmental Protection (FDEP), and SCS Engineers (SCS). The purpose of the meeting was to discuss the status of the pending permit application for the Southeast County Landfill (SELF) and present to the FDEP the three alternatives evaluated by SCS to lower the leachate depth in the low spot in Phase IV. The alternatives presented were as follows:

- Alternative 1. Install a pump in Phase IV with suction line into the low spot.
- Alternative 2. Install a well point and pump near existing leachate collection header with submersible pump.
- Alternative 3. Install a new pump station at the projected low point in Phase IV, connected to the existing leachate collection header with a submersible pump.

Based on SCS's recommendation to proceed with Alternative 1 (see drawing attached), the FDEP requested that the HCDSW submit a construction plan for approval. This letter provides the HCDSW with guidance for the installation of Alternative 1 (pump and suction line in Phase IV) to increase leachate withdrawal from the low spot.

SCS recommends that the HCDSW consider the following phased procedures to install the new temporary pump and the suction line in Phase IV.

- After approval from the Florida Department of Environmental Protection (FDEP), excavation should begin to locate the existing perimeter tee connection of the 8-inch diameter leachate header pipe that passes through the low spot under Phase IV (See plan on the attached drawing).
- Once the header is located, it should be checked to ensure that there are no obstructions for a distance between 100 to 130 feet within the 8-inch diameter leachate header (See Section A).
- If no obstructions are found, the 4-inch diameter suction line should be installed into the 8-inch diameter header to a distance between 100 to 130 feet (See Section A and detail 4). If the installation is successful, the new



Ms. Patricia V. Berry
August 3, 1995
Page 2

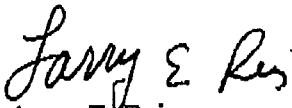
pump should be ordered. The pump capacity (150 gallons per minute @ 18 feet suction-lift) was selected to provide an adequate removal rate based on the expected leachate generation in the landfill and without exceeding the average field suction-lift of 25 feet.

- The concrete pad should be installed for the new pump and the discharge connections (valves and flowmeter) should be connected to the existing 6-inch diameter forcemain leading to the main leachate pump station (See details 1, 2, 3 and 5).

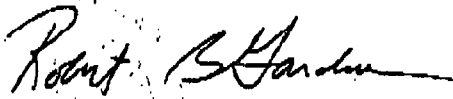
While the HCDSW is waiting for the permanent pump to arrive, a temporary pump can be connected to the suction and discharge lines to begin leachate withdrawal from the low spot. The proposed in-line flow meter will measure leachate removal quantities for both the proposed Temporary Pump Station No. 5 and the existing Temporary Pump Station No. 3. The existing time meter in the existing Temporary Pump Station No. 3 will be monitored so that leachate quantity removal can be monitored separate for both pumps.

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

Very truly yours,



Larry E. Ruiz
Senior Project Engineer



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

RBG/LER:ler
Enclosures

SCS ENGINEERS

August 4, 1995
File No. 0990018.35

X
Mr. Kim B. Ford
Florida Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, FL 33619

DECEIVE
AUG 04 1995
Environmental Protection
DISTRICT

Subject: Response to the Florida Department of Environmental Protection's Letter dated June 5, 1995, Southeast County Landfill, Hillsborough County, Florida, Operation Permit Renewal, Pending Permit No. S029-256427

Dear Kim:

On behalf of HCDSW, SCS Engineers (SCS) has reviewed the referenced letter from the Florida Department of Environmental Protection (FDEP). The following responses address the questions raised by the FDEP concerning the operation permit renewal for the Southeast County Landfill (SELF). Each of the FDEP's comments is restated in bold below, and followed by our response.

- 1. FDEP Statement 1 - The Department has no objections to the proposed Phase IV piezometer as shown in Figure 6. Please provide all record drawings and initial measurements of leachate depth over the clay liner as part of this permit application. This information is necessary to verify compliance with the engineer's design for leachate management.**

Response - On July 5, 1995, a piezometer was installed in Phase IV to monitor the leachate depth over the liner in the Southeast County Landfill (SELF). The piezometer was constructed as shown in Figure 7 of the Leachate Management Plan (LMP). On July 6, 1995, the piezometer was surveyed by the county's land surveyor and on July 7, 1995, the piezometer was developed by personnel from the Hillsborough County Department of Solid Waste (HCDSW). The piezometer was allowed to recharge for 48 hours and the HCDSW began monitoring the piezometer on July 10, 1995. Initial readings indicated a leachate depth of 56 inches above the liner.

Data from the installation of the piezometer indicates that the low point of the landfill apparently is just to the south of Temporary Pump Station No. 3 (TPS-3) as shown in Figure 6 of the LMP. We believe this is a temporary condition and that the final low point will still occur in Phase VI as originally projected by Ardaman and Associates, Inc. The current condition is preventing some leachate from being conveyed to TPS-3. In order to achieve the objectives of the LMP, the HCDSW will install a Temporary Pump Station No. 5 (TPS-5) in Phase IV with a suction line that will reach the leachate within the low area. The design for TPS-5 is presented in Appendix B of the LMP. The revised LMP for the SELF is attached, the LMP was revised to include operation with the piezometer and the proposed TPS-5.



Mr. Kim B. Ford
August 4, 1995
Page 2

2. FDEP Statement 2 - Please provide a schedule for construction/installation for each site improvement and future phase development proposed as part of this permit application.

Response - The installation of one settling plate in Phase IV and one settling plate in Phase VI, will be completed as soon as possible but not later than 90 days after September 1, 1995. The addition of three totalizers to the leachate collection and removal system will be completed as soon as possible but not later than 90 days after September 1, 1995. The installation of one backup pump in pump station No. 3 is no longer necessary and the proposed Temporary Pump Station No. 5 will be completed as soon as possible but not later than 30 days after August 1, 1995. The schedule for proposed modifications to the stormwater management system was included in the response to FDEP Statement 13 dated September 20, 1994.

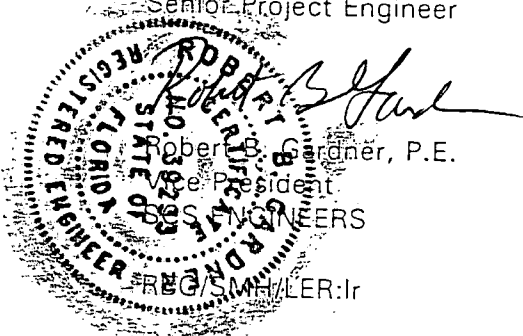
3. FDEP Statement 3 - Please provide a revised Leachate Management Plan that describes the use of Table 2 and Figure 2 for compliance monitoring and excludes the use of leachate management systems that have to be removed or replaced.

Response - A revised LMP is enclosed. As indicated in the responses to the FDEP's letter dated April 26, 1995, Table 2 of the LMP can be used as a planning tool for estimated leachate hauling quantities. The Figure 2 will be used to compare the projected hydrograph versus actual monitored leachate depths as landfilling operations progress. The system will be managed so that the actual depth of leachate is maintained at or below the values shown in the projected hydrograph. The LMP was revised to include systems that will be excluded in the future.

Please do not hesitate to call if you have any questions.

Very truly yours,

Larry E. Ruiz
Senior Project Engineer



Attachments

cc: Patricia V. Berry, HCDSW
Paul Schipfer, HCEPC
Robert Butera, P.E., FDEP Tampa

LETTER OF TRANSMITTAL

TO Florida Department of Environmental
Protection, Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

DATE August 4, 1995
JOB NO. 0990018.35
ATTENTION Mr. Kim Ford
Re: Responses to FDEP Letter
dated 6-5-95

WE ARE SENDING YOU

- ☒ Attached ☐ Under separate cover via _____
- ☐ Shop drawings ☐ Prints
- ☐ Copy of letter ☐ Change order
- the following items: ☐ Plans ☐ Samples
- ☐ Specifications ☐ _____

RECEIVED
AUG 04 1995
Department of Environmental Protection
BY SOUTHWEST DISTRICT

COPIES	DATE	DESCRIPTION
3	8-4-95	Leuchate Management Plan Southeast County Landfill Hillsborough County, Florida

THESE ARE TRANSMITTED as checked below:

- ☐ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval
- ☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution
- ☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints
- ☐ For review and comment ☐ _____
- ☐ FOR BIDS DUE _____ 19 _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS _____

COPY TO _____

SIGNED: Pradur John

LETTER OF TRANSMITTAL

TO Florida Department of Environmental
Protection, Southwest District
3804 Coconut Palm Drive
Tampa, FL 33619

DATE August 4, 1995

JOB NO. 6990018.35

ATTENTION Mr. Kim Ford

Re: _____

WE ARE SENDING YOU

- ☐ Attached ☐ Under separate cover via _____
- ☐ Shop drawings ☐ Prints
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- the following items: ☒ Plans ☐ Samples
- ☐ Specifications ☐ _____

RECEIVED
AUG 04 1995
Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

COPIES	DATE	DESCRIPTION
1	8-4-95	Alternate 1 Suction Line Drawing

THESE ARE TRANSMITTED as checked below:

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- ☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution
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- ☐ For review and comment ☐ _____
- ☐ FOR BIDS DUE _____ 19 ____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS _____

COPY TO _____

SIGNED: Bradley J. Law

08-04-95 02:39PM FROM SCS ENGINEERS TAMPA TO 7446125

P001/003

FAX COVER

TO:

DATE:

NAME:

COMPANY NAME:

FAX NUMBER:

PHONE NUMBER:

SCS ENGINEERS

Environmental Consultants

3012 U.S. Highway 301 North
Suite 700
Tampa, Florida 33619

Phone 813 621-0080
FAX 813 623-6757

FROM:

JOB/OVERHEAD NUMBER:

NUMBER OF PAGES:

COMMENTS:

FYI

Environmental Consultants

3012 U.S. Highway 301 North
Suite 200
Tampa, FL 33619-2742**SCS ENGINEERS**

August 3, 1995

File No. 0990018.35

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

Subject: Installation Plan for the Temporary Pump Station No. 5 in Phase IV
at the Southeast Landfill, Hillsborough County, Florida

Dear Patty:

On August 1, 1995, a meeting was held with the Hillsborough County Department of Solid Waste (HCDSW), the Florida Department of Environmental Protection (FDEP), and SCS Engineers (SCS). The purpose of the meeting was to discuss the status of the pending permit application for the Southeast County Landfill (SELF) and present to the FDEP the three alternatives evaluated by SCS to lower the leachate depth in the low spot in Phase IV. The alternatives presented were as follows:

- Alternative 1. Install a pump in Phase IV with suction line into the low spot.
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Based on SCS's recommendation to proceed with Alternative 1 (see drawing attached), the FDEP requested that the HCDSW submit a construction plan for approval. This letter provides the HCDSW with guidance for the installation of Alternative 1 (pump and suction line in Phase IV) to increase leachate withdrawal from the low spot.

SCS recommends that the HCDSW consider the following phased procedures to install the new temporary pump and the suction line in Phase IV.

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- Once the header is located, it should be checked to ensure that there are no obstructions for a distance between 100 to 130 feet within the 8-inch diameter leachate header (See Section A).
- If no obstructions are found, the 4-inch diameter suction line should be installed into the 8-inch diameter header to a distance between 100 to 130 feet (See Section A and detail 4). If the installation is successful, the new



Ms. Patricia V. Berry
August 3, 1995
Page 2

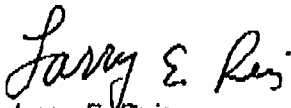
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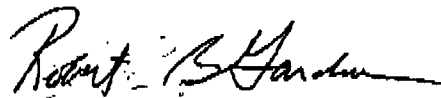
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While the HCDSW is waiting for the permanent pump to arrive, a temporary pump can be connected to the suction and discharge lines to begin leachate withdrawal from the low spot. The proposed in-line flow meter will measure leachate removal quantities for both the proposed Temporary Pump Station No. 5 and the existing Temporary Pump Station No. 3. The existing time meter in the existing Temporary Pump Station No. 3 will be monitored so that leachate quantity removal can be monitored separate for both pumps.

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

Very truly yours,


Larry E. Ruiz
Senior Project Engineer


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

RBG/LER:ler
Enclosures



Lawton Chiles
Governor

Florida Department of Environmental Protection

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

DATE: 8-1-95

TIME: 9:15 A.M.

SUBJECT: SOUTHEAST L.F. - LEACHATE MANAGEMENT

A T T E N D E E S

Name	Affiliation	Telephone
Larry Ruiz	SCS Engineers	621-0080
Bob Gardner	SCS Engineers	621-0080
Patricia Berry	Dept. of Solid Waste	276-2908
STEVE MORGAN	FOEP	744-6100 x385
KIM FORD	"	" 382
BOB BORERA	FOEP	744-6100 x451
Allison Amram	FOEP	" x336

~~8/27~~ 8/1/95

S.E. LANDFILL

- + APPLIED - 8/22/94
 - + EXPIRED - OLD PERMIT - 12-1-94
 - + NOV - IF NOT IN COMPLIANCE BY END OF YEAR.
Sign waiver 5 month - Dec. 31, 1995.
-

- 16 ACRES IMPOUNDED WITH EXCESS \approx 2' LEACHATE.
- 90'-100' FROM LINER EDGE. -
- EST. TIME - 2 WEEKS - MODIFY PERMIT - LEACHATE MGMT. PLAN.
- PROPOSED @ PATH PUMPS.
- HAULING LEACHATE FROM SPILLAGE LEACHATE TANK.
- HAULING 150,000 GALS/DAY - 3 TO 4 months to resolve leachate problems.
- Submit schedule with mod. + keep schedule updated.
- Waiver request - 5-months.
- Contract expires - Sept. 30, 1995 - SES.
- Compliance with Hydrograph. High - 2.6' / Lo - 1.9'

Fri - SE Hills permit response. LMP will include the mod.

16 acres of settlement - not affected by current leachate system. SCS has modification for the system

- Co. will modify leachate mgmt plan, won't need a permit mod.

Schedule submitted for construction of ~ 130' section line for leachate.

There are still some engineering concerns to work out.

Kim wants to be able to measure leachate flows

Once the system is functioning, (150 gpd) would 190,000 gpd - should take 2 1/2 months to drawdown leachate level. Pump performance will decrease w/ decreasing head

Co. will send design in today, requesting immediate start of construction. Kim will try to fax response today.

Once application is complete, what is schedule for permit application?

Kim - can't issue permit until the facility is in compliance. Leachate levels are too high.

8/1/95

p2/2

Bob - Co. should request waiver for several months until they can get leachate levels down.

Bob Gardner - Another District, landfill owner applied for a variance for double-liner system in. Request for variance was for a limited time. Request is still under review.

Bob B - If waiver can't cover time needed, maybe then apply for a variance. Co. is considering installing well pair -
1) above sand drainage
2) in " "
3) in clay

Bob B - Suggested waiver to end of Dec '95.

Patty - Daryl's out of the office til end of week. She will contact us later.

SCS's contract expires ~~the~~ Sept^{30th}, new consultant not expected to be working til Nov.

Cary - When can Co. be considered in compliance?

Kim - When they've met the HELT model ~~and~~ hydro-graph in the LMP

April '96 - leachate should be no greater than 24" deep.

HILLSBOROUGH COUNTY

Florida

Office of the County Administrator

Daniel A. Kleman

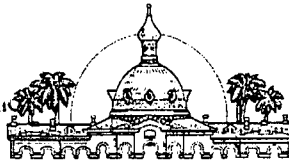
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D.E.P.

JUL 24 1995

TAMPA



Senior Assistant County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Cretta Johnson
Jimmie Keel
Robert Taylor

July 17, 1995

Florida Department of
Environmental Protection
ATTN: Kim Ford, Professional Engineer I
3804 Coconut Palm Dr.
Tampa, Fl 33619

Dear Mr Ford,

On behalf of the Hillsborough County Department of Solid Waste, I would like to take this opportunity to invite a representative from your agency to attend our next monthly information and progress meeting at the Southeast County Landfill. We hope to have representatives from Waste Management of Florida, SCS Engineers, The Hillsborough County Environmental Protection Commission, The Southeast Hillsborough Civic Association, and any citizens who would like to attend. An agenda will be provided and the next meeting will be held on July 20, 1995 at 9:00 a.m.

Please call me at 671-7707 if you have any questions. I look forward to our meeting.

Sincerely,

Meredith Matthews
Hillsborough County
Dept. of Solid Waste

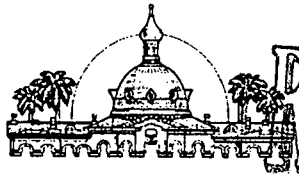
HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

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Sandra Helen Wilson



Senior Assistant County Administrator
Patricia Bean

Assistant County Administrators

Edwin Hunzeker
Crista Johnson
Jimmie Keel
Robert Taylor

RECEIVED
JUL 12 1995

July 10, 1995

Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

Richard D. Garrity, Ph.D.
Director of District Management
Florida Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Solid Waste Landfill Permitting Requirements

Dear Dr. Garrity:

On May 15, 1995, the Hillsborough County Department of Solid Waste (DSW) submitted the attached correspondence to the Florida Department of Environmental Protection (DEP) regarding the DEP's permitting requirements for a new Class I landfill.

Specifically, the DSW requested that the DEP confirm or clarify its district policy requiring 100% design drawings for the permit drawing submittal.

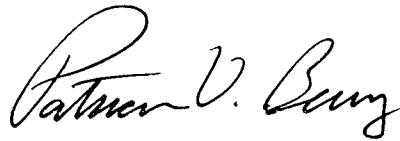
As previously stated, it is critical that the DSW receive direction or clarification from the DEP on this issue so that the DSW can, if necessary, modify the scope of services for the new professional services contract (which is currently underway), reevaluate the full-service contract procurement process for the future landfill construction, and revise its new Class I landfill implementation schedule.

To date, the DSW has not yet received a response to its May 15, 1995 correspondence. The DSW is again requesting that the DEP provide information to clarify this issue as soon as possible so that the scope of services for the professional services contract can be modified as necessary during the current procurement process.

Richard D. Garrity
July 10, 1995
Page Two

Your prompt assistance with this matter is appreciated. Should you have any questions or require any additional information, please contact me at 276-2908.

Sincerely,

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

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

Attachment

xc: Daryl H. Smith, DSW
Robert Butera, DEP
Kim Ford, DEP

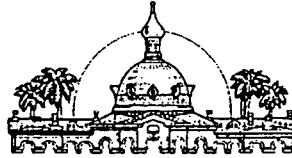
HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

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Senior Assistant County Administrator
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Assistant County Administrators
Edwin Hunzeker
Cretta Johnson
Jimmie Keel
Robert Taylor

May 15, 1995

Richard D. Garrity, Ph.D.
Director of District Management
Florida Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Solid Waste Landfill Permitting Requirements

Dear Dr. Garrity:

The Hillsborough County Department of Solid Waste (DSW) is writing to request clarification of a Florida Department of Environmental Protection (DEP) policy regarding permitting requirements for a new Class I landfill.

Specifically, the DSW has recently become aware that the DEP Southwest District Office now requires that a permit application for the issuance of a new landfill permit include detailed (100%) construction drawings. In the past, the DEP has issued landfill construction permits based on the submittal of 70% design drawings. Upon finalization of the detailed construction drawings, the DEP was provided with a copy of the drawings, along with an explanation of any significant changes. The DEP then had an opportunity to comment on any changes and require a modification to the permit as necessary.

Since the permitting process can be somewhat lengthy, submittal of the 70% design drawings enabled an applicant to proceed with the permitting efforts for a project while continuing to finalize the construction details for the award of a construction contract. This procedure provided for efficient and timely project implementation.

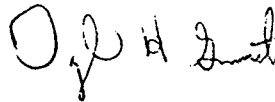
Dr. Richard Garrity
May 15, 1995
Page Two

The DSW has a specific reason for seeking clarification from the DEP concerning the requirement for submittal of detailed (100%) construction drawings. The DSW is currently preparing scopes of services for procuring new professional consulting services contracts. One of the consulting services contracts includes design and permitting assistance for a new Class I landfill. The scope of services is structured to have the consultant provide the 70% design drawings necessary for obtaining the landfill solid waste permit. These drawings would then be submitted to contractors as part of a bid package for the design, construction and operation of the new landfill. This procurement procedure has several benefits, including one party (the contractor) being solely responsible and liable for the project from design through the operation of the landfill (full-service approach). This full-service approach was utilized for the County's Resource Recovery Facility and served to provide the County with a committed and involved contractor.

It would appear that the DEP's policy regarding detailed permit drawings may not only limit the efficient implementation of new landfill projects, but may also preclude the DSW from proceeding with a full-service contract procurement approach for the new Class I landfill. Therefore, it is critical that the DSW receive direction or clarification from the DEP on this issue so that the DSW can, if necessary, modify the scope of services for the new professional services contract, reevaluate the full-service contract procurement process for the future landfill construction, and revise its new Class I landfill implementation schedule.

Your timely assistance with this matter is appreciated. Should you have any questions or require any additional information, please contact either myself at 276-2900 or Patricia V. Berry, DSW Landfill Services Manager, at 276-2908.

Sincerely,



Daryl H. Smith
Director
Department of Solid Waste

DHS/pb

xc: Patricia V. Berry, DSW
Robert Butera, DEP
Kim Ford, DEP

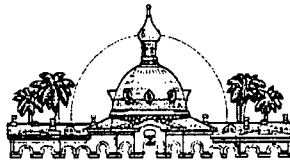
HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS

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June 29, 1995

D.E.P.

JUL - 7 1995

TAMPA

Senior Assistant County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Cretta Johnson
Jimmie Keel
Robert Taylor

DK
Mr. Kim B. Ford, P.E.
Division of Waste Management
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Operation Permit Renewal - Southeast County Landfill - Pending Permit No. SO29-256427

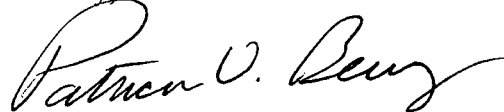
Dear Mr. Ford:

The Hillsborough County Department of Solid Waste (DSW) has received the June 5, 1995 incompleteness letter from the Florida Department of Environmental Protection (DEP) concerning the renewal of the operating permit for the Southeast County Landfill. The DSW requests that the DEP accept the following timetable for submission of the requested information, in accordance with the "Notice" paragraph in the DEP June 5, 1995 letter.

The DSW is in the process of preparing responses to the DEP's request for additional information. The proposed Phase IV piezometer is scheduled for installation on July 5, 1995. In order to have sufficient time to install and monitor the piezometer and provide the DEP with all requested information, the DSW is requesting an additional 30 days to provide a complete response to the DEP's incompleteness letter.

Should the DEP have any problem with this extension request, please contact me at 276-2908.

Sincerely,



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

xc: Daryl H. Smith, DSW
Steve Hamilton, SCS
Paul Schipfer, EPC

SOUTHWEST DISTRICT
CONVERSATION RECORD

Date 6/20/95
Time 9:25

Subject Leachate Treatment Plant
Permit No. SC 29
County Hillsborough
Telephone No. 276-2920

M. Jim Clayton
Representing Hills. Co. Solid Waste

☒ Phone Me ☐ Was Called ☐ Scheduled Meeting ☐ Unscheduled Meeting

Other Individuals Involved in Conversation/Meeting _____

Getting ready to do 6-month sampling -
want to delete asbestos, dioxins
(2,3,7,8-TCDD)

Footnote on App II list says you can delete if
Priority Pollutant - Compound #114 ^{not expected to be present}

6/22 2:00 Left voice mail message for Jim:
2,3,7,8-TCDD is required by 62-550.310 (1° Drinking
Water Std) - must do. Asbestos can be dropped from
leachate effluent sampling if they have a
leachate sample that's been analyzed for
asbestos + was non-detect.

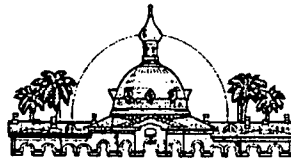
(continue on another
sheet, if necessary)

Signature Alison Amman
Title PGI

HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman



June 14, 1995

RECEIVED
JUN 16 1995

Department of Environmental Protection
SOUTHWEST DISTRICT

BY Senior Assistant County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Cretta Johnson
Jimmie Keel
Robert Taylor

BOARD OF COUNTY COMMISSIONERS

Dottie Berger
Phyllis Busansky
Joe Chillura
Chris Hart
Jim Norman
Ed Turanchik
Sandra Helen Wilson

Ms. Allison Amram
Department of Environmental Protection
Waste Management Section
3804 Coconut Palm Drive
Tampa, Fl 33619-8318

RE: Permit Number SC29-199393, Southeast County Leachate
Treatment and Reclamation Facility

Dear Ms. Amram:

Enclosed are the analyses for the Southeast County Leachate
Treatment and Reclamation Facility. The samples were taken from
the treated leachate for May 1995.

In reference to Specific Condition C of permit number SC29-
199393, the treated leachate exceeded the MCL for the following
parameters:

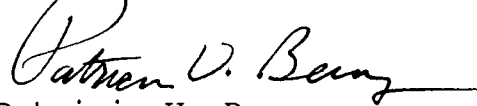
Parameter	MCL	Result
1) Total Dissolved Solids	500 mg/l	4880 mg/l
2) Chloride	250 mg/l	2345 mg/l

The above parameter results are circled on the enclosed
laboratory Certificate of Analysis.

Allison Amram
June 14, 1995
Page 2

Should you have any questions concerning the analyses, please contact Jim Clayton at 276-2920.

Sincerely,

A handwritten signature in cursive script, reading "Patricia V. Berry", with a horizontal line extending from the end of the signature.

Patricia V. Berry
Executive Manager
Department of Solid Waste

PVB/jgc

Enclosure

xc: Jim Clayton, Department of Solid Waste
Sarah Hill, Department of Solid Waste
Steve Morgan, Department of Environmental Protection
Kim Ford, Department of Environmental Protection
Paul Schipfer, Environmental Protection Commission
Steve Hamilton, SCS Engineers

CERTIFICATE OF ANALYSIS

RESULTS BY SAMPLE

SENT **HILLSBOROUGH COUNTY SOLID**
TO: **WASTE DEPARTMENT**
PO BOX 1110
TAMPA, FL 33601
JAMES G. CLAYTON
813/272-5680 FAX 276-2960

ANALYZED BY: **PBS&J Environmental Laboratories**
6635 East Colonial Drive
Orlando, FL 32807

Phone: (407) 277-4443
Fax: (407) 382-8794

This is to certify that the following samples were analyzed using good laboratory practices to show the following results.

Sample ID: TR. PLT-TREATED LEACHATE Lab ID: **9505031-01** Collected: 05/02/95 09:30:00

TEST	RESULT	UNITS	METHOD	EXTRACTED	ANALYZED	BY
CONDUCTIVITY	8270	umhos/cm	EPA 120.1		05/10/95	cs
pH	8.18	ph units	EPA 150.1		05/03/95	rp
TOTAL DISSOLVED SOLIDS	4880	mg/l	EPA 160.1		05/05/95	km
TOTAL SUSPENDED SOLIDS	24	mg/l	EPA 160.2		05/05/95	km
BARIUM-ICP METHOD	<0.100 U	mg/l	EPA 200.7		05/30/95	mks
CADMIUM-ICP METHOD	<0.005 U	mg/l	EPA 200.7		05/30/95	mks
CHROMIUM-ICP METHOD	<0.010 U	mg/l	EPA 200.7		05/30/95	mks
LEAD-ICP METHOD	<0.015 U	mg/l	EPA 200.7		05/30/95	mks
SELENIUM-ICP METHOD	<0.020 U	mg/l	EPA 200.7		05/30/95	mks
SILVER-ICP METHOD	<0.010 U	mg/l	EPA 200.7		05/30/95	mks
MERCURY	<0.20 u	ug/l	EPA 245.1		05/22/95	bjb
TOTAL ALKALINITY	876	mg/l caco3	EPA 310.1		05/12/95	sb
CHLORIDE	2345	mg/l	EPA 325.2		05/24/95	cc
TOTAL KJELDAHL NITROGEN	5.40	mg/l as n	EPA 351.2		05/05/95	km
NITRATE	0.05	mg/l as n	EPA 353.2		05/02/95	gm
BIOCHEMICAL OXYGEN DEMAND	3 I	mg/liter	EPA 405.1		05/03/95	rp
CHEMICAL OXYGEN DEMAND	360	mg/l	EPA 410.4		05/09/95	ksc
TOTAL ORGANIC CARBON	92.7	mg/l as c	EPA 415.1		05/03/95	ksc
ARSENIC-ICP METHOD	<0.050 U	mg/l	EPA 6010		05/30/95	mks
CONDUCTIVITY IN FIELD	8390	coc units	FIELD			
pH IN FIELD	7.85	ph units	FIELD			
TEMPERATURE IN FIELD	30.4	oc	FIELD			
FECAL COLIFORM-MF	<4	col/100 ml	SM9221E		05/02/95	rp

Sample ID: TR. PLT-TREATED LEACH-DUPLab ID: 9505031-02 Collected: 05/02/95 09:30:00

TEST	RESULT	UNITS	METHOD	EXTRACTED	ANALYZED	BY
CONDUCTIVITY	8360	umhos/cm	EPA 120.1		05/10/95	cs
pH	8.17	ph units	EPA 150.1		05/03/95	rp
TOTAL DISSOLVED SOLIDS	4880	mg/l	EPA 160.1		05/05/95	km
TOTAL SUSPENDED SOLIDS	20	mg/l	EPA 160.2		05/05/95	km
BARIUM-ICP METHOD	<0.100 U	mg/l	EPA 200.7		05/30/95	mks
CADMIUM-ICP METHOD	<0.005 U	mg/l	EPA 200.7		05/30/95	mks
CHROMIUM-ICP METHOD	<0.010 U	mg/l	EPA 200.7		05/30/95	mks
LEAD-ICP METHOD	0.017 I	mg/l	EPA 200.7		05/30/95	mks
SELENIUM-ICP METHOD	<0.020 U	mg/l	EPA 200.7		05/30/95	mks
SILVER-ICP METHOD	<0.010 U	mg/l	EPA 200.7		05/30/95	mks
MERCURY	<0.20 u	ug/l	EPA 245.1		05/22/95	bjb
TOTAL ALKALINITY	892	mg/l caco3	EPA 310.1		05/12/95	sb
CHLORIDE	2303	mg/l	EPA 325.2		05/24/95	cc
TOTAL KJELDAHL NITROGEN	5.33	mg/l as n	EPA 351.2		05/05/95	km
NITRATE	0.05	mg/l as n	EPA 353.2		05/02/95	gm
BIOCHEMICAL OXYGEN DEMAND	3 I	mg/liter	EPA 405.1		05/03/95	rp
CHEMICAL OXYGEN DEMAND	350	mg/l	EPA 410.4		05/09/95	ksc

CERTIFICATE OF ANALYSIS

RESULTS BY SAMPLE

Sample ID: TR. PLT-TREATED LEACH-DUP **Lab ID:** 9505031-02 **Collected:** 05/02/95 09:30:00

TEST	RESULT	UNITS	METHOD	EXTRACTED	ANALYZED	BY
TOTAL ORGANIC CARBON	92.0	mg/l as c	EPA 415.1		05/03/95	ksc
ARSENIC-ICP METHOD	<0.050 U	mg/l	EPA 6010		05/30/95	mks
CONDUCTIVITY IN FIELD	8390	coc units	FIELD			
pH IN FIELD	7.85	ph units	FIELD			
TEMPERATURE IN FIELD	30.4	oc	FIELD			
FECAL COLIFORM-MF	<4	col/100 ml	SM9221E		05/02/95	rp

Sample ID: SE/LEACHATE/EQIP BLANK **Lab ID:** 9505031-03 **Collected:** 05/02/95 09:28:00

TEST	RESULT	UNITS	METHOD	EXTRACTED	ANALYZED	BY
CONDUCTIVITY	15.55	umhos/cm	EPA 120.1		05/10/95	cs
pH	6.40	ph units	EPA 150.1		05/03/95	rp
TOTAL DISSOLVED SOLIDS	32	mg/l	EPA 160.1		05/05/95	km
TOTAL SUSPENDED SOLIDS	<4 U	mg/l	EPA 160.2		05/05/95	km
BARIUM-ICP METHOD	<0.005 U	mg/l	EPA 200.7		05/30/95	mks
CADMIUM-ICP METHOD	<0.005 U	mg/l	EPA 200.7		05/30/95	mks
CHROMIUM-ICP METHOD	<0.010 U	mg/l	EPA 200.7		05/30/95	mks
LEAD-ICP METHOD	<0.015 U	mg/l	EPA 200.7		05/30/95	mks
SELENIUM-ICP METHOD	<0.020 U	mg/l	EPA 200.7		05/30/95	mks
SILVER-ICP METHOD	<0.010 U	mg/l	EPA 200.7		05/30/95	mks
MERCURY	<0.20 u	ug/l	EPA 245.1		05/22/95	bjb
TOTAL ALKALINITY	<1 U	mg/l caco3	EPA 310.1		05/10/95	sb
CHLORIDE	19.0	mg/l	EPA 325.2		05/24/95	cc
TOTAL KJELDAHL NITROGEN	<0.1 U	mg/l as n	EPA 351.2		05/05/95	km
NITRATE	<0.01 U	mg/l as n	EPA 353.2		05/02/95	gm
BIOCHEMICAL OXYGEN DEMAND	<1 U	mg/liter	EPA 405.1		05/03/95	rp
CHEMICAL OXYGEN DEMAND	<1.0 U	mg/l	EPA 410.4		05/04/95	ksc
TOTAL ORGANIC CARBON	<1.0 U	mg/l as c	EPA 415.1		05/03/95	ksc
ARSENIC-ICP METHOD	<0.050 U	mg/l	EPA 6010		05/30/95	mks

FAX COVER**TO:**

DATE:

6/16/95

NAME:

Kim Ford

COMPANY NAME:

FDEP

FAX NUMBER:

744-6125

PHONE NUMBER:

744-6100

SCS ENGINEERS

Environmental Consultants

3012 U.S. Highway 301 North
Suite 700
Tampa, Florida 33619Phone 813 621-0080
FAX 813 623-6757

FROM:

Larry Ruiz

JOB/OVERHEAD NUMBER:

0990018-35

NUMBER OF PAGES:

3

COMMENTS:

Please call with comments.

Larry

MONITORING AND PERFORMANCE EVALUATION

Leachate depth records will be maintained on site and will be reported to FDEP and EPC on a monthly basis. Copies of the forms to be used are included in Attachment A. The leachate levels will be monitored at TPS-3, the LCRS riser in Phase IV, and the LCRS riser in Phase III. Stormwater levels in Phases V and VI will continue to be monitored in Phase VI TPS-4. Recent data indicates that the riser in Phase IV currently provides the best approximation of the existing leachate depth over the liner. After a relationship is established for depth of leachate in the SELF from measurements at the proposed piezometer, the HCDSW may elect in the future to discontinue monitoring leachate levels at TPS-3, the LCRS riser in Phase IV, and the LCRS riser in Phase III.

The new piezometer in Phase IV will become the monitoring point for depth over the liner. The piezometer is located near to the area where the greatest clay settlement is expected and will provide data from which the storage in the landfill will be estimated (Figure 6). The system's performance will be evaluated on a daily basis; Attachment B, presents the daily evaluation report form that will be used. Based on the projected hydrograph (Figure 2), the action criteria are included on the daily evaluation form per the following conditions:

- Low level operation will be obtained with leachate depth over the liner of 12 inches or less. This condition may be maintained intermittently for short periods. If this condition is not achieved during each calendar year, the HCDSW will evaluate the LCRS performance and will provide a report with recommendations to the FDEP and EPC.
- Normal operation will be obtained with leachate depth over the liner between 12 inches and 24 inches. The HCDSW will achieve this condition in April or May of each year and will strive to maintain this condition. If this condition is not achieved during the month of April or May of each year, the HCDSW will evaluate the LCRS performance and will provide a report with recommendations to the FDEP and EPC.

- High level operation will be obtained with leachate depth over the liner between 24 inches and 30 inches. This condition may be maintained for several months each year but will never be higher than 30 inches. For this condition accelerated leachate removal may be necessary.

These conditions will ensure that the system is managed so that the actual depth of leachate in the SELF is maintained at or below the values shown in the projected hydrograph. The FDEP and the EPC will be notified of any equipment failure or event that disrupts the routine operation of the LCRS. As indicated in the 1994 Operation Permit Renewal Application Engineering Report Section 5.2, the person responsible for operation of the SELF is the Landfill Site Manager, HCDSW, currently Mr. Meredith Matthews. He reports to the Landfill Services Executive Manager, HCDSW, currently Ms. Patricia V. Berry.

LIMITATIONS

Limiting factors in the existing system are:

- Single pump in TPS-3.

In order to improve leachate withdrawal at the facility, the existing backup pump for TPS-3 will be installed and setup for alternate operation with the existing pump. The new pump will allow for more efficient removal and minimize the risk for operational down time. The backup pump will be scheduled to be installed after approval of the 1994 Operation Permit Renewal Application.

- Spray irrigation.

1. Currently no spray irrigation is being done on Saturdays and Sundays, although the HCDSW reserves the right to spray irrigate on these days.
2. The LTRF is presently operating under a 1-year trial operation period under the FDEP construction permit. The existing spray irrigation restrictions have

FAX COVER

TO:

DATE: June 13, 1995

NAME: Mr. Kim B. Ford, P.E.

COMPANY NAME: FDEP

FAX NUMBER: 744-6125

PHONE NUMBER: 744-6100

SCS ENGINEERS

Environmental Consultants

**3012 U.S. Highway 301 North
Suite 700
Tampa, Florida 33619**

**Phone 813 621-0080
FAX 813 623-6757**

FROM: Larry Ruiz

JOB/OVERHEAD NUMBER: 0990018.35

NUMBER OF PAGES: 7

COMMENTS:

As we discussed, please attached find the draft revisions to the LMP for the Southeast County Landfill, Hillsborough County. Only the sections that have changed are included and the revisions are shown underlined. Please call with your comments or if you have any questions, thanks.

Larry Ruiz

OBJECTIVE**DRAFT**

This plan presents the leachate management system at the Hillsborough County Southeast Landfill (SELF). The objective of the leachate management plan is to remove leachate as it is ~~conveyed to the collection point~~ within the SELF, and not exceed the maximum storage calculated for the SELF using the U.S. Environmental Protection Agency's (U.S. EPA) Hydrological Evaluation of Landfill Performance (HELP) model. This Leachate Management Plan (LMP) replaces Sections 3.3 and 3.4 of the 1994 Operation Permit Renewal Application Engineering Report for the SELF. The SELF leachate management system includes the following major components and disposal methods:

- Leachate collection and removal system (LCRS).
- Collection point, Temporary Pump Station No. 3 (TPS-3).
- Leachate storage tank (500,000 gallons).
- Leachate treatment and reclamation facility (LTRF).
- Disposal methods.
 - Effluent spray irrigation system.
 - Tanker trucks hauling to off-site treatment facilities.
 - Truck mounted spray recirculation.

A leachate management system schematic is shown on Figure 1.

LEACHATE MANAGEMENT SYSTEM COMPONENTS**Existing Leachate Generation**

Dry and wet conditions were simulated using the HELP model. The results from the HELP model showed estimated monthly averages of spray irrigation, hauling, and storage for a dry year, wet year, and the year which showed the maximum leachate generation. Table 1 lists the characteristics of the SELF's cover configurations and the leachate generation estimates based on each configuration. Water balance calculations were performed on the various configurations which currently comprise the SELF, including sideslopes with a final capping system, intermediately capped Phases I through IV, and an active cell. The results

from the HELP model are summarized in Table 2, which shows estimated monthly averages of spray irrigation, hauling, and storage for a dry year, wet year, and the fourth year which showed the maximum leachate generation. Table 2 can be used as a planning tool for estimating leachate/effluent off-site hauling projections.

The water balance calculations indicate the SELF will have a maximum leachate depth of 2.5 feet over the liner during the modeled year that showed the greatest amount of leachate generation, as shown on the depth over the liner composite hydrograph on Figure 2. Figure 2, will be used as a planning tool for estimating leachate depth over the liner. Although Figure 2 was used to establish the proposed maximum depth over the liner of 2.5 feet, the leachate depth measured in the proposed Phase IV piezometer will be utilized for estimating the depth of leachate over the liner. Figure 2 will be used to compare the projected hydrograph versus actual monitored leachate depths as landfilling operations progress. The system will be managed so that the actual depth of leachate is maintained at or below the values shown in the projected hydrograph.

The maximum depth of 2.5 feet corresponds to a calculated maximum storage of approximately 4.7 million gallons as shown on Figure 3. Storage calculations are based on the estimated top of phosphatic clay contours obtained from the 1994 Geotechnical investigation by Ardaman and Associates, Inc. (Ardaman), and additional data from a field survey dated February 22, 1995. As the top of phosphatic clay settles, leachate storage in the SELF will change. The clays settlement will be monitored on a semi-annual basis and Figure 3 will be adjusted annually to reflect the most accurate representation of leachate storage in the landfill. The design layout of the leachate collection system is shown on Figure 4. The top of clay settlement will be monitored at the existing temporary sumps No. 3 and No. 4. In addition, two temporary settling plates will be installed at the locations shown on Figure 4. The design detail for the proposed settling plates is shown in Figure 5.

DRAFT

Future Leachate Generation

As new phases are opened or closed, and as more waste material is deposited, the factors influencing leachate generation will change. Therefore, further analysis was conducted on

Records indicate that an average of 12,200 gpd was recirculated in 1993. During summer months, recirculated volumes peaked near 24,000 gpd. During the winter months, volumes were down to 2,700 gpd. The HCDSW will continue recirculating leachate in full conformance with the Resource Conservation and Recovery Act (RCRA), Subtitle D and Florida Administrative Code (FAC), Chapter 62-701. The HCDSW will continue to notify the FDEP of all recirculation quantities in the leachate disposal reports.

Schedule for Maintenance of the LCRS

The SELF facilities are inspected daily. Exhibit 3-1 of the 1994 Permit Renewal Application Engineering Report presents the daily and monthly inspection forms used at the SELF. Maintenance of the LCRS is conducted on an as needed basis. If necessary this LMP schedule will be modified to reflect permit conditions. During the last 5 years, the system performed satisfactorily and no repairs have been necessary.

SYSTEM COMPONENTS PROJECTED PERFORMANCE

DRAFT

A leachate management system schematic is shown on Figure 1. The LCRS removal rates, pump rates, and pump control settings will be as follows:

Permanent Pump Stations "A" and "B", and Temporary Pump Station No. 4

As described in Section 5.3.2 of the 1994 Permit Renewal Application Engineering Report, the permanent pump station "A" (PPS-A) north of Phase V, and the temporary pump station No. 4 (TPS-4) north of Phase VI, were constructed as part of Phases V and VI development. Neither pump station currently is in use for leachate management. Since the leachate collection system in Phases V and VI is not tied to any active landfilling Phase, the HCDSW is using TPS-4 to discharge stormwater via force main into the existing 16-inch diameter HDPE drainage pipe.

Based on current landfill operations and waste projections, filling in Phases V and VI should begin in late 1998. By this time, the HCDSW will obtain the construction permit for the leachate permanent pump station "B" (PPS-B) which will be required before Phases V and

VI receive waste. After PPS-B is constructed, the existing TPS-3 and TPS-4 in Phase VI will be removed. The existing PPS-A will remain as backup to PPS-B during repairs or maintenance. Before any waste is placed in Phases V and VI, the LCBS must be activated. A detailed construction sequence is outlined in Section 5.3.2 of the 1994 Permit Renewal Application Engineering Report.

Temporary Pump Station No. 3 (TPS-3), capacity 125 gpm

TPS-3 is the initial collection point from the SELF. TPS-3 consists of an 8-foot inside diameter below-grade concrete sump with a single submersible pump. TPS-3 conveys leachate to the Main Leachate Pump Station. On February 10, 1995, the pump in TPS-3 was set to a 24-hour cycle operation. The "on" float in the existing TPS-3 is set at 12 inches of depth from the sump bottom and the "off" float is being maintained at 6 inches from the bottom. This results in a storage in the sump of 188 gallons of leachate. The settings described above provide for the maximum leachate withdrawal rate possible based on the existing configuration of the TPS-3.

DRAFT

Main Leachate Pump Station (MLPS), capacity 240 gpm

The MLPS consists of a 7-foot inside square below-grade concrete sump with dual vertical pumps, one operating and one stand by. From the MLPS, leachate is conveyed to the 500,000 gallon storage tank at the on-site LTRF. The pump in operation is set for a 24-hour operation cycle with the "on" float at 4 feet from the sump bottom and the "off" float at 2 feet from the sump bottom, resulting in a storage of 733 gallons of leachate.

Storage Tank, capacity 500,000 gallons

The leachate level in the storage tank will be maintained to provide for the maximum storage capacity possible. The tank will be maintained with an average low level of 6 feet or 180,000 gallons (3 days storage) to ensure enough leachate is available for the LTRF to operate without interruptions. When levels below 6 feet are reached in the tank, leachate hauling and recirculation will be temporarily reduced or stopped. Similarly, an action level will be established for high level of 11 feet (320,000 gallons) in the storage tank. A level

MONITORING AND PERFORMANCE EVALUATION

Leachate depth records will be maintained on site and will be reported to FDEP and EPC on a monthly basis. Copies of the forms to be used are included in Attachment A. The leachate levels will be monitored at TPS-3, the LCRS riser in Phase IV, and the LCRS riser in Phase III. Stormwater levels in Phases V and VI will continue to be monitored in Phase VI TPS-4. Recent data indicates that the riser in Phase IV currently provides the best approximation of the existing leachate depth over the liner. After a relationship is established for depth of leachate in the SELE from measurements at the proposed piezometer, the HCDSW may elect in the future to discontinue monitoring leachate levels at TPS-3, the LCRS riser in Phase IV, and the LCRS riser in Phase III.

The new piezometer in Phase IV will become the monitoring point for depth over the liner. The piezometer is located near to the area where the greatest clay settlement is expected and will provide data from which the storage in the landfill will be estimated (Figure 6). The system's performance will be evaluated on a daily basis; Attachment B, presents the daily evaluation report form that will be used. Based on the projected hydrograph (Figure 2), the action criteria are included on the daily evaluation form per the following conditions:

DRAFT

- Normal operation of the system will be obtained with leachate depth over the liner of 24 inches or less. For this condition leachate removal will continue with the goal to achieve 12 inches or less.
- High level operation will be reached with leachate depth over the liner higher than 24 inches. For this condition, leachate removal will be increased with the goal to achieve 24 inches or less by April of each year.
- Non-compliance will occur with leachate depth over the liner above 30 inches. For this condition accelerated leachate removal must continue with the goal to achieve 24 inches or less by April of each year. Notification to FDEP and EPC is required.

These conditions will ensure that the system is managed so that the actual depth of leachate in the SELF is maintained at or below the values shown in the projected hydrograph. The FDEP and the EPC will be notified of any equipment failure or event that disrupts the routine operation of the LCRS. As indicated in the 1994 Operation Permit Renewal Application Engineering Report Section 5.2, the person responsible for operation of the SELF is the Landfill Site Manager, HCDSW, currently Mr. Meredith Matthews. He reports to the Landfill Services Executive Manager, HCDSW, currently Ms. Patricia V. Berry.

LIMITATIONS

Limiting factors in the existing system are:

DRAFT

- Single pump in TPS-3.

In order to improve leachate withdrawal at the facility, the existing backup pump for TPS-3 will be installed and setup for alternate operation with the existing pump. The new pump will allow for more efficient removal and minimize the risk for operational down time. The backup pump will be scheduled to be installed after approval of the 1994 Operation Permit Renewal Application.

- Spray irrigation.

1. Currently no spray irrigation is being done on Saturdays and Sundays, although the HCDSW reserves the right to spray irrigate on these days.
2. The LTRF is presently operating under a 1-year trial operation period under the FDEP construction permit. The existing spray irrigation restrictions have an impact on the spray field quantities. Prior to the completion of the first year operation, the HCDSW intends to begin negotiations with the FDEP to modify the existing spray irrigation constraints to allow for increased spray irrigation in order to manage all leachate on site.

Transmit Confirmation Report

No. : 002
Receiver : 9-2727144
Transmitter : WASTE MGT TAMPA SWDIST
Date : Jun 14 95 14:13
Time : 07'55
Mode : Fine
Pages : 10
Result : OK



Lawton Chiles
Governor

Florida Department of Environmental Protection

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619
813-744-6100

Virginia B. Wetherell
Secretary

FAX TRANSMITTAL SHEET

6/14/95
Date

FAXED

TO:

PAUL SCHIPPER

DEPT.:

WASTE MANAGEMENT

FAX #:

272 7144

FROM:

Jim Ford

DEPT.: D.E.P., Tampa Office

PHONE: 813-744-6100 or SunCom 542-6100 Ext. 382
FAX(local) 744-6125 or (SunCom) 542-6125

SUBJECT:

SE LF

COMMENT:

4
E mail on GPS

pls comment & THX

TOTAL NUMBER OF PAGES, INCLUDING COVER PAGE:

10

RECEIVED BY:

PHONE:

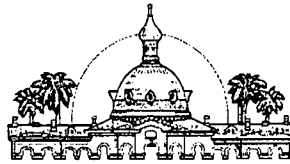
HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS

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RECEIVED
JUN 12 1995
Department of Environmental Protection
BY SOUTHWEST DISTRICT
Patricia Beatty

Assistant County Administrators
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Cerra Johnson
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June 15, 1995

Florida Department of
Environmental Protection
ATTN: Kim Ford, Professional Engineer I
3804 Coconut Palm Dr.
Tampa, Fl 33619

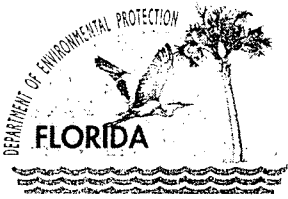
Dear Mr Ford,

On behalf of the Hillsborough County Department of Solid Waste, I would like to take this opportunity to invite a representative from your agency to attend our next monthly information and progress meeting at the Southeast County Landfill. We hope to have representatives from Waste Management of Florida, SCS Engineers, The Hillsborough County Environmental Protection Commission, The Southeast Hillsborough Civic Association, and any citizens who would like to attend. An agenda will be provided and the next meeting will be held on February 16, 1994 at 9:00 a.m.

Please call me at 671-7707 if you have any questions. I look forward to our meeting.

Sincerely,

Meredith Matthews
Meredith Matthews
Hillsborough County
Dept. of Solid Waste



Department of Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

June 6, 1995

James G. Clayton
Environmental Supervisor
Hillsborough County Solid Waste Department
P.O. Box 1110
Tampa, FL 34601

Subject: Water Quality Monitoring Reporting
Hillsborough County Southeast Sanitary Landfill
Permit No. SO29-158504, Hillsborough County

Dear Mr. Clayton:

All Class I landfill facilities that are currently operating are required under F.A.C. Rule 62-701.510(9) to report their water quality monitoring results in specific format. A copy of this rule section is attached for your reference. Most facilities have been including all of the semi-annual requirements, except for the updated groundwater table contour map, and the summary of water quality standards or criteria that have been exceeded. Please carefully review these requirements prior to submitting your water quality monitoring reports for the next reporting period.

In addition, every landfill permit has a specific condition that requires the results to be submitted on the DER Form 17-1.216(2), Quarterly Report on Groundwater Monitoring. This reporting form has been replaced by DEP Form 62-522.600(11), attached. This form is for the reporting of groundwater, surface water and leachate monitoring. Please make sure that this form is correctly filled out, and the certification statement is signed and dated. This form is important for two reasons: it demonstrates that the facility owner or representative is aware of the results of the monitoring, and it provides a standardized format for entry into the State's Groundwater Monitoring System (GMS) database. This database is used statewide to evaluate historical trends, and to provide data upon request. Standardized input forms greatly increase the accuracy of this database.

Several items on the forms appear to be confusing. On the page with the certification statement, the "GMS #" is the facility identification number used in the GMS database. For your facility, this number is 4029C30075.

For "Method of Discharge", please put "unknown" for lined landfills. You may elect to state that the facility is a lined landfill.

Mr. James G. Clayton
June 6, 1995
Page 2

On the Parameter Monitoring Report side, "Facility GMS #" appears again. It's the same number as the "GMS #" from the first side of the form. "Test Site ID #" refers to the GMS well number, and "Well Name" refers to the common name used for the well. Your facility well names and GMS Test Site ID numbers are provided below:

Facility GMS # 4029C30075 (The GMS Identification Number)

<u>Well Name</u>	<u>Test Site ID #</u>
TH-19	4029A12631
TH-20B	4029A14418
TH-22	4029A12634
TH-24A	4029A14419
TH-28	4029A12636
TH-30	4029A14113
TH-36	4029A14114
TH-38A	4029A14415
TH-40	4029A12632
TH-56A	4029A14416
Supply Well	4029A13073

STORET codes are input codes for the method of analysis for a specific water quality monitoring parameter. STORET is the US EPA's water quality monitoring database. All State water quality monitoring programs that receive any Federal moneys are required to include this information to provide EPA with an accurate water quality database. Your laboratory should have the list of these codes. If you are in need of these numbers, please fax to me a list of the parameters and method analyzed for each parameter, and I can fax you the appropriate STORET codes. My fax number is 813/744-6125.

I appreciate the extra effort that this letter requires. Once the reporting forms are correctly set up, they will be easy to use for future reports. The groundwater contour maps must be drawn for each sampling event. If you should have any questions, please contact me at 813/744-6100, ext. 336.

Sincerely,



Allison Amram, P.G.
Solid Waste Section

Attachments

cc: Bob Butera, P.E., FDEP

(9) Water quality monitoring reporting.

(a) The landfill owner or operator shall report all water quality and leachate monitoring results to the Department semi-annually, unless a different monitoring frequency is specified in the permit. The operator of the landfill shall notify the Department at least 14 days before the sampling is scheduled to occur so that the Department may collect split samples. The report shall include at least the following:

1. The facility name and identification number, sample collection dates, and analysis dates;
2. All analytical results, including all peaks even if below maximum contaminant levels;
3. Identification number and designation of all surface water and ground water monitoring points;
4. Applicable water quality standards;
5. Quality assurance, quality control notations;
6. Method detection limits;
7. STORET code numbers for all parameters;
8. Water levels recorded prior to evaluating wells or sample collection. Elevation reference shall include the top of the well casing and land surface at each well site at a precision of plus or minus 0.01 foot (NGVD); and
9. An updated ground water table contour map, with contours at no greater than one-foot intervals, which indicates ground water elevations and flow direction; and
10. A summary of any water quality standards or criteria that are exceeded;

(b) A technical report, prepared, signed and sealed by a professional geologist or professional engineer with experience in hydrogeologic investigations, shall be submitted to the Department every two years, and shall be updated at the time of permit renewal. The report shall summarize and interpret the water quality data and water level measurements collected during the past two years. The report shall contain, at a minimum, the following:

1. Tabular and graphical displays of any data which shows that a monitoring parameter has been detected, including hydrographs for all monitor wells;
2. Trend analyses of any monitoring parameters detected;
3. Comparisons among shallow, middle, and deep zone wells;
4. Comparisons between upgradient and downgradient wells;
5. Correlations between related parameters such as total dissolved solids and specific conductance;
6. Discussion of erratic and/or poorly correlated data;
7. An interpretation of the ground water contour maps, including an evaluation of ground water flow rates; and
8. An evaluation of the adequacy of the water quality monitoring frequency and sampling locations based upon site conditions.

(c) All field and laboratory records specified in Rules 62-160.600 - .630, F.A.C., shall be made available to the Department and be retained for the design period of the landfill.

Specific Authority: 403.061, 403.704, F.S.

Law Implemented: 403.702, 403.704, 403.707, F.S.

History: New 1-6-93; Amended 1-2-94, 5-19-94, Formerly 62-701.510.



Lawton Chiles
Governor

Florida Department of Environmental Protection

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619
813-744-6100

Virginia B. Wetherell
Secretary

FAX TRANSMITTAL SHEET

6/5/95

Date

FAXED

TO:

DEPT.:

FAX #:

FROM:

DEPT.: D.E.P., Tampa Office

PHONE: 813-744-6100 or SunCom 542-6100 Ext. 382.
FAX(local) 744-6125 or (SunCom) 542-6125

SUBJECT:

COMMENT:

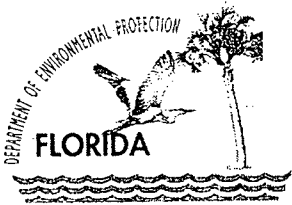
TOTAL NUMBER OF PAGES, INCLUDING COVER PAGE:

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PHONE:

Transmit Confirmation Report

No. : 001
Receiver : 9-6236757
Transmitter : WASTE MGT TAMPA SWDIST
Date : Jun 05 95 8:53
Time : 02'29
Mode : Fine
Pages : 03
Result : OK



Department of Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

June 5, 1995

Mr. Daryl Smith, Director
Hillsborough County
Department of Solid Waste
Post Office Box 1110
Tampa, FL 33601

**Re: Southeast Landfill, Hillsborough County
Operation Permit Renewal
Pending Permit No.: SO29-256427**

Dear Mr. Smith:

This is to acknowledge receipt of the additional information in support of your permit application received May 26, 1995 to operate the solid waste management facility referred to as Southeast Class I Sanitary Landfill.

This letter constitutes notice that a permit will be required for your project pursuant to Chapter(s) 403, Florida Statutes.

Your application for a permit remains incomplete. Please provide the information listed below promptly. Evaluation of your proposed project will be delayed until all requested information has been received.

The following information is needed in support of the solid waste application [Chapter 62-701, Florida Administrative Code (F.A.C.)]:

1. The Department has no objections to the proposed Phase IV piezometer as shown in Figure 6. Please provide all record drawings and initial measurements of leachate depth over the clay liner as part of this permit application. This information is necessary to verify compliance with the engineer's design for leachate management.
2. Please provide a schedule for construction/installation for each site improvement and future phase development proposed as part of this permit application.
3. Please provide a revised Leachate Management Plan that describes the use of Table 2 and Figure 2 for compliance monitoring and excludes the use of leachate management systems that have to be removed or replaced.

Mr. Daryl Smith, Director
Hillsborough County

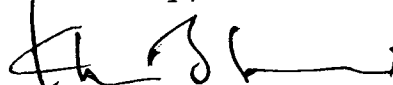
June 5, 1995
Page Two

Please be advised that a separate construction permit is required for the review and approval of permanent site improvements such as the future downchutes, leachate collection gallery in Phase VI, and closure.

"NOTICE! Pursuant to the provisions of Section 120.600, F.S. and Chapter 62-12.070(5), F.A.C., if the Department does not receive a complete response to this request for information within 30 days of the date of this letter, the Department may issue a final order denying your application. You need to respond within 30 days after you received this letter, responding to all of the information requests and indicating when a response to any unanswered questions will be submitted. If the response will require longer than 30 days to develop, you should develop a specific time table for the submission of the requested information for Department review and consideration. Failure to comply with a time table accepted by the Department will be grounds for the Department to issue a Final Order of Denial for lack of timely response. A denial for lack of information or response will be unbiased as to the merits of the application. The applicant can reapply as soon as the requested information is available."

You are requested to submit your response to this letter as one complete package. On all future correspondence to the Department, please include Robert Butera on distribution. If there are points which must be discussed and resolved, please contact me at (813) 744-6100, extension 382.

Sincerely,



Kim B. Ford, P.E.
Solid Waste Section
Division of Waste Management

KBF/br
Attachment

cc: Patricia V. Berry, Hillsborough County DSW
Paul Schipfer, HCEPC
Robert Gardner, P.E., SCS Engineers
William Kutash, Program Administrator, Waste Management
Robert Butera, P.E., FDEP Tampa
Allison Amram, P.G., FDEP Tampa
Steve Morgan, FDEP Tampa
Richard Tedder, P.E., FDEP Tallahassee

LETTER OF TRANSMITTAL

TO Florida Department
of Environmental Regulation
Southwest District
3804 Coconut Palm Drive

DATE May 26, 1995JOB NO. 0990018.35ATTENTION Kim Ford

Re: _____

WE ARE SENDING YOU

☐ Attached ☐ Under separate cover via _____☐ Shop drawings ☐ Prints☒ Copy of letter ☐ Change orderthe following items: ☐ Plans ☐ Samples☐ Specifications ☐ _____**RECEIVED**
MAY 26 1995Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

COPIES	DATE	DESCRIPTION
3	5/26/95	Response to FDEP letter dated April 25, 1995.

THESE ARE TRANSMITTED as checked below:

- ☒ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval
☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints
☐ For review and comment ☐ _____
☐ FOR BIDS DUE _____ 19 _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS _____

COPY TO _____ SIGNED: Larry E. Liu

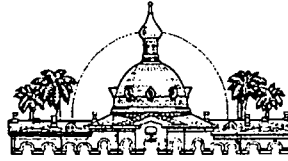
HILLSBOROUGH COUNTY

Florida

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Daniel A. Kleman

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Senior Assistant County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Cretta Johnson
Jimmie Keel
Robert Taylor

May 23, 1995

RECEIVED
MAY 25 1995

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

Depa _____ Environmental Protection
BY _____ SOUTHWEST DISTRICT

RE: Southeast County Landfill - Leachate Management

Dear Mr. Ford:

In accordance with the Hillsborough County Department of Solid Waste's (DSW) Leachate Management Plan for the Southeast County Landfill (Landfill), the DSW is providing the April 1995 Water Balance Report Forms and Field Data Entry Forms for the Landfill. In addition, the DSW is providing the April 1995 effluent and leachate field data forms for the Landfill and the daily leachate and collection system evaluation reports.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as an update on the DSW's leachate management efforts for the Landfill. This information is being provided in response to both the permitting and enforcement issues at hand.

As can be seen from the April 1995 Leachate Water Balance Report, SCS Engineers, the DSW's landfill engineering consultant, has estimated that the leachate level within the Landfill, based on the Phase IV Riser leachate level, is approximately 16 inches over the liner. The depth of leachate measured in the Phase III Riser is between 3 and 4 inches.

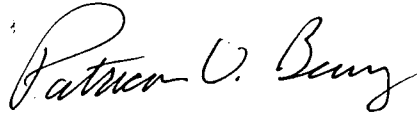
Mr. Kim Ford
May 23, 1995
Page Two

RECEIVED
MAY 25 1995

Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

Should you have any questions concerning the information provided, please call at 276-2908.

Sincerely,



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

Attachments

xc: Matt Matthews, DSW
Steve Hamilton, SCS
Steve Morgan, DEP
Paul Schipfer, EPC

LEACHATE WATER BALANCE REPORT FORM

APRIL 1995

SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FL

I	II		III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI
Day	Area (acres)		Rainfall (in.)	Depth in Effluent Pond (in.)	Est. Depth Over Liner (in.)	Est. Landfill Storage (gal.)	Leachate Pumped to LTRF (gal.)	Leachate in 500K Tank (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Recirculation (gal.)	Effluent Pond Storage (gal.)	Effluent Sprayed (gal.)	Effluent Recirculation (gal.)	Total Effluent Hauled (gal.)	Landfill Evapor. (gal.)
	final	active														
1	23.2	5.0	92.2	0.6	23.0	17.0	1,264,000	163,000	115,000	35,000	81,000	0	71,000	0	0	0
2	23.2	5.0	92.2	NR	NR	NR	NR	NR	NR	47,000	0	0	NR	0	0	0
3	23.2	5.0	92.2	0.0	42.0	17.0	1,264,000	128,000	115,000	43,000	75,000	9,000	138,000	46,000	0	44,000
4	23.2	5.0	92.2	0.0	40.0	16.0	1,189,000	89,000	115,000	43,000	0	17,000	131,000	46,000	0	51,000
5	23.2	5.0	92.2	0.0	35.0	16.0	1,189,000	104,000	144,000	44,000	31,000	0	113,000	46,000	0	37,000
6	23.2	5.0	92.2	0.6	29.0	16.0	1,189,000	103,000	173,000	46,000	0	0	92,000	46,000	0	37,000
7	23.2	5.0	92.2	0.0	33.0	15.0	1,115,000	125,000	230,000	46,000	50,000	0	106,000	0	0	0
8	23.2	5.0	92.2	0.0	21.0	16.0	1,189,000	236,000	259,000	44,000	62,000	0	65,000	0	0	0
9	23.2	5.0	92.2	0.0	NR	NR	NR	NR	NR	43,000	0	0	NR	0	0	0
10	23.2	5.0	92.2	0.0	45.0	16.0	1,189,000	93,000	345,000	43,000	62,000	17,000	150,000	39,000	0	45,000
11	23.2	5.0	92.2	0.0	39.0	16.0	1,189,000	141,000	317,000	45,000	50,000	17,000	127,000	39,000	0	45,000
12	23.2	5.0	92.2	0.0	35.0	16.0	1,189,000	95,000	345,000	45,000	50,000	0	113,000	39,000	0	32,000
13	23.2	5.0	92.2	0.0	31.0	16.0	1,189,000	71,000	345,000	46,000	25,000	0	99,000	39,000	0	32,000
14	23.2	5.0	92.2	0.0	27.0	16.0	1,189,000	53,000	345,000	44,000	37,000	0	85,000	27,000	0	22,000
15	23.2	5.0	92.2	0.0	21.0	27.0	2,546,000	185,000	317,000	55,000	25,000	0	65,000	0	0	0
16	23.2	5.0	92.2	0.0	NR	NR	NR	NR	NR	47,000	0	0	NR	0	0	0
17	23.2	5.0	92.2	0.0	38.0	16.0	1,189,000	93,000	374,000	39,000	25,000	0	124,000	39,000	0	32,000
18	23.2	5.0	92.2	0.0	36.0	16.0	1,189,000	85,000	403,000	48,000	38,000	0	116,000	39,000	0	32,000
19	23.2	5.0	92.2	0.0	35.0	16.0	1,189,000	94,000	403,000	44,000	50,000	0	113,000	39,000	0	32,000
20	23.2	5.0	92.2	0.0	35.0	16.0	1,189,000	65,000	403,000	44,000	50,000	0	113,000	39,000	0	32,000
21	23.2	5.0	92.2	0.0	21.0	16.0	1,189,000	66,000	374,000	45,000	50,000	0	65,000	39,000	0	32,000
22	23.2	5.0	92.2	0.0	NR	15.0	1,115,000	192,000	345,000	47,000	44,000	0	NR	0	0	0
23	23.2	5.0	92.2	0.0	NR	NR	NR	NR	NR	44,000	0	0	NR	0	0	0
24	23.2	5.0	92.2	0.0	30.0	16.0	1,189,000	95,000	403,000	46,000	50,000	0	95,000	46,000	0	37,000
25	23.2	5.0	92.2	0.2	25.0	16.0	1,189,000	66,000	403,000	45,000	50,000	0	78,000	46,000	0	37,000
26	23.2	5.0	92.2	0.2	25.0	16.0	1,189,000	66,000	374,000	45,000	50,000	0	78,000	0	0	0
27	23.2	5.0	92.2	0.0	27.0	16.0	1,189,000	85,000	345,000	45,000	69,000	0	85,000	46,000	0	37,000
28	23.2	5.0	92.2	0.0	24.0	16.0	1,189,000	66,000	317,000	46,000	50,000	0	75,000	0	0	0
29	23.2	5.0	92.2	0.0	21.0	16.0	1,189,000	168,000	288,000	46,000	50,000	0	65,000	0	0	0
30	23.2	5.0	92.2	NR	NR	NR	NR	NR	NR	44,000	0	0	NR	0	0	0
Total				1.60	738.0	411.0	31,084,000	2,725,000	7,597,000	1,344,000	1,124,000	60,000	2,362,000	700,000	0	393,000
Daily Avg				0.06	30.8	16.4	1,243,000	109,000	304,000	45,000	37,000	2,000	98,000	23,000	0	21,000

Revised by BWP, 4/13/95.

Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured.
4. Column V, estimated from depth in Phase IV riser.
5. Column VI, estimated from Column V and approximate volume with top of clay elevation at 118.5 feet.
6. Column VII, estimated from Column IX + Column X + Change in Storage of 500,000 gal. tank.
7. Column VIII, estimated from depth in 500,000 gal. leachate tank.
8. Columns IX and XIII, quantities from flow meters.
9. Columns X, XI, XIV, and XV, quantities calculated from truck weight.
10. Column XVI, 80.8% of the daily values from Columns XI, XIII and XIV.

FIELD DATA ENTRY FORM

APRIL 1995

SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FL

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
Day	Active Area (ac.)	Depth in Effl. Pond (in.)	Stormwater In Sump No. 4 (in.)	Phase III Riser (in.)	Phase IV Riser (in.)	Phase IV Piezometer (in.)	Rainfall (in.)	Leachate Hauled		Leachate Recirc. (gal.)	Effluent Hauled		Effluent Recirc. (gal.)	Leachate Treated at LTRF (gal.)	Effluent Sprayed (gal.)	Depth in 500K Tank (ft.)
1	5.0	23.0	63.0	3.0	17.0	NR	0.6	62,372	18,683	0	0	0	0	34,904	0	4.0
2	5.0	NR	NR	NR	NR	NR	NR	NR	0	0	0	0	0	46,847	0	NR
3	5.0	42.0	64.0	4.0	17.0	NR	0.0	62,170	12,526	8,500	0	0	0	43,303	45,570	4.0
4	5.0	40.0	62.0	4.0	16.0	NR	0.0	NR	0	17,000	0	0	0	42,906	45,570	4.0
5	5.0	35.0	60.0	4.0	16.0	NR	0.0	31,039	0	0	0	0	0	43,880	45,570	5.0
6	5.0	29.0	62.0	4.0	16.0	NR	0.6	NR	0	0	0	0	0	45,703	45,570	6.0
7	5.0	33.0	60.0	3.0	15.0	NR	0.0	49,710	0	0	0	0	0	46,217	0	
8	5.0	21.0	62.0	3.0	16.0	NR	0.0	43,313	18,464	0	0	0	0	44,203	0	8.0
9	5.0	NR	NR	NR	NR	NR	0.0	NR	0	0	0	0	0	43,319	0	NR
10	5.0	45.0	63.0	3.0	16.0	NR	0.0	49,533	12,299	17,000	0	0	0	43,448	39,060	12.0
11	5.0	39.0	60.0	3.0	16.0	NR	0.0	37,516	12,134	17,000	12,467	0	0	45,098	39,060	11.0
12	5.0	35.0	59.0	3.0	16.0	NR	0.0	31,355	18,662	0	18,622	0	0	45,223	39,060	12.0
13	5.0	31.0	24.0	3.0	16.0	NR	0.0	25,200	0	0	24,912	0	0	46,298	39,060	12.0
14	5.0	27.0	57.0	4.0	16.0	NR	0.0	37,393	0	0	12,358	0	0	44,323	27,240	12.0
15	5.0	21.0	58.0	4.0	27.0	NR	0.0	24,858	0	0	24,835	0	0	54,960	0	11.0
16	5.0	NR	NR	NR	NR	NR	0.0	NR	0	0	0	0	0	47,190	0	NR
17	5.0	38.0	60.0	3.0	16.0	NR	0.0	25,067	0	0	24,811	0	0	39,462	39,060	13.0
18	5.0	36.0	28.0	3.0	16.0	NR	0.0	37,557	0	0	24,729	0	0	47,511	39,060	14.0
19	5.0	36.0	57.0	3.0	16.0	NR	0.0	49,974	0	0	24,800	0	0	44,428	39,096	14.0
20	5.0	35.0	56.0	3.0	16.0	NR	0.0	49,808	0	0	24,800	0	0	43,697	39,060	14.0
21	5.0	21.0	58.0	4.0	16.0	NR	0.0	49,840	0	0	24,800	0	0	45,210	39,060	13.0
22	5.0	NR	56.0	3.0	15.0	NR	0.0	43,897	0	0	24,818	0	0	47,153	0	12.0
23	5.0	NR	NR	NR	NR	NR	0.0	NR	0	0	0	0	0	43,677	0	NR
24	5.0	30.0	59.0	4.0	16.0	NR	0.0	49,824	0	0	24,667	0	0	45,629	45,650	14.0
25	5.0	25.0	42.0	3.0	16.0	NR	0.2	43,406	6,200	0	24,800	0	0	45,030	45,650	14.0
26	5.0	25.0	55.0	3.0	16.0	NR	0.2	37,284	12,360	0	24,800	0	0	45,000	0	12.0
27	5.0	27.0	55.0	3.0	16.0	NR	0.0	50,244	18,773	0	24,800	0	0	45,000	45,650	1
28	5.0	24.0	48.0	4.0	16.0	NR	0.0	43,359	6,200	0	24,800	0	0	45,555	0	11.0
29	5.0	21.0	53.0	4.0	16.0	NR	0.0	49,811	0	0	24,800	0	0	45,729	0	10.0
30	5.0	NR	NR	NR	NR	NR	NR	NR	0	0	0	0	0	43,548	0	NR
1	First day of next month. Record depth in 500,000 gal tank only.															11.0

Notes:

1. NR = No Records.
2. Columns II-VIII, field measured.
3. Column VI, if level exceeds 27.6 inches (2.3 ft.), leachate withdrawal from landfill must increase.
4. Column VII, Phase IV piezometer not yet constructed.
5. Columns IX-XIV, quantities calculated from truck weight.
6. Columns XV and XVI, quantities from flow meters.
7. Column XVII, field measured.

**EFFLUENT DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL**

(Month/Year) Apr: 1 1995

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)	Initials
				Contractor (gallons)	County (gallons)					
1	23	34,904	—				34,904	AM	—	
2		46,847	—	—	—	—	46,847	—	—	
3	42	43,303	45,570				(2,267)		N	
4	40	42,906	45,570				(2,664)		N	
5	35	43,880	45,570				(1,690)		N	
6	29	45,703	45,570				(1,133)	AM	N	
7	33	46,217	—				46,217			
8	21	44,203	—				44,203			
9	—	43,319	—	—	—	—	43,319			
10	45	43,448	39,060				4,388		N	
11	39	45,098	39,060	12,467			6,038		N	
12	35	45,223	39,060	18,622			6,163		N	
13	31	46,298	39,060	24,912			7,238		N	
14	27	44,323	27,240	12,358			17,083		N	
15	21	54,960	—	24,835			54,960			
16	—	47,190	—	—	—	—	47,190			

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

Comments: _____

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

Date	Depth in Effluent Pond (inches)	Leachate Treated (gallons)	Treated Effluent Sprayed (gallons)	Treated Effluent Hauled		Treated Effluent Recirculation (gallons)	Treated Effluent Stored (gallons)	Time at End of Rainfall	(1) Effluent Runoff to Retention Area (Y/N)	Initials
				Contractor (gallons)	County (gallons)					
17	38	39,462	39,060	24,811			402		N	
18	34	47,511	39,060	24,729			8,451		N	
19	35	44,428	39,096	24,800			5,332		N	
20	35	43,697	39,060	24,800			4,637		N	
21	21	45,210	39,060	24,800			7,150		N	
22	—	47,153	—	24,818			47,153			
23	—	43,677	—	—			43,677			
24	30	45,629	45,650	24,667			(021)		N	
25	25	45,030	45,650	24,800			(620)	AM	N	
26	25	45,000	—	24,800			45,000	AM		
27	27	45,000	45,650	24,800			(650)		N	
28	24	45,555	—	24,800			45,555			
29	21	45,729	—	24,800			45,729			
30	—	43,548	—	—			43,548			
31										

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

Comments: _____

LEACHATE DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) April, 1995

Date	Sump No. 3 (Inches)	(1) Phase IV Riser	(1) Phase IV Piezometer	Phase III Riser	Sump No. 4 (Inches)	Depth in 500K Tank (feet)	Storage 500K Tank (gallons)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)	Initials
		(Inches)	(Inches)	(Inches)				Contractor (gallons)	County (gallons)			
1	12	17	N/A	3	63	4	120 K	62,372	18,683		0.6	
2	12	—		—	—	—	—	—	—		—	
3	12	17		4	64	4	120 K	62,170	12,526	8,500	0	
4	12	16		4	62	4	120 K	—	—	17,000	0	
5	12	16		4	60	5	150 K	31,039			0	
6	12	16		4	62	6	180 K	—			0.6	
7	12	15		3	60	8	240 K	49,710			0	
8	12	16		3	62	9	270 K	43,313	18,464		0	
9	12	—		—	—	—	—	—	—		0	
10	12	16		3	63	12	360 K	49,533	12,299	17,000	0	
11	12	16		3	60	11	330 K	37,516	12,134	17,000	0	
12	12	16		3	59	12	360 K	31,355	18,662		0	
13	12	16		3	24	12	360 K	25,200			0	
14	12	16		4	57	12	360 K	37,393			0	
15	23	27		4	58	11	330 K	24,858			0	
16								—	—		0	
Leachate Hauled Subtotal												

(1) If depth is greater than 27.6 inches (2.3 feet): Contact Supervisor Immediately. Complete Evaluation Report Form.

Comments: _____

LEACHATE DEPTH/QUANTITIES DATA FORM
SOUTHEAST COUNTY LANDFILL

(Month/Year) April, 1995

Date	Sump No. 3 (inches)	(1) Phase IV Riser (inches)	(1) Phase IV Piezometer (inches)	Phase III Riser (inches)	Sump No. 4 (Inches)	Depth in 500K Tank (feet)	Storage 500K Tank (gallons)	Leachate Hauled		Leachate Recirculation (gallons)	Rainfall (inches)	Initials
								Contractor (gallons)	County (gallons)			
17	12	16	N/A	3	60	13	390 K	25,067			0	
18	12	16	-	3	28	14	420 K	37,557			0	
19	12	16	-	3	57	14	420 K	49,974			0	
20	12	16	-	3	56	14	420 K	49,808			0	
21	12	16	-	4	58	13	390 K	49,840			0	
22	12	15	-	3	56	12	360 K	43,897			0	
23	-	-		-	-	-	-				0	
24	12	16	-	4	59	14	420 K	49,824			0	
25	12	16	-	3	42	14	420 K	43,406	6,200		0.2	
26	12	16	-	3	55	13	390 K	37,284	12,360		0.2	
27	12	16	-	3	55	12	360 K	50,244	18,773		0.0	
28	12	16		4	48	11	330 K	43,359	6,200		0.0	
29	12	16		4	53	10	300 K	49,811	-		0.0	
30	-	-		-	-	-	-		-		-	
31												
Leachate Hauled Subtotal												

(1) If depth is greater than 27.6 inches (2.3 feet): Contact Supervisor Immediately. Complete Evaluation Report Form.

Comments: _____

Leachate Hauled Month Total: 1120,831

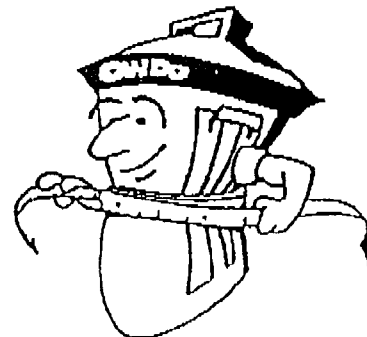


Hillsborough County

Department of Solid Waste * P.O. Box 1110
Tampa, FL 33601

Sender's Telephone Number: 276-29

24-Hour FAX Line - (813) 276-2960



"Together We CAN-DO It"

DATE: 5-26-95

TO: Kim Ford

FAX: 744-6125 SUBJECT: _____

FROM: Patty Bury

COMMENTS (If Any): Hard Copy will follow

Total Pages Sent (including cover sheet) 3

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HILLSBOROUGH COUNTY

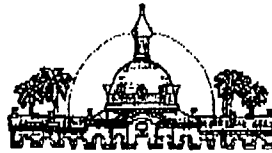
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May 25, 1995

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

RE: Southeast County Landfill - Leachate Management

Dear Mr. Ford:

The Hillsborough County Department of Solid Waste (DSW) has received the Florida Department of Environmental Protection's (DEP) May 12, 1995 correspondence concerning the DSW's leachate management efforts at the County's Southeast County Landfill (Landfill).

As discussed in our most recent additional information submittal for the Landfill permit renewal, the DSW has proposed to install a temporary piezometer in Phase IV of the Landfill to serve as a measurement device for determining the leachate level in the Landfill in the area of greatest clay settlement. While the DSW can appreciate the DEP's suggestion to install the piezometer as soon as possible, the DSW requests that the DEP first review and approve the piezometer design and installation location. The design and location information will be provided to the DEP, along with the final additional information submittal, on May 26, 1995.

The second issue raised by the DEP's May 12, 1995 letter pertains to the spray irrigation quantities for the month of March 1995. The construction permit for the Leachate Treatment and Reclamation Facility (LTRF) does not obligate the DSW to spray irrigate a specific quantity of treated leachate effluent. However, the DSW does intend to maximize the amount of effluent which is disposed of through spray irrigation versus off-site hauling. The DSW does not spray irrigate on Saturdays or Sundays since the LTRF contractor is not on site. This accounts for 8 days of 0 gallons per day (gpd). No spray irrigation was conducted on March 8, 1995 due to a rain event.

Mr. Kim Ford

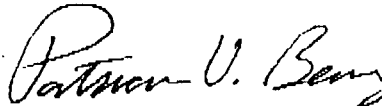
May 25, 1995

Page Two

On March 22 and 23, 1995, no spray irrigation occurred since a contractor representative was not present for those days. Only 12,000 gpd were spray irrigated on March 24, 1995 due to the low level in the effluent basin. In addition, the DSW is required to manage the spray irrigation system in accordance with the Landfill filling sequence. During March 1995, the filling activities for Phase IV interfered with the operation of irrigation zones 7 and 8 due to the location of the working phase and sprinkler heads. This situation limited the amount of spray irrigation for the month.

Should you require additional information concerning this matter or if I can be of further assistance, please call at 276-2908.

Sincerely,



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

xc: Matt Matthews, DSW
Steve Hamilton, SCS
Steve Morgan, DEP
Paul Schipfer, EPC

HILLSBOROUGH COUNTY

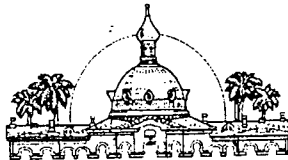
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May 23, 1995

RECEIVED
MAY 25 1995

Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

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

RE: Southeast County Landfill - Leachate Management

Dear Mr. Ford:

In accordance with the Hillsborough County Department of Solid Waste's (DSW) Leachate Management Plan for the Southeast County Landfill (Landfill), the DSW is providing the April 1995 Water Balance Report Forms and Field Data Entry Forms for the Landfill. In addition, the DSW is providing the April 1995 effluent and leachate field data forms for the Landfill and the daily leachate and collection system evaluation reports.

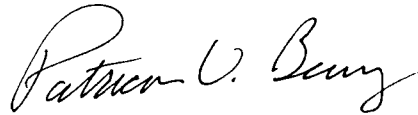
This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as an update on the DSW's leachate management efforts for the Landfill. This information is being provided in response to both the permitting and enforcement issues at hand.

As can be seen from the April 1995 Leachate Water Balance Report, SCS Engineers, the DSW's landfill engineering consultant, has estimated that the leachate level within the Landfill, based on the Phase IV Riser leachate level, is approximately 16 inches over the liner. The depth of leachate measured in the Phase III Riser is between 3 and 4 inches.

Mr. Kim Ford
May 23, 1995
Page Two

Should you have any questions concerning the information provided, please call at 276-2908.

Sincerely,

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

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

Attachments

xc: Matt Matthews, DSW
Steve Hamilton, SCS
Steve Morgan, DEP
Paul Schipfer, EPC

LEACHATE WATER BALANCE REPORT FORM

APRIL 1995

SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FL

Day	final	active	Int.	Rainfall (in.)	Depth in Effluent Pond (in.)	Est. Depth Over Liner (in.)	Est. Landfill Storage (gal.)	Leachate Pumped to LTRF (gal.)	Leachate in 500K Tank (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Recir- culation (gal.)	Effluent Pond Storage (gal.)	Effluent Sprayed (gal.)	Effluent Recir- culation (gal.)	Total Effluent Hauled (gal.)	Landfill Evapor. (gal.)
1	23.2	5.0	92.2	0.6	23.0	17.0	1,264,000	163,000	115,000	35,000	81,000	0	71,000	0	0	0	0
2	23.2	5.0	92.2	NR	NR	NR	NR	NR	NR	47,000	0	0	NR	0	0	0	0
3	23.2	5.0	92.2	0.0	42.0	17.0	1,264,000	126,000	115,000	43,000	75,000	9,000	138,000	46,000	0	0	44,000
4	23.2	5.0	92.2	0.0	40.0	16.0	1,189,000	89,000	115,000	43,000	0	17,000	131,000	46,000	0	0	51,000
5	23.2	5.0	92.2	0.0	35.0	16.0	1,189,000	104,000	144,000	44,000	31,000	0	113,000	46,000	0	0	37,000
6	23.2	5.0	92.2	0.6	29.0	16.0	1,189,000	103,000	173,000	46,000	0	0	92,000	46,000	0	0	37,000
7	23.2	5.0	92.2	0.0	33.0	15.0	1,115,000	125,000	230,000	46,000	50,000	0	106,000	0	0	0	0
8	23.2	5.0	92.2	0.0	21.0	16.0	1,189,000	236,000	259,000	44,000	62,000	0	65,000	0	0	0	0
9	23.2	5.0	92.2	0.0	NR	NR	NR	NR	NR	43,000	0	0	NR	0	0	0	0
10	23.2	5.0	92.2	0.0	45.0	16.0	1,189,000	93,000	345,000	43,000	62,000	17,000	150,000	39,000	0	0	45,000
11	23.2	5.0	92.2	0.0	39.0	16.0	1,189,000	141,000	317,000	45,000	50,000	17,000	127,000	39,000	0	12,000	45,000
12	23.2	5.0	92.2	0.0	35.0	16.0	1,189,000	95,000	345,000	45,000	50,000	0	113,000	39,000	0	19,000	32,000
13	23.2	5.0	92.2	0.0	31.0	16.0	1,189,000	71,000	345,000	46,000	25,000	0	99,000	39,000	0	25,000	32,000
14	23.2	5.0	92.2	0.0	27.0	16.0	1,189,000	53,000	345,000	44,000	37,000	0	85,000	27,000	0	12,000	22,000
15	23.2	5.0	92.2	0.0	21.0	27.0	2,546,000	185,000	317,000	55,000	25,000	0	65,000	0	0	25,000	0
16	23.2	5.0	92.2	0.0	NR	NR	NR	NR	NR	47,000	0	0	NR	0	0	0	0
17	23.2	5.0	92.2	0.0	38.0	16.0	1,189,000	93,000	374,000	39,000	25,000	0	124,000	39,000	0	25,000	32,000
18	23.2	5.0	92.2	0.0	36.0	16.0	1,189,000	85,000	403,000	48,000	38,000	0	118,000	39,000	0	25,000	32,000
19	23.2	5.0	92.2	0.0	35.0	16.0	1,189,000	94,000	403,000	44,000	50,000	0	113,000	39,000	0	25,000	32,000
20	23.2	5.0	92.2	0.0	35.0	16.0	1,189,000	65,000	403,000	44,000	50,000	0	113,000	39,000	0	25,000	32,000
21	23.2	5.0	92.2	0.0	21.0	16.0	1,189,000	66,000	374,000	45,000	50,000	0	65,000	39,000	0	25,000	32,000
22	23.2	5.0	92.2	0.0	NR	15.0	1,115,000	192,000	345,000	47,000	44,000	0	NR	0	0	25,000	0
23	23.2	5.0	92.2	0.0	NR	NR	NR	NR	NR	44,000	0	0	NR	0	0	0	0
24	23.2	5.0	92.2	0.0	30.0	16.0	1,189,000	95,000	403,000	48,000	50,000	0	95,000	46,000	0	25,000	37,000
25	23.2	5.0	92.2	0.2	25.0	16.0	1,189,000	66,000	403,000	45,000	50,000	0	78,000	46,000	0	25,000	37,000
26	23.2	5.0	92.2	0.2	25.0	16.0	1,189,000	66,000	374,000	45,000	50,000	0	78,000	0	0	25,000	0
27	23.2	5.0	92.2	0.0	27.0	16.0	1,189,000	85,000	345,000	45,000	69,000	0	85,000	46,000	0	25,000	37,000
28	23.2	5.0	92.2	0.0	24.0	16.0	1,189,000	66,000	317,000	46,000	50,000	0	75,000	0	0	25,000	0
29	23.2	5.0	92.2	0.0	21.0	16.0	1,189,000	168,000	288,000	46,000	50,000	0	65,000	0	0	25,000	0
30	23.2	5.0	92.2	NR	NR	NR	NR	NR	NR	44,000	0	0	NR	0	0	0	0
Total				1.60	738.0	411.0	31,084,000	2,725,000	7,597,000	1,344,000	1,124,000	60,000	2,362,000	700,000	0	393,000	616,000
Daily Avg				0.06	30.8	16.4	1,243,000	109,000	304,000	45,000	37,000	2,000	98,000	23,000	0	13,000	21,000

Notes:

1. NR = No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Columns III and IV, field measured.
4. Column V, estimated from depth in Phase IV riser.
5. Column VI, estimated from Column V and approximate volume with top of clay elevation at 118.5 feet.
6. Column VII, estimated from Column IX + Column X + Change in Storage of 500,000 gal. tank.
7. Column VIII, estimated from depth in 500,000 gal. leachate tank.
8. Columns IX and XIII, quantities from flow meters.
9. Columns X, XI, XIV, and XV, quantities calculated from truck weight.
10. Column XVI, 80.8% of the daily values from Columns XI, XIII and XIV.

Revised by BWP, 4/13/95.

FIELD DATA ENTRY FORM

APRIL 1995

SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FL

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
Day	Active Area (ac.)	Depth in Effl. Pond (in.)	Stormwater In Sump No. 4 (in.)	Phase III Riser (in.)	Phase IV Riser (in.)	Phase IV Piezometer (in.)	Rainfall (in.)	Leachate Contractor (gal.)	Hauled County (gal.)	Leachate Recirc. (gal.)	Effluent Contractor (gal.)	Hauled County (gal.)	Effluent Recirc. (gal.)	Leachate Treated at LTRF (gal.)	Effluent Sprayed (gal.)	Depth in 500K Tank (ft.)
1	5.0	23.0	63.0	3.0	17.0	NR	0.6	62,372	18,683	0	0	0	0	34,904	0	4.0
2	5.0	NR	NR	NR	NR	NR	NR	NR	0	0	0	0	0	46,847	0	NR
3	5.0	42.0	64.0	4.0	17.0	NR	0.0	62,170	12,526	8,500	0	0	0	43,303	45,570	4.0
4	5.0	40.0	62.0	4.0	16.0	NR	0.0	NR	0	17,000	0	0	0	42,906	45,570	4.0
5	5.0	35.0	60.0	4.0	16.0	NR	0.0	31,039	0	0	0	0	0	43,880	45,570	5.0
6	5.0	29.0	62.0	4.0	16.0	NR	0.6	NR	0	0	0	0	0	45,703	45,570	6.0
7	5.0	33.0	60.0	3.0	15.0	NR	0.0	49,710	0	0	0	0	0	46,217	0	
8	5.0	21.0	62.0	3.0	16.0	NR	0.0	43,313	18,464	0	0	0	0	44,203	0	
9	5.0	NR	NR	NR	NR	NR	0.0	NR	0	0	0	0	0	43,319	0	NR
10	5.0	45.0	63.0	3.0	16.0	NR	0.0	49,533	12,299	17,000	0	0	0	43,448	39,060	12.0
11	5.0	39.0	60.0	3.0	16.0	NR	0.0	37,516	12,134	17,000	12,467	0	0	45,098	39,060	11.0
12	5.0	35.0	59.0	3.0	16.0	NR	0.0	31,355	18,662	0	18,622	0	0	45,223	39,060	12.0
13	5.0	31.0	24.0	3.0	16.0	NR	0.0	25,200	0	0	24,912	0	0	46,298	39,060	12.0
14	5.0	27.0	57.0	4.0	16.0	NR	0.0	37,393	0	0	12,358	0	0	44,323	27,240	12.0
15	5.0	21.0	58.0	4.0	27.0	NR	0.0	24,858	0	0	24,835	0	0	54,960	0	11.0
16	5.0	NR	NR	NR	NR	NR	0.0	NR	0	0	0	0	0	47,190	0	NR
17	5.0	38.0	60.0	3.0	16.0	NR	0.0	25,067	0	0	24,811	0	0	39,462	39,060	13.0
18	5.0	36.0	28.0	3.0	16.0	NR	0.0	37,557	0	0	24,729	0	0	47,511	39,060	14.0
19	5.0	35.0	57.0	3.0	16.0	NR	0.0	49,974	0	0	24,800	0	0	44,428	39,096	14.0
20	5.0	35.0	56.0	3.0	16.0	NR	0.0	49,808	0	0	24,800	0	0	43,697	39,060	14.0
21	5.0	21.0	58.0	4.0	16.0	NR	0.0	49,840	0	0	24,800	0	0	45,210	39,060	13.0
22	5.0	NR	56.0	3.0	15.0	NR	0.0	43,897	0	0	24,818	0	0	47,153	0	12.0
23	5.0	NR	NR	NR	NR	NR	0.0	NR	0	0	0	0	0	43,677	0	NR
24	5.0	30.0	59.0	4.0	16.0	NR	0.0	49,824	0	0	24,667	0	0	45,629	45,650	14.0
25	5.0	25.0	42.0	3.0	16.0	NR	0.2	43,406	6,200	0	24,800	0	0	45,030	45,650	14.0
26	5.0	25.0	55.0	3.0	16.0	NR	0.2	37,284	12,360	0	24,800	0	0	45,000	0	13.0
27	5.0	27.0	55.0	3.0	16.0	NR	0.0	50,244	18,773	0	24,800	0	0	45,000	45,650	1
28	5.0	24.0	48.0	4.0	16.0	NR	0.0	43,359	6,200	0	24,800	0	0	45,555	0	1
29	5.0	21.0	53.0	4.0	16.0	NR	0.0	49,811	0	0	24,800	0	0	45,729	0	10.0
30	5.0	NR	NR	NR	NR	NR	NR	NR	0	0	0	0	0	43,548	0	NR
1	First day of next month. Record depth in 500,000 gal tank only.															1.0

Notes:

1. NR = No Records.
2. Columns II-VIII, field measured.
3. Column VI, if level exceeds 27.6 inches (2.3 ft.), leachate withdrawal from landfill must increase.
4. Column VII, Phase IV piezometer not yet constructed.
5. Columns IX-XIV, quantities calculated from truck weight.
6. Columns XV and XVI, quantities from flow meters.
7. Column XVII, field measured.

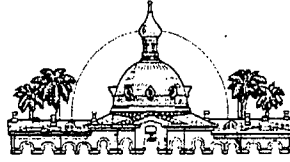
HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS

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Senior Assistant County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Cretta Johnson
Jimmie Keel
Robert Taylor

May 23, 1995

OK to status

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

RECEIVED
MAY 25 1995

Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

RE: Southeast County Landfill - Phase IV Cleanout

Dear Mr. Ford:

The Hillsborough County Department of Solid Waste (DSW) is providing the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission (EPC) with the Phase IV Cleanout Construction Observations and Documentation Report (Report) prepared by SCS Engineers for the Southeast County Landfill (Landfill).

The Phase IV final perimeter cleanout was constructed on April 3, 1995 in accordance with the detail drawing and information provided to the DEP and the EPC as part of the Landfill's 1989 permit renewal information. Both the detail drawing and 1989 correspondence are provided as an attachment to the Report.

Should you have any questions concerning the Report, please call at 276-2908.

Sincerely,

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

Attachment

xc: Steve Hamilton, SCS
Paul Schipfer, EPC
Greg Walk, WMI

RECEIVED
MAY 25 1995

Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

**PHASE IV CLEANOUT CONSTRUCTION
OBSERVATIONS AND DOCUMENTATION REPORT**

**SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA**

For:

Hillsborough County Department of Solid Waste
601 East Kennedy Boulevard
P.O. Box 1110
Tampa, Florida 33601

Submitted by:

SCS ENGINEERS
3012 U.S. Highway 301 North
Suite 700
Tampa, Florida 33619
(813) 621-0080

May 19, 1995
Job No. 0990018.35



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BACKGROUND	1
Introduction	1
Summary of Construction	2
Weather/Site Conditions	2
Excavation	2
Pipe Fabrication	4
Installation of Cleanout	5
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Appendices

- A Letter Dated November 2, 1989 From County to FDEP



TABLES

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2	Cleanout Detail Located in Phase IV	6



BACKGROUND

On October 19, 1989, a meeting was held between the Florida Department of Environmental Protection (FDEP), the Environmental Protection Commission of Hillsborough County (EPC), and Hillsborough County Department of Solid Waste (HCDSW). In that meeting FDEP and EPC requested that cleanouts be incorporated into the design of the Southeast County Landfill (SELF) leachate collection and removal system (LCRS) for Phases V and VI, and Phase IV where appropriate. In a letter dated November 2, 1989 (Appendix A), the HCDSW submitted the final additional information requested by FDEP and EPC. The letter contains drawings which indicate that three additional perimeter cleanouts would be constructed in Phases IV, V, and VI (Appendix A).

In accordance with the letter dated November 2, 1989, the final perimeter cleanout was constructed in Phase IV on April 3, 1995. In addition, as of October 29, 1991, five perimeter cleanouts were constructed along the perimeter of Phases V and VI. The cleanouts in Phases V and VI are shown in Appendix S of the Construction Quality Assurance Monitoring of Phases V and VI, dated May 1992, by GeoSyntec Consultants, sheet 2 of 5 of the as-built.

INTRODUCTION

The SELF is located on County Road 672, eight miles east of U.S. Highway 301. Figure 1 shows that the location of the Phase IV cleanout construction at the SELF is near the western perimeter of the landfill between Phases IV and VI.

This report presents the observations performed by SCS Engineers (SCS) of the construction of the perimeter cleanout in Phase IV. The excavation and installation of the cleanout were performed by personnel from Waste Management Inc.(WMI) and the HCDSW. The cleanout was fabricated by Fife Industrial Pipe Company (FIFE). The services provided by SCS included observation and documentation of the construction of the cleanout. The collected data was recorded in a time/event log.



SUMMARY OF CONSTRUCTION

At 9:00 a.m. on April 3, 1995, WMI, HCDSW, and SCS were present to begin construction of the cleanout. Representatives from all parties involved in the construction work are listed in Table 1.

**TABLE 1. REPRESENTATIVES PRESENT
SOUTHEAST COUNTY LANDFILL**

HCDSW	WMI	SCS	FIFE
Marvin Spradley	Greg Walk	Beres Powell	Randy Myers
Harrell Buckner	Gene White		
Troy McKee	Roger Titters		
Walt Grey	Donny Mabry		

Weather/Site Conditions

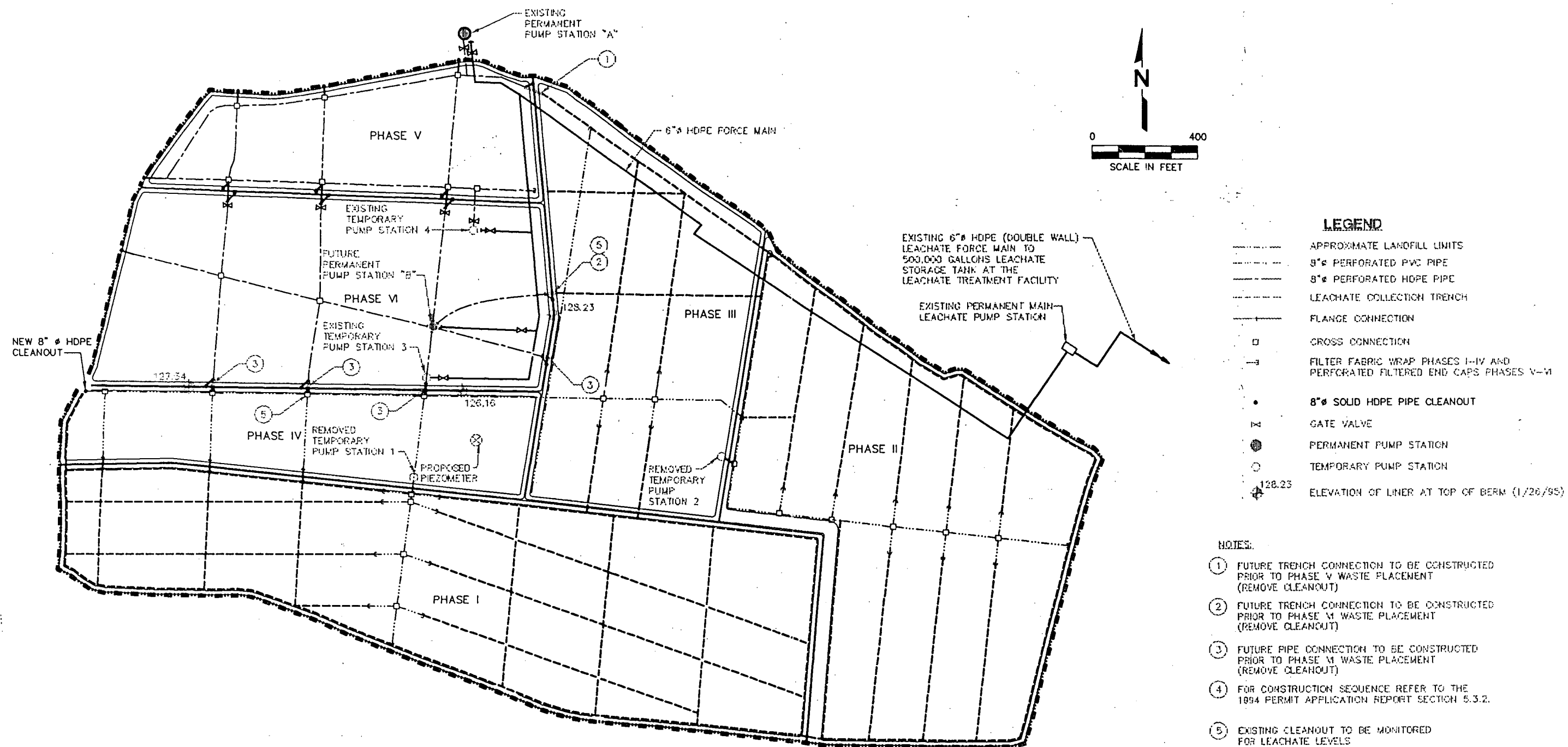
The sky was clear and sunny with a light breeze. The temperature was approximately 80° Fahrenheit, and the site was in good condition with no standing water present.

Excavation

Excavation began approximately 40 feet east of the perimeter berm on the western perimeter of the landfill between Phases IV and VI and approximately 20 feet south of the berm dividing Phases IV and VI (see Figure 1). Excavation was accomplished by use of a



090018.35\CLEANOUT



DRAWING COMPILED FROM THE FOLLOWING AS-BUILT DRAWINGS:
 PHASE I - CAMP DRESSER & MCKEE, INC. MAY, 1984
 PHASE II - FLA LAND CONSULTANTS 9-5-86
 PHASES III & IV - GEOSERVICES INC. 3-14-89
 PHASES V & VI - GEOSYNTEC OF BOYNTON BEACH, FL
 AND HOLLINGSWORTH & ASSOCIATES, INC. 7-14-92

Figure 1. Location Of New Cleanout In Phase IV, Southeast Landfill.

John Deere track excavator operated by a HCDSW employee under the direction of WMI. The excavation began by locating the gravel pack surrounding the LCRS PVC pipe header, making sure to stay at least 20 feet from the liner between Phases IV and VI. Once the gravel pack was located, a sump was created approximately 10 feet to the south to help drain the excavation. No pumping off-site was necessary. The excavation then proceeded in a westerly direction to locate the end of the header pipe. As the excavation proceeded, to determine if the excavation was in alignment with the pipe and to minimize disturbance to the pipe or gravel pack, the excavation proceeded downward in approximately 6-inch lifts.

At 12:20 p.m., the end of the pipe was located. The track excavator then created an excavation with side slopes ranging from approximately 1H:1V to 3H:1V to allow for safe entry. About an hour later (1:30 p.m.), FIFE arrived at the site. At 2:35 p.m. a County employee arrived to certify the excavation for confined space entry. The excavation was certified. No hydrogen sulfide or flammables were detected.

At 3:30 p.m., WMI used a chain saw to cut off the end of the pipe. By this time, the perforated PVC pipe was half full (approx. 4 inches deep) of leachate. Also at 3:30 p.m., the track excavator operator left the site. The new track excavator operator did not arrive until 4:08 p.m.

Pipe Fabrication

The preparation of the PVC pipe continued while FIFE fabricated the non-perforated 8-inch diameter HDPE cleanout. The cleanout was fabricated with the materials specified below and in accordance with FIFE fabrication specifications:

1. 40 linear feet of 8-inch outer diameter (OD) high density polyethylene (HDPE), Driscopipe 1000, SDR 17.
2. 8-inch 18.5 Deg. HDPE fabricated elbow, SDR 17.
3. 8-inch PVC schedule 80 glue-on flange.



4. 8-inch HDPE threaded cap.
5. 316-stainless steel bolts, nuts, and washers.
6. 8-inch fusion unit.

The cleanout detail is shown in Figure 2. In preparation for laying the cleanout, the track excavator excavated from the existing LCRS perforated PVC pipe toward the landfill perimeter on an approximate 3H:1V grade. In creating this trench, leachate began to flow from the gravel pack that surrounds the perimeter of the landfill into the excavation created for the cleanout. By the time backfilling was to begin (4:55 p.m.), the leachate level appeared to stabilize at 3 inches above the top of the pipe.

Installation Of Cleanout

At 4:30 p.m., FIFE completed the fabrication of the cleanout and left the site. Once the cleanout was fabricated and the existing pipe prepared, WMI employees entered the excavation to line up the cleanout with the existing pipe. A chain and the track excavator were used to hoist the cleanout high enough into the air for proper alignment. The PVC flange that was connected to the HDPE flange was then slipped over the end of the existing PVC pipe. By 4:40 p.m. the HDPE cleanout had been connected to the perforated PVC pipe. Glue was used to connect the PVC flange to the existing PVC pipe.

Backfilling

At 4:55 p.m., the track excavator began to backfill with clean fill taken from the borrow area. The track excavator backfilled a minimum of 6 inches of clean fill over the cleanout. At 5:20 p.m., the track dozer began to backfill with the excavated waste. Before leaving the site at 5:00 p.m., Greg Walk instructed the track dozer operator to create a berm around the construction area and to finish backfilling the next day. Backfilling was approximately 80 percent completed when the dozer stopped backfilling to create the berm. By 5:35 p.m. the berm was completed and all persons had left the site.



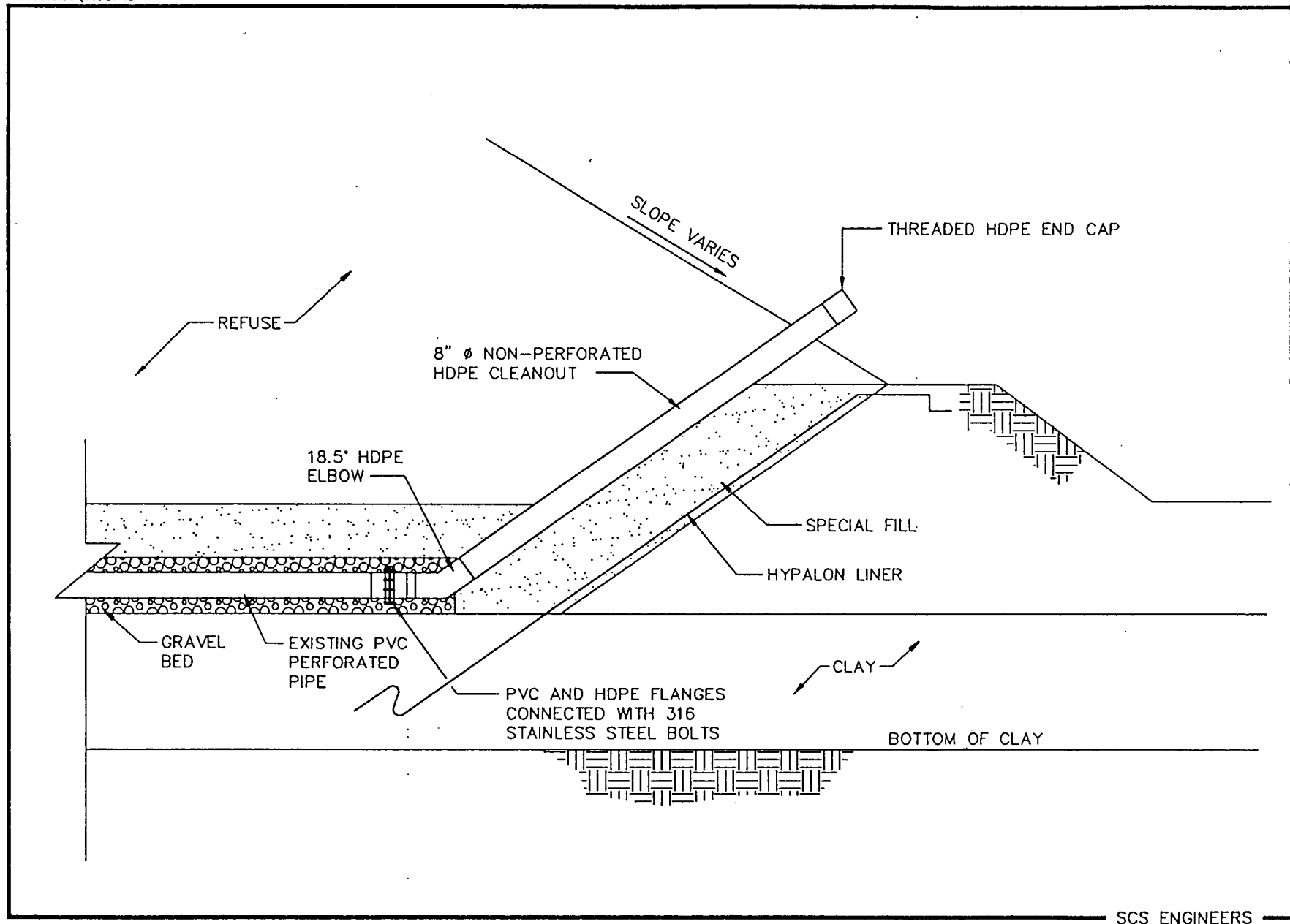


Figure 2. Cleanout Detail Located In Phase IV.

APPENDIX A
LETTER DATED NOVEMBER 2, 1989
FROM COUNTY TO FDEP



① Gayle ✓
② 985027-11. 6/1/89. —
BOARD OF COUNTY COMMISSIONERS
HILLSBOROUGH COUNTY, FLORIDA

Office of the County Administrator

Larry J. Brown
County Administrator



P.O. Box 1110
Tampa, Florida 33601

November 2, 1989

Mr. Kim Ford, P.E.
Florida Department of Environmental Regulation
4520 Oak Fair Boulevard
Tampa, Florida 33610-7347

Dear Mr. Ford:

As requested during our meeting on October 19, 1989, Hillsborough County is submitting the detail drawing for the leachate system cleanouts for the construction of Phases V and VI and modification of Phase IV of the Southeast County Landfill.

As discussed during our meeting, the Florida Department of Environmental Regulation (DER) and the Hillsborough County Environmental Protection Commission (EPC) concurred with the County's request to include the leachate collection system for Phases V and VI in the permit renewal along with the other construction activities of landclearing, placement of special fill and the installation of the synthetic liner. DER and EPC did request that cleanouts be incorporated into the leachate system design for Phases V and VI and in Phase IV where appropriate. The attached detail drawing prepared by SCS Engineers provides for three perimeter cleanouts.

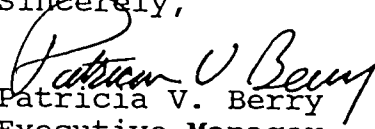
During the meeting, the County also requested that any revisions to the wellpoint construction details be submitted for DER and EPC approval prior to the placement of solid waste in Phase VI rather than under this permit renewal. The wellpoint redesign is currently being analyzed by SCS Engineers and sufficient time is necessary to make a recommendation on any potential design modifications.

This submittal should provide the final additional information requested by DER and EPC for issuance of the revised permit Intent to Issue for the Southeast County Landfill. The County looks forward to receiving the revised Intent within the near future.

Mr. Kim Ford
November 2, 1989
Page Two

Please call at #272-6674 if you have any questions concerning this submittal.

Sincerely,

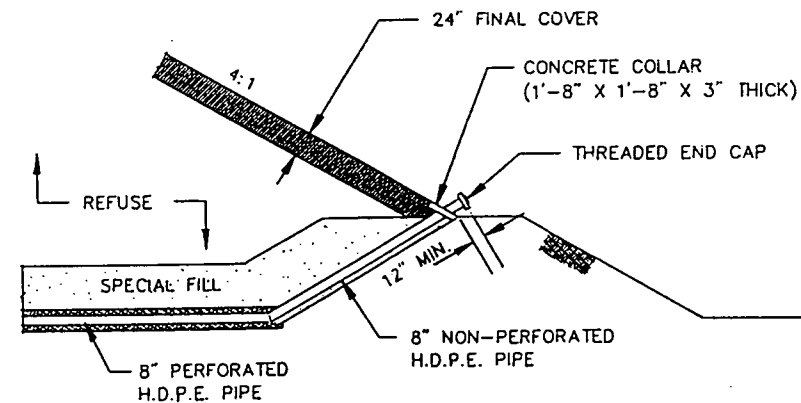
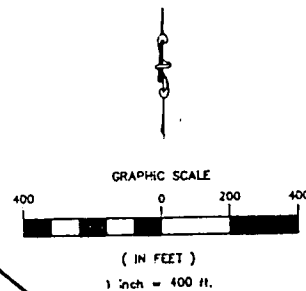
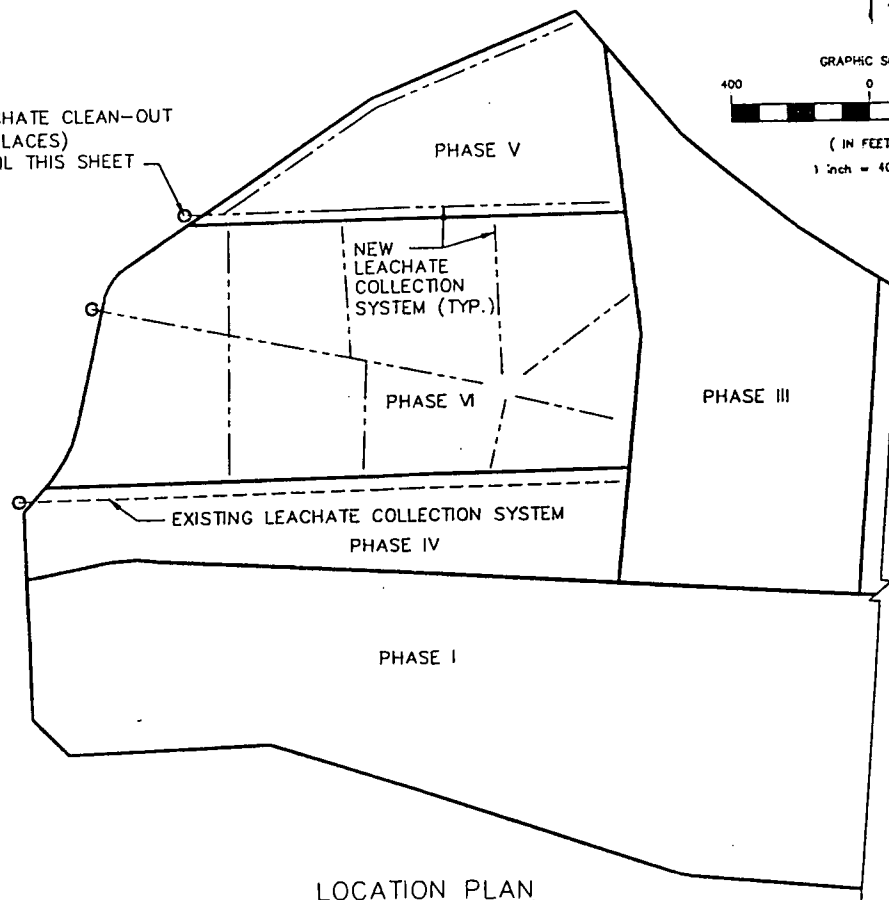

Patricia V. Berry
Executive Manager
Department of Solid Waste

pvb/

Attachment

cc: Daryl H. Smith, DSW
Paul Schipfer, EPC
Bob Gardner, SCS

NEW LEACHATE CLEAN-OUT
(TYP. 3 PLACES)
SEE DETAIL THIS SHEET



LEACHATE PIPE
PERIMETER CLEAN-OUT
NOT TO SCALE

NOTE:
FOR CONSTRUCTION OF REMAINDER OF PHASE V & VI
SEE CAMP DRESSER & MCKEE, INC. DRAWINGS, DATED
APRIL 19, 1989.

Robert B. [Signature]
10/31/89

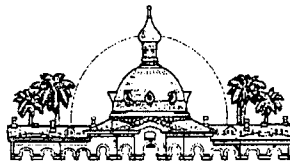
HILLSBOROUGH COUNTY

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Senior Assistant County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Cretta Johnson
Jimmie Keel
Robert Taylor

May 11, 1995


Mr. Kim Ford, P. E.
Solid Waste Section - Division of Waste Management
Florida Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

RECEIVED
MAY 16 1995

Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

RE: Certification of Construction Completion Inspection on April 28, 1995 for the Hillsborough County Southeast County Landfill Leachate Treatment and Reclamation Facility, Permit Number; SC29-199393

Dear Mr. Ford:

On April 28, 1995, an inspection was conducted for Certification of Construction Completion of the above referenced project by Kim Ford of the Florida Department of Environmental Protection (FDEP), Paul Schipfer of the Hillsborough County Environmental Protection Commission (HCEPC), Rich Siemering of SCS Engineers (SCS) and John Johnson of the Hillsborough County Department of Solid Waste (HCDSW).

During the inspection, the FDEP and HCEPC requested that the HCDSW provide a written response to concerns regarding the Leachate Treatment and Reclamation Facility's (LTRF) truck loading stands/leachate spill containment and the main leachate sump pump/irrigation sump pump repairs. In response to the FDEP's and the HCEPC's request, the HCDSW is providing the following information:

Truck Loading Stands/Leachate Spill Containment

The LTRF has two concrete truck loading stands; one is located at the main Facility and the other is located at the Main Leachate Pump Station. These two loading areas include a center line trench drain which is pipe-drained to a sump at that location. On Monday, May 1, 1995, the HCDSW simulated a tanker loading operation spill with clean LTRF production well water. The test spill waters flowed down the sides of the tanker and into the center trench drain from the tankers underside (see attached photos) thus demonstrating the effectiveness of the design of the truck loading stands and trench drains.

Mr. Kim Ford
May 11, 1995
Page 2

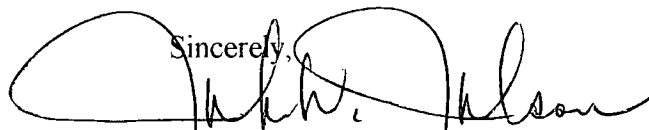
Main Leachate Sump Pump #1/Irrigation Sump Pump #2

On March 12, 1995, the HCDSW personnel observed Main Leachate Pump No. 1 to be excessively loud and vibrating. The LTRF contractor, Great Monument Construction Company (GMCC) disabled and removed the pump for inspection to determine the need for repairs. Upon inspection of the pump, it was observed to have suffered bearing failure which in turn damaged the pump shaft. The pump manufacturer's representative contends that the bearing failure resulted from abrasives in and around the carbon graphite bearing. The source of the abrasives has not yet been determined. In addition to pump repair costs, GMCC has been requested to submit pricing for the retrofitting of the existing two main leachate pumps with a flush water lubrication system, including an in-line filter as recommended and manufactured by the pump manufacturer, Crane-Deming, Inc. This effort will protect the bearings from future contact with sand and/or other abrasives.

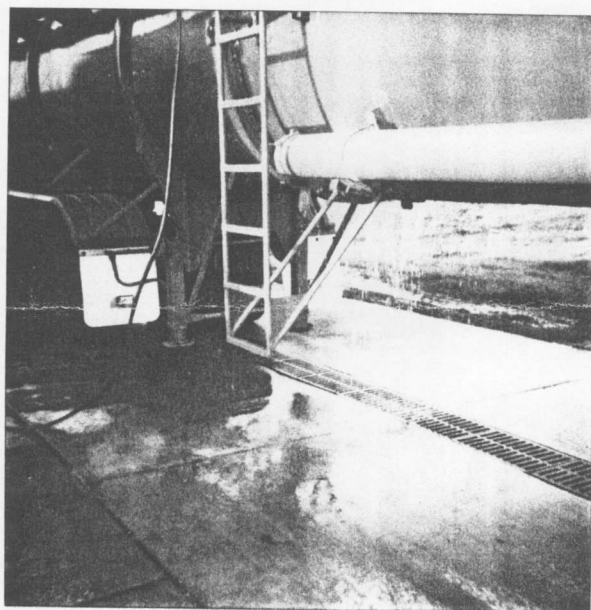
On February 6, 1995, during a tanker (effluent) filling operation at the main leachate pump station, the County's Contract hauler pumped the effluent basin below the 6 inch suction line. This action caused irrigation pump #2 to run dry, resulting in significant bearing and shaft damage. GMCC has recently submitted pricing for repairs/replacement of the pump and the HCDSW is currently processing the Allowance Authorization Release (AAR) to GMCC. The County's contract hauler has been given instruction, both verbal and written, by the HCDSW on proper procedures for pumping/filling operations at both the leachate treatment plant and main pump station.

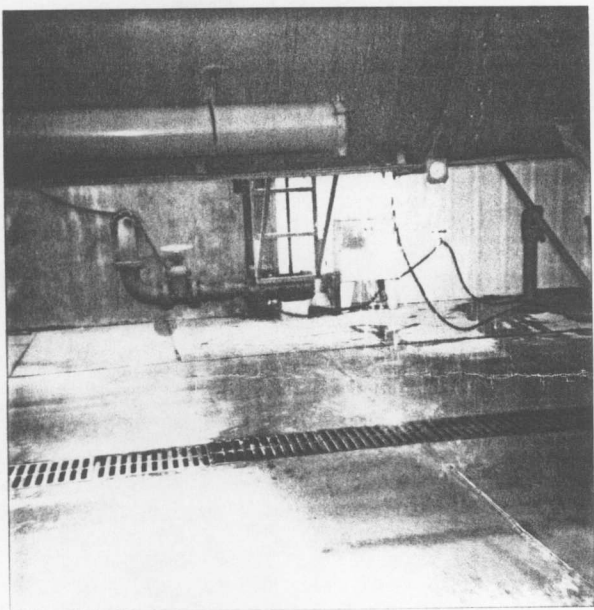
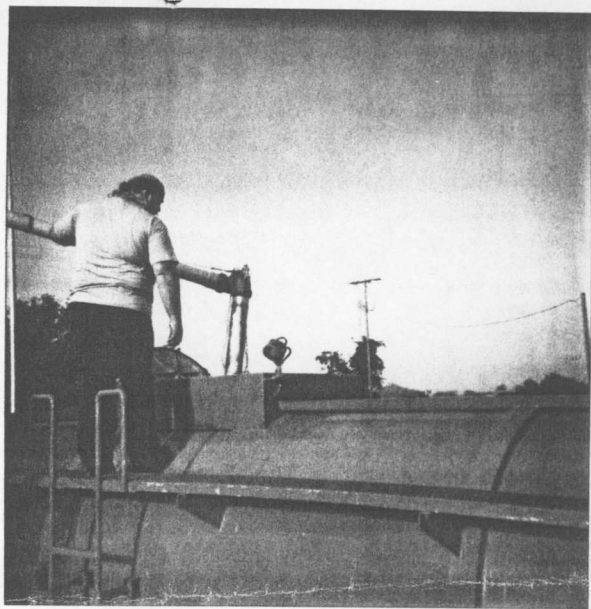
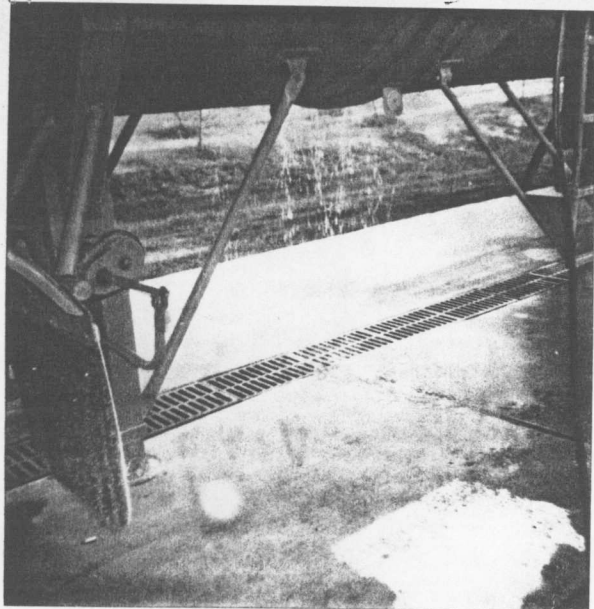
The HCDSW will promptly notify the FDEP upon the reinstallation of both the main leachate pump #1 and irrigation pump #2. In addition, the HCDSW will notify the FDEP of any future disabling/removal of any LTRF pumps for anything other than routine maintenance or service.

The HCDSW hopes that the information provided satisfies the FDEP's and the HCEPC's concerns regarding the County's LTRF. Should you have any other questions concerning this matter, please contact me at 276-2927.

Sincerely,

John W. Johnson, Engineer I
Project Manager,
Department of Solid Waste

c: Patricia V. Berry, DSW
Paul Schipfer, HCEPC
Steve Hamilton, SCS





HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS

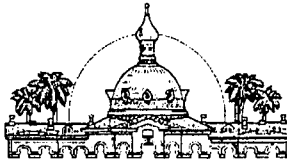
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RECEIVED
MAY 16 1995



Department of Environmental Protection
SOUTHWEST DISTRICT

BY _____

May 18, 1995

X
Florida Department of
Environmental Protection
ATTN: Kim Ford, Professional Engineer I
3804 Coconut Palm Dr.
Tampa, Fl 33619

Dear Mr Ford,

On behalf of the Hillsborough County Department of Solid Waste, I would like to take this opportunity to invite a representative from your agency to attend our next monthly information and progress meeting at the Southeast County Landfill. We hope to have representatives from Waste Management of Florida, SCS Engineers, The Hillsborough County Environmental Protection Commission, The Southeast Hillsborough Civic Association, and any citizens who would like to attend. An agenda will be provided and the next meeting will be held on May 18, 1995 at 9:00 a.m.

Please call me at 671-7707 if you have any questions. I look forward to our meeting.

Sincerely,

Meredith Matthews
Meredith Matthews
Hillsborough County
Dept. of Solid Waste



Department of Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

May 12, 1995

Ms. Patricia Berry
Department of Solid Waste
Hillsborough County
Post Office Box 1110
Tampa, FL 33601

RE: Southeast County Landfill
Leachate Management
Pending Permit #SO29-256427, Hillsborough County

Dear Ms. Berry:

Thank you for your recent May 8, 1995 letter and information regarding leachate management. DEP is encouraged by results of the County's efforts. However, recent information provided by your consultant, SCS Engineers, indicates that the depth of leachate at the time your permit is renewed should be no greater than 1.7 feet (20 inches) and there is no device currently installed to accurately measure the depth of leachate over the liner. SCS has proposed to install a piezometer in Phase IV at a location furthest from the LCRS. DEP suggests that the County propose to install the piezometer as soon as possible to verify that the landfill will be in compliance with the engineer's design at the time of renewal. DEP will expedite its review to prevent further delays.

The records provided show many days when there is little or no rain but leachate is not sprayed. Please provide a detailed explanation for each day in March that less than 50,000 gpd were sprayed (for 22 out of 31 days, including 0 gpd sprayed on 11 of those 22 days).

If you have any questions, you may call me at (813) 744-6100, extension 382.

Sincerely,

Kim B. Ford, P.E.
Solid Waste Program
Division of Waste Management

KBF/ab

cc: Daryl Smith, HCDSW
Robert Gardner, P.E., SCS Engineers
Paul Schipfer, HCEPC
Robert Butera, P.E., FDEP Tampa
Steve Morgan, FDEP Tampa

TAMPA TRIBUNE 5/12/95

Toxic waste out with garbage

It's legal to put potentially hazardous substances in Hillsborough County's landfill.

By SUSAN JAFFE
Tribune Staff Writer

TAMPA — Along with the household trash in Hillsborough County's landfill is something a little more exotic: millions of pounds of waste containing potentially hazardous substances.

Even though the 179-acre Southeast County Landfill is designed to handle only ordinary garbage, 8 million pounds of what can be harmful substances have been dumped at the landfill on County Road 672 near Balm.

The companies dumping the waste haven't broken any laws. In fact, they had the county's permission. It's all by the book.

Critics say nothing is forever. Today's waste could end up in Tampa's drinking water 50 years from now. Traces of lead and other contaminants have already been detected in groundwater monitoring wells near the landfill but don't exceed permitted levels.

The substances, listed by the U.S. Environmental Protection Agency (EPA) as potentially toxic, include 500,000 pounds of lead from thousands of melted-down car

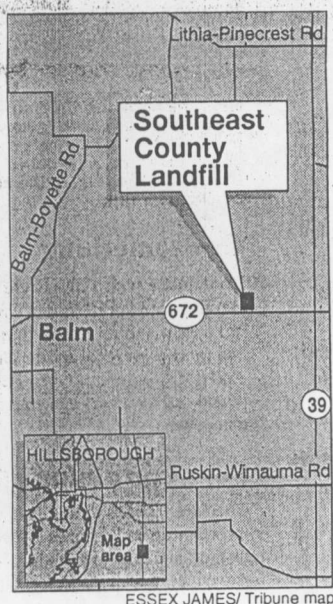
batteries. They also include 6.5 million pounds of a diluted ammonium nitrate solution, a byproduct of the fertilizer manufacturing process.

Ammonium nitrate has drawn a lot of attention lately as the main ingredient in the truck-bomb blast in Oklahoma City, but the solution going into the landfill is far more diluted.

The law works like this: Companies can't dump pure lead, for example, into the landfill. However, if the lead is encased in a concrete-like "slag" of melted car batteries, and toxicity tests prove it won't escape, then it can go into the landfill. The companies must also provide test results showing the waste will not contaminate the environment and that the material isn't hazardous when it goes into the landfill.

If tests find hazardous waste in a sample, the county won't accept it at the dump, said Daryl Smith, director

See LANDFILL'S, Page 10



JAY NOLAN/Tribune photo

A bulldozer mingles industrial waste with other refuse at the Southeast County Landfill, which was designed for household garbage only.

Landfill's legal dumping raises safety questions

From Page 1

of the Hillsborough County Department of Solid Waste. "We say 'No,' and we do that on a regular basis."

Moreover, Smith pointed out that homeowners can slip hazardous substances into their household garbage, which goes into the landfill. Those pollutants could be the source of the pollutants showing up in the monitoring wells.

But it's the legal dumping that scares some environmentalists.

"Everyone approves of it, but it sure doesn't look good or sound good, especially with our history of leaking landfills," said Bill Newton, staff director of the Florida Consumer Action Network in Tampa.

"There are a lot of questions and no good answers other than there's a loophole in the law that allows these toxics to be put in the landfill."

Southeast, operated by waste giant Waste Management Inc., is Hillsborough County's only remaining landfill, taking in 270,000 tons of garbage a year. It opened in 1984 with fairly sophisticated technology: a hardened clay liner and a system to capture any hazardous runoff that collects on top of the liner.

However, critics point to leaking landfills all over the country that are now part of Superfund — a program to clean up the nation's worst waste sites — and say even the most sophisticated landfill will eventually fail.

Cam Oberting, president of the Taylor Road Civic Association, learned that lesson the hard way. She works to clean up Taylor Road and Hillsborough Heights landfills, which are now toxic waste sites.

"When Hillsborough Heights opened in 1979, they had that same theory — that they could take care of anything. Well, now it's on the Superfund list," she said.

"Even if it is legal, is it safe?" asked Suzi Ruhl, an environmental attorney with the Legal Environmental Action Foundation in Tallahassee, which is trying to tighten landfill regulations.

The companies say disposing of the materials in the landfill is not a problem since they are in a form that is unlikely to threaten the environment.

For example, the fertilizer company Nitram, Inc. disposes of ammonium nitrate in a substantially diluted solution mixed in a clay-like material. In that form, environmental regulators say it doesn't pose a threat to the environment, said William Taylor, the company's attorney.

Oberting disagreed. "You can dilute hazardous waste any way you want to, it's still hazardous waste."

Gulf Coast Recycling, a truck and car battery recycler, put thousands of pounds of lead, a smelting byproduct, in Southeast from 1987 through 1989.

Then, in 1990, they started to ship the material to licensed hazardous waste landfills in Louisiana, Indiana and most recently, South Carolina, said Taylor, who is also Gulf Coast's attorney. The South Carolina dump is a 466-mile trip from Tampa.

"If it's so safe, why are they now bringing it to South Carolina?" Consumer Action's Newton wanted to

know.

Even though the companies were allowed to dump their waste at the landfill, an environmental engineer in the solid waste department of Florida's Department of Environmental Protection said Southeast was not her first choice for the disposal of large quantities of industrial waste.

"It's just a matter of what level of insurance do you want?" said Kathy Anderson. "I don't think babies are going to die, but do you want an Escort or a Mercedes? Southeast is OK, but is it the best-designed landfill in Florida? I'd say no. It's not a state-of-the-art, double-lined landfill."

"What they've got there is sound

and economic for the people of Hillsborough County. It would be expensive for the county to build a landfill with a double composite liner — your garbage bill could double."

If that's the case, the county's Smith said, the state "needs to revise its rules. We are not in the regulation business."

"We have met all these criteria, and folks a lot smarter than I am have determined that this type of landfill is appropriate to receive this material. We are doing what they have asked us to do."

The disposal data come from Toxic Release Inventory (TRI) reports the companies must file with the EPA. The reports tell what hap-

pens to some 600 hazardous substances handled in the United States when they enter the environment, including where they are dumped.

"Generally, chemicals on that list have been found to be toxic," said Charles Cartwright of EPA's Atlanta regional office. "They may have short or long-term adverse effects and others may still be under study."

"The very purpose of TRI is to let the regulators know where this material goes," replied Taylor. "They are aware of this activity and felt that it doesn't pose a threat."

Oberting isn't convinced. "There are no guarantees that hazardous waste will not enter into our drinking water."

Legal toxic dumping

From 1987 to 1993, the Hillsborough County Solid Waste Department allowed industrial waste containing these potentially hazardous substances to be dumped in the Southeast County Landfill:

Chemical	Pounds	Company
Ammonium nitrate solution	6.5 million	Nitram Inc.
Anthracene	750	Gardner Asphalt Co.
Asbestos (friable)	2,000	Gardner Asphalt Co.
Dibenzofuran	2,350	Gardner Asphalt Co.
Lead	499,000	Gulf Coast Recycling
Lead	2,800	Davies Can Co.
Manganese	1,331	Reynolds Metal Co.
Naphthalene	500	Gardner Asphalt Co.
Sodium sulfate solution	750,000	Gulf Coast Recycling
Zinc compounds	360,910	Reeves Southeastern Corp.

Source: U.S. Environmental Protection Agency

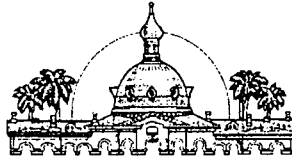
HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS

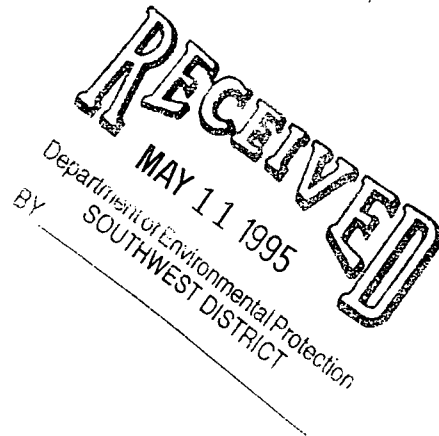
Dottie Berger
Phyllis Busansky
Joe Chillura
Chris Hart
Jim Norman
Ed Turanchik
Sandra Helen Wilson



Senior Assistant County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Cretta Johnson
Jimmie Keel
Robert Taylor

May 8, 1995



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

RE: Southeast County Landfill - Leachate Management

Dear Mr. Ford:

In accordance with the Hillsborough County Department of Solid Waste's (DSW) Leachate Management Plan for the Southeast County Landfill (Landfill), the DSW is providing the January, February and March 1995 Water Balance Report Forms and Field Data Entry Forms for the Landfill. In addition, the DSW is providing the March 1995 effluent field data forms for the Landfill.

This information is being provided to the Florida Department of Environmental Protection (DEP) and the Hillsborough County Environmental Protection Commission as an update on the DSW's leachate management efforts for the Landfill. This information is being provided in response to both the permitting and enforcement issues at hand.

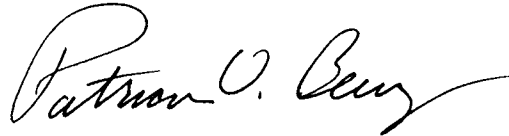
As can be seen from the March 1995 Leachate Water Balance Report, SCS Engineers, the DSW's landfill engineering consultant, has estimated that the leachate level within the Landfill, based on the Phase IV Riser leachate level, is approximately 16.8 inches over the liner. The Phase III Riser is averaging 4.8 inches of leachate.

As referenced in the DSW's March 6, 1995 correspondence to the DEP, the Public Utilities Department requested a temporary reduction in leachate disposal at the Falkenburg Wastewater Treatment Facility during February 1995. The reduction was not required for the entire three week period as originally envisioned and the DSW was able to resume the regular leachate disposal rate beginning March 1, 1995. The reduction in leachate removal during March 1995 is attributed to leachate availability.

Mr. Kim Ford
May 8, 1995
Page Two

Should you have any questions concerning the information provided, please call at 276-2908.

Sincerely,

A handwritten signature in black ink, appearing to read "Patricia V. Berry". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

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

Attachments

xc: Matt Matthews, DSW
Steve Hamilton, SCS
Steve Morgan, DEP
Paul Schipfer, EPC

LEACHATE WATER BALANCE REPORT FORM
MARCH, 1995
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FL

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV
Day	Area (acres)			Rainfall (in.)	Sump No. 3 (in.)	Est. Depth Over Liner (in.)	Est. Landfill Storage (gal.)	Leachate Pumped to LTRF (gal.)	Leachate in 500K Tank (gal.)	Leachate Treated at LTRF (gal.)	Total Leach./Effl. Hauled (gal.)	Leachate Recirculation (gal.)	Change in Effl. Pond Storage (gal.)	Effluent Sprayed (gal.)	Effluent Recirculation (gal.)	Landfill Evapor. (gal.)
	final	active	int.													
1	23.2	5.0	92.2	0.0	12.0	16.8	1,249,000	138,000	345,000	45,000	122,000	0	9,000	36,000	0	29,000
2	23.2	5.0	92.2	Trace	12.0	16.8	1,249,000	109,000	317,000	44,000	122,000	0	(2,000)	46,000	0	37,000
3	23.2	5.0	92.2	0.0	12.0	16.8	1,249,000	129,000	259,000	42,000	116,000	0	(10,000)	52,000	0	42,000
4	23.2	5.0	92.2	0.0	12.0	16.8	1,249,000	229,000	230,000	49,000	123,000	0	49,000	0	0	0
5	23.2	5.0	92.2	0.0	12.0	16.8	1,249,000	75,000	288,000	46,000	0	0	46,000	0	0	0
6	23.2	5.0	92.2	0.0	12.0	16.8	1,249,000	95,000	317,000	43,000	109,000	0	(9,000)	52,000	0	42,000
7	23.2	5.0	92.2	0.0	12.0	16.8	1,249,000	130,000	259,000	49,000	110,000	0	(20,000)	52,000	17,000	56,000
8	23.2	5.0	92.2	0.7	12.0	16.8	1,249,000	138,000	230,000	40,000	98,000	0	40,000	0	0	0
9	23.2	5.0	92.2	0.0	12.0	16.8	1,249,000	97,000	230,000	45,000	109,000	0	6,000	39,000	0	32,000
10	23.2	5.0	92.2	0.0	12.0	15.6	1,160,000	97,000	173,000	46,000	109,000	0	4,000	42,000	0	34,000
11	23.2	5.0	92.2	0.0	12.0	15.6	1,160,000	241,000	115,000	36,000	103,000	0	36,000	0	0	0
12	23.2	5.0	92.2	0.0	12.0	NR	NR	NR	NR	45,000	0	0	45,000	0	0	0
13	23.2	5.0	92.2	0.0	12.0	16.8	1,249,000	125,000	173,000	45,000	79,000	0	6,000	39,000	0	32,000
14	23.2	5.0	92.2	0.0	12.0	16.8	1,249,000	123,000	173,000	45,000	79,000	0	(11,000)	39,000	17,000	45,000
15	23.2	5.0	92.2	0.0	12.0	16.8	1,249,000	123,000	173,000	45,000	78,000	0	(11,000)	39,000	17,000	45,000
16	23.2	5.0	92.2	0.0	12.0	16.8	1,249,000	124,000	173,000	45,000	79,000	0	(10,000)	46,000	9,000	44,000
17	23.2	5.0	92.2	0.0	12.0	16.8	1,249,000	90,000	173,000	45,000	74,000	0	5,000	40,000	0	32,000
18	23.2	5.0	92.2	0.9	12.0	16.8	1,249,000	146,000	144,000	47,000	98,000	0	47,000	0	0	0
19	23.2	5.0	92.2	0.2	12.0	16.8	1,249,000	232,000	144,000	45,000	0	0	45,000	0	0	0
20	23.2	5.0	92.2	0.0	12.0	NR	NR	NR	NR	49,000	80,000	0	(8,000)	57,000	0	46,000
21	23.2	5.0	92.2	0.0	12.0	16.8	1,249,000	103,000	202,000	53,000	80,000	0	(16,000)	60,000	9,000	56,000
22	23.2	5.0	92.2	0.0	12.0	16.8	1,249,000	38,000	173,000	NR	67,000	0	NR	0	0	0
23	23.2	5.0	92.2	0.0	12.0	16.8	1,249,000	61,000	144,000	NR	61,000	0	NR	0	9,000	7,000
24	23.2	5.0	92.2	0.0	25.2	30.0	3,486,000	46,000	144,000	39,000	37,000	0	27,000	12,000	0	10,000
25	23.2	5.0	92.2	0.0	12.0	20.4	1,424,000	104,000	115,000	47,000	0	0	47,000	0	0	0
26	23.2	5.0	92.2	0.0	12.0	16.8	1,249,000	129,000	173,000	43,000	0	0	43,000	0	0	0
27	23.2	5.0	92.2	0.0	12.0	16.8	1,249,000	120,000	259,000	45,000	75,000	0	(29,000)	57,000	17,000	60,000
28	23.2	5.0	92.2	0.0	12.0	16.8	1,249,000	98,000	259,000	46,000	81,000	0	(13,000)	59,000	0	48,000
29	23.2	5.0	92.2	0.1	12.0	16.8	1,249,000	91,000	230,000	45,000	75,000	0	(24,000)	60,000	9,000	56,000
30	23.2	5.0	92.2	0.0	12.0	16.8	1,249,000	64,000	202,000	46,000	75,000	0	(22,000)	59,000	9,000	55,000
31	23.2	5.0	92.2	0.0	12.0	15.6	1,160,000	90,000	144,000	43,000	81,000	0	(3,000)	46,000	0	37,000
Total				1.90	385.2	500.4	38,366,000	3,385,000	5,961,000	1,303,000	2,320,000	0	267,000	932,000	113,000	845,000
Daily Avg				0.06	12.4	17.3	1,323,000	117,000	206,000	45,000	75,000	0	9,000	30,000	4,000	27,000

Revised by BWP, 4/13/95.

Notes:

1. NR, No Records.
2. Column II, total area with waste is 120.4 acres (Phases I-IV).
3. Column V, estimated from depth in Phase IV riser.
4. Column VI, estimated from column V and approximate volume with top of clay elevation at 118.5 feet.
5. Column VII, estimated from Column IX + Column X + Change in Storage of 500,000 gal. tank.
6. Columns IX and XIII, quantities from flow meters.
7. Column X, quantity calculated from truck weight.
8. Column XV, 80.8% of the daily values from Columns XI, XIII and XIV.

FIELD DATA ENTRY FORM
MARCH, 1995
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FL

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV
Day	Active Area (ac.)	Sump No. 3 (in.)	Sump No. 4 (in.)	Phase III Riser (in.)	Phase IV Riser (in.)	Phase IV Piezometer (in.)	Rainfall (in.)	Leachate/Effluent Hauled Contractor (gal.)	County (gal.)	Leachate Recirc. (gal.)	Effluent Recirc. (gal.)	Leachate Treated at LTRF (gal.)	Effluent Sprayed (gal.)	Depth in 500K Tank (ft.)
1	5.0	12.0	69.6	4.8	16.8	NR	0.0	71,983	50,127	0	0	44,690	35,888	12.0
2	5.0	12.0	64.8	4.8	16.8	NR	Trace	71,942	49,896	0	0	44,289	45,675	11.0
3	5.0	12.0	63.6	4.8	16.8	NR	0.0	66,228	49,776	0	0	41,876	52,200	9.0
4	5.0	12.0	64.8	4.8	16.8	NR	0.0	72,492	50,269	0	0	48,540	0	8.0
5	5.0	12.0	66	4.8	16.8	NR	0.0	0	0	0	0	45,858	0	10.0
6	5.0	12.0	61.2	4.8	16.8	NR	0.0	72,176	37,126	0	0	43,460	52,200	11.0
7	5.0	12.0	63.6	4.8	16.8	NR	0.0	71,837	37,683	0	17,000	48,824	52,200	9.0
8	5.0	12.0	63.6	4.8	16.8	NR	0.7	66,277	31,741	0	0	39,997	0	8.0
9	5.0	12.0	64.8	4.8	16.8	NR	0.0	71,929	37,295	0	0	45,000	39,150	8.0
10	5.0	12.0	62.4	3.6	15.6	NR	0.0	71,979	37,428	0	0	45,504	42,413	6.0
11	5.0	12.0	64.8	4.8	15.6	NR	0.0	72,260	30,916	0	0	35,723	0	4.0
12	5.0	12.0	NR	NR	NR	NR	0.0	0	0	0	0	44,761	0	NR
13	5.0	12.0	66	4.8	16.8	NR	0.0	60,762	18,627	0	0	45,259	39,150	6.0
14	5.0	12.0	62.4	4.8	16.8	NR	0.0	60,034	18,657	0	17,000	44,702	39,150	6.0
15	5.0	12.0	60	4.8	16.8	NR	0.0	59,753	18,685	0	17,000	44,820	39,150	6.0
16	5.0	12.0	63.6	4.8	16.8	NR	0.0	60,134	18,645	0	8,500	44,820	46,070	6.0
17	5.0	12.0	63.6	4.8	16.8	NR	0.0	35,938	37,780	0	0	45,150	39,690	6.0
18	5.0	12.0	62.4	4.8	16.8	NR	0.9	61,240	36,980	0	0	47,352	0	5.0
19	5.0	12.0	66	3.6	16.8	NR	0.2	0	0	0	0	44,948	0	5.0
20	5.0	12.0	NR	NR	NR	NR	0.0	61,523	18,688	0	0	49,103	56,784	NR
21	5.0	12.0	67.2	4.8	16.8	NR	0.0	61,118	18,552	0	8,500	52,616	59,956	7.0
22	5.0	12.0	63.6	4.8	16.8	NR	0.0	60,605	6,300	0	0	NR	0	6.0
23	5.0	12.0	62.4	4.8	16.8	NR	0.0	60,971	0	0	8,500	NR	0	5.0
24	5.0	25.2	62.4	8.4	30.0	NR	0.0	36,526	0	0	0	38,585	12,000	5.0
25	5.0	12.0	64.8	6.0	20.4	NR	0.0	0	0	0	0	46,559	0	4.0
26	5.0	12.0	66	4.8	16.8	NR	0.0	0	0	0	0	42,552	0	6.0
27	5.0	12.0	64.8	4.8	16.8	NR	0.0	62,157	12,565	0	17,000	45,367	57,415	9.0
28	5.0	12.0	62.4	4.8	16.8	NR	0.0	62,470	18,730	0	0	45,540	58,600	9.0
29	5.0	12.0	61.2	4.8	16.8	NR	0.1	62,161	12,478	0	8,500	45,080	59,815	8.0
30	5.0	12.0	60	4.8	16.8	NR	0.0	62,356	12,430	0	8,500	46,342	59,300	7.0
31	5.0	12.0	60	3.6	15.6	NR	0.0	62,516	18,752	0	0	43,108	45,570	5.0
1	First day of next month. Record depth in 500,000 gal tank only.													3.8

Notes:

1. NR, No Records.
2. Column VI, if level exceeds 27.6 inches (2.3 ft.), leachate withdrawal from landfill must increase.
3. Columns IX and X, quantities calculated from truck weight.
4. Columns XIII and XIV, quantities from flow meters.

SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FL

Day	Area (acres)			Rainfall (in.)	Sump No. 3 (in.)	Est. Depth Over Liner (in.)	Est. Landfill Storage (gal.)	Leachate Pumped to LTRF (gal.)	Leachate in 500K Tank (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Recirculation (gal.)	Change in Effl. Pond Storage (gal.)	Effluent Sprayed (gal.)	Effluent Recirculation (gal.)	Landfill Evapor. (gal.)
	closed	active	int.													
1	23.2	5.0	92.2	0.0	56.4	NR	NR	124,000	345,000	0	124,000	0	0	0	0	0
2	23.2	5.0	92.2	0.0	56.4	NR	NR	114,000	345,000	0	129,000	0	0	0	0	0
3	23.2	5.0	92.2	0.0	51.6	NR	NR	134,000	331,000	51,000	140,000	0	27,000	24,000	0	19,000
4	23.2	5.0	92.2	0.1	51.6	NR	NR	302,000	274,000	45,000	135,000	0	45,000	0	0	0
5	23.2	5.0	92.2	0.2	50.4	NR	NR	NR	NR	50,000	0	0	50,000	0	0	0
6	23.2	5.0	92.2	0.0	50.4	NR	NR	192,000	345,000	41,000	151,000	0	(8,000)	49,000	0	40,000
7	23.2	5.0	92.2	0.0	49.2	NR	NR	119,000	345,000	53,000	153,000	0	51,000	2,000	0	2,000
8	23.2	5.0	92.2	0.0	51.6	NR	NR	124,000	259,000	29,000	153,000	0	(29,000)	58,000	0	47,000
9	23.2	5.0	92.2	0.0	46.8	NR	NR	30,000	202,000	29,000	116,000	0	(10,000)	39,000	0	32,000
10	23.2	5.0	92.2	0.0	45.6	NR	NR	242,000	86,000	44,000	140,000	0	39,000	5,000	0	4,000
11	23.2	5.0	92.2	0.0	21.6	NR	NR	371,000	144,000	44,000	109,000	0	44,000	0	0	0
12	23.2	5.0	92.2	0.4	19.2	NR	NR	NR	NR	45,000	0	0	45,000	0	0	0
13	23.2	5.0	92.2	0.5	12.0	NR	NR	139,000	317,000	40,000	128,000	0	40,000	0	0	0
14	23.2	5.0	92.2	0.3	21.6	NR	NR	143,000	288,000	44,000	128,000	0	44,000	0	0	0
15	23.2	5.0	92.2	0.0	24.0	NR	NR	252,000	259,000	49,000	117,000	0	(11,000)	60,000	0	48,000
16	23.2	5.0	92.2	0.0	12.0	NR	NR	99,000	345,000	41,000	116,000	0	(11,000)	52,000	0	42,000
17	23.2	5.0	92.2	0.0	15.6	NR	NR	80,000	288,000	44,000	122,000	0	(8,000)	52,000	0	42,000
18	23.2	5.0	92.2	0.0	22.8	NR	NR	300,000	202,000	46,000	152,000	0	46,000	0	0	0
19	23.2	5.0	92.2	0.0	21.6	NR	NR	NR	NR	44,000	0	0	44,000	0	0	0
20	23.2	5.0	92.2	0.0	22.8	NR	NR	168,000	259,000	45,000	152,000	0	45,000	0	0	0
21	23.2	5.0	92.2	0.9	14.4	NR	NR	140,000	230,000	45,000	152,000	0	(7,000)	52,000	0	42,000
22	23.2	5.0	92.2	0.0	22.8	NR	NR	110,000	173,000	45,000	152,000	0	(7,000)	52,000	0	42,000
23	23.2	5.0	92.2	0.0	22.8	NR	NR	153,000	86,000	30,000	37,000	0	(16,000)	46,000	0	37,000
24	23.2	5.0	92.2	0.0	15.6	NR	NR	134,000	173,000	37,000	68,000	0	(9,000)	46,000	0	37,000
25	23.2	5.0	92.2	0.0	12.0	NR	NR	229,000	202,000	45,000	97,000	0	45,000	0	0	0
26	23.2	5.0	92.2	0.0	8.4	NR	NR	107,000	288,000	49,000	0	0	49,000	0	0	0
27	23.2	5.0	92.2	0.0	10.8	NR	NR	145,000	345,000	41,000	104,000	0	(19,000)	60,000	0	48,000
28	23.2	5.0	92.2	0.0	12.0	NR	NR	112,000	345,000	44,000	67,000	0	(9,000)	53,000	0	43,000
Total				2.40	822.0	0.0	0	4,063,000	6,476,000	1,120,000	2,942,000	0	470,000	650,000	0	525,000
Daily Avg				0.09	29.4	ERR	ERR	163,000	259,000	40,000	105,000	0	17,000	23,000	0	19,000

Notes:

1. NR, No Records.
2. Column II, total area with waste is 120.4 acres (Phases II/V).
3. Column V, estimated from depth in Phase IV Piezometer.
4. Column VI, estimated from column V and approximate volume with top of clay elevation at 118.5 feet.
5. Column VII, estimated from Column IX + Column X + Change in Storage of 500,000 gal. tank.
6. Columns IX and XIII, quantities from flow meters.
7. Column X, quantity calculated from truck weight.
8. Column XV, 80.8% of the daily values from Columns XI, XIII, and XV.

FIELD DATA ENTRY FORM
FEBRUARY, 1995
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FL

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV
Day	Active Area (ac.)	Sump No. 3 (in.)	Sump No. 4 (in.)	Phase III Riser (in.)	Phase IV Riser (in.)	Phase IV Piezometer (in.)	Rainfall (in.)	Leachate Hauled		Leachate Recirc. (gal.)	Effluent Recirc. (gal.)	Leachate Treated at LTRF (gal.)	Effluent Sprayed (gal.)	Depth in 500K Tank (ft.)
								Contractor (gal.)	County (gal.)					
1	5.0	56.4	73.2	39.6	49.2	NR	0.0	67,562	56,333	0	0	0	0	12.0
2	5.0	56.4	73.2	37.2	58.8	NR	0.0	72,774	56,121	0	0	0	0	12.0
3	5.0	51.6	72.0	30.0	43.2	NR	0.0	90,743	49,209	0	0	51,230	24,266	11.5
4	5.0	51.6	73.2	36.0	58.8	NR	0.1	79,379	55,825	0	0	44,800	0	9.5
5	5.0	50.4	0.0	NR	NR	NR	0.2	0	0	0	0	50,080	0	NR
6	5.0	50.4	61.2	34.8	54.0	NR	0.0	95,892	55,511	0	0	41,020	49,158	12.0
7	5.0	49.2	61.2	34.8	54.0	NR	0.0	96,984	55,944	0	0	52,570	2,373	12.0
8	5.0	51.6	61.2	34.8	52.8	NR	0.0	96,987	56,026	0	0	28,730	57,672	9.0
9	5.0	46.8	61.2	31.2	50.4	NR	0.0	59,821	56,158	0	0	28,730	38,610	7.0
10	5.0	45.6	61.2	33.6	51.6	NR	0.0	83,953	55,671	0	0	44,470	5,180	3.0
11	5.0	21.6	72.0	1.2	27.6	NR	0.0	96,440	12,400	0	0	44,470	0	5.0
12	5.0	19.2	0.0	NR	NR	NR	0.4	0	0	0	0	44,638	0	NR
13	5.0	12.0	73.2	9.6	26.4	NR	0.5	96,641	30,931	0	0	40,497	0	11.0
14	5.0	21.6	72.0	10.8	13.2	NR	0.3	71,943	55,970	0	0	44,008	0	10.0
15	5.0	24.0	72.0	9.6	13.2	NR	0.0	59,963	56,642	0	0	48,714	59,887	9.0
16	5.0	12.0	68.4	8.4	22.8	NR	0.0	59,984	55,836	0	0	41,236	52,237	12.0
17	5.0	15.6	67.2	7.2	22.8	NR	0.0	59,974	62,043	0	0	44,001	52,237	10.0
18	5.0	22.8	66.0	6.0	24.0	NR	0.0	96,586	55,802	0	0	46,302	0	7.0
19	5.0	21.6	0.0	NR	NR	NR	0.0	0	0	0	0	43,632	0	NR
20	5.0	22.8	61.2	9.6	13.2	NR	0.0	96,121	55,565	0	0	45,327	0	9.0
21	5.0	14.4	61.2	7.2	26.4	NR	0.9	96,079	55,871	0	0	45,327	52,200	8.0
22	5.0	22.8	70.8	7.2	25.2	NR	0.0	96,177	55,892	0	0	44,511	52,200	6.0
23	5.0	22.8	69.6	6.0	13.2	NR	0.0	12,000	24,888	0	0	29,882	45,675	3.0
24	5.0	15.6	60.0	3.6	19.2	NR	0.0	30,022	37,989	0	0	37,292	45,675	6.0
25	5.0	12.0	64.8	3.6	15.6	NR	0.0	66,009	30,903	0	0	45,425	0	7.0
26	5.0	8.4	60.0	4.8	15.6	NR	0.0	0	0	0	0	49,269	0	10.0
27	5.0	10.8	69.6	4.8	16.8	NR	0.0	72,492	31,339	0	0	40,974	59,850	12.0
28	5.0	12.0	69.6	4.8	16.8	NR	0.0	35,868	31,273	0	0	44,400	53,150	12.0
29														
30														
31														
1	First day of next month. Record depth in 500,000 gal tank only.													12.0

Notes:

1. NR, No Records.
2. Column VI, if level exceeds 27.6 inches (2.3 ft.), leachate withdrawal from landfill must increase.
3. Columns IX and X, quantities calculated from truck weight.
4. Columns XIII and XIV, quantities from flow meters.

LEACHATE WATER BALANCE REPORT FORM
JANUARY, 1995
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FL

I	II			III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV
Day	Area (acres)			Rainfall (in.)	Sump No. 3 (in.)	Est. Depth Over Liner (in.)	Est. Landfill Storage (gal.)	Leachate Pumped to LTRF (gal.)	Leachate in 500K Tank (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Recirculation (gal.)	Change in Effl. Pond Storage (gal.)	Effluent Sprayed (gal.)	Effluent Recirculation (gal.)	Landfill Evapor. (gal.)
	closed	active	int.													
1	23.2	5.0	92.2	0.0	51.6	NR	NR	NR	NR	NR	0	0	NR	0	0	0
2	23.2	5.0	92.2	0.0	67.2	NR	NR	0	409,000	NR	63,000	0	NR	0	0	0
3	23.2	5.0	92.2	0.0	70.8	NR	NR	85,000	345,000	NR	126,000	0	NR	0	0	0
4	23.2	5.0	92.2	0.3	75.6	NR	NR	108,000	305,000	NR	126,000	0	NR	0	0	0
5	23.2	5.0	92.2	0.0	69.6	NR	NR	96,000	288,000	NR	125,000	0	NR	0	0	0
6	23.2	5.0	92.2	0.0	64.8	NR	NR	308,000	259,000	NR	136,000	0	NR	0	0	0
7	23.2	5.0	92.2	1.7	64.8	NR	NR	NR	NR	NR	144,000	0	NR	0	0	0
8	23.2	5.0	92.2	0.0	64.8	NR	NR	NR	NR	NR	0	0	NR	0	0	0
9	23.2	5.0	92.2	0.0	66.0	NR	NR	97,000	288,000	NR	126,000	0	NR	0	0	0
10	23.2	5.0	92.2	0.0	62.4	NR	NR	126,000	259,000	NR	126,000	0	NR	0	0	0
11	23.2	5.0	92.2	0.0	64.8	NR	NR	97,000	259,000	NR	125,000	0	NR	0	0	0
12	23.2	5.0	92.2	0.0	63.6	NR	NR	234,000	230,000	NR	119,000	0	NR	0	0	0
13	23.2	5.0	92.2	0.4	60.0	NR	NR	154,000	345,000	NR	125,000	0	NR	0	0	0
14	23.2	5.0	92.2	1.1	60.0	NR	NR	85,000	374,000	NR	125,000	0	NR	0	0	0
15	23.2	5.0	92.2	0.2	58.8	NR	NR	NR	NR	NR	0	0	NR	0	0	0
16	23.2	5.0	92.2	0.0	67.2	NR	NR	103,000	334,000	NR	121,000	0	NR	0	0	0
17	23.2	5.0	92.2	0.0	68.4	NR	NR	93,000	317,000	NR	121,000	0	NR	0	0	0
18	23.2	5.0	92.2	0.0	63.6	NR	NR	104,000	288,000	NR	115,000	0	NR	0	0	0
19	23.2	5.0	92.2	0.0	63.6	NR	NR	162,000	276,000	NR	122,000	0	NR	0	0	0
20	23.2	5.0	92.2	0.0	58.8	NR	NR	165,000	317,000	NR	122,000	0	NR	0	0	0
21	23.2	5.0	92.2	0.0	57.6	NR	NR	23,000	360,000	NR	124,000	0	NR	0	0	0
22	23.2	5.0	92.2	0.0	63.6	NR	NR	NR	NR	NR	0	0	NR	0	0	0
23	23.2	5.0	92.2	0.0	69.6	NR	NR	109,000	259,000	NR	109,000	0	NR	0	0	0
24	23.2	5.0	92.2	0.0	58.8	NR	NR	166,000	259,000	NR	122,000	0	NR	0	0	0
25	23.2	5.0	92.2	0.0	58.8	NR	NR	162,000	302,000	NR	124,000	0	NR	0	0	0
26	23.2	5.0	92.2	0.0	56.4	NR	NR	130,000	340,000	NR	124,000	0	NR	0	0	0
27	23.2	5.0	92.2	0.0	56.4	NR	NR	125,000	345,000	NR	125,000	0	NR	0	0	0
28	23.2	5.0	92.2	0.0	55.2	NR	NR	210,000	345,000	NR	123,000	0	NR	0	0	0
29	23.2	5.0	92.2	0.0	56.4	NR	NR	NR	NR	NR	0	0	NR	0	0	0
30	23.2	5.0	92.2	0.1	54.0	NR	NR	39,000	432,000	NR	125,000	0	NR	0	0	0
31	23.2	5.0	92.2	0.8	54.0	NR	NR	123,000	345,000	NR	123,000	0	NR	0	0	0
Total				4.60	1927.2	0.0	0	3,104,000	7,880,000	0	3,166,000	0	0	0	0	0
Daily Avg				0.15	62.2	ERR	ERR	124,000	315,000	ERR	102,000	0	ERR	0	0	0

Notes:

1. NR, No Records.
2. Column II, total area with waste is 120.4 acres (Phases IIV).
3. Column V, estimated from depth in Phase IV Piezometer.
4. Column VI, estimated from column V and approximate volume with top of clay elevation at 118.5 feet.
5. Column VII, estimated from Column IX + Column X + Change in Storage of 500,000 gal. tank.
6. Columns IX and XIII, quantities from flow meters.
7. Column X, quantity calculated from truck weight.
8. Column XV, 80.8% of the daily values from Columns XI, XIII and XIV.

FIELD DATA ENTRY FORM
JANUARY, 1995
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FL

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV
Day	Active Area (ac.)	Sump No. 3 (in.)	Sump No. 4 (in.)	Phase III Riser (in.)	Phase IV Riser (in.)	Phase IV Piezometer (in.)	Rainfall (in.)	Leachate Hauled		Leachate Recirc. (gal.)	Effluent Recirc. (gal.)	Leachate Treated at LTRF (gal.)	Effluent Sprayed (gal.)	Depth in 500K Tank (ft.)
								Contractor (gal.)	County (gal.)					
1	5.0	51.6	NR	NR	NR	NR	0.0	0	0	0	0	NR	0	NR
2	5.0	67.2	NR	NR	NR	NR	0.0	0	63,000	0	0	NR	0	14.2
3	5.0	70.8	NR	NR	NR	NR	0.0	68,582	57,086	0	0	NR	0	12.0
4	5.0	75.6	NR	NR	NR	NR	0.3	68,599	57,148	0	0	NR	0	10.6
5	5.0	69.6	NR	NR	NR	NR	0.0	68,291	56,808	0	0	NR	0	10.0
6	5.0	64.8	NR	NR	NR	NR	0.0	68,537	66,999	0	0	NR	0	9.0
7	5.0	64.8	NR	NR	NR	NR	1.7	86,522	57,007	0	0	NR	0	NR
8	5.0	64.8	NR	NR	NR	NR	0.0	0	0	0	0	NR	0	NR
9	5.0	66.0	NR	NR	NR	NR	0.0	68,386	57,387	0	0	NR	0	10.0
10	5.0	62.4	NR	NR	NR	NR	0.0	68,546	57,244	0	0	NR	0	9.0
11	5.0	64.8	NR	NR	NR	NR	0.0	68,428	56,975	0	0	NR	0	9.0
12	5.0	63.6	NR	NR	NR	NR	0.0	68,528	50,632	0	0	NR	0	8.0
13	5.0	60.0	NR	48.0	66.0	NR	0.4	68,514	56,868	0	0	NR	0	12.0
14	5.0	60.0	NR	48.0	60.0	NR	1.1	68,466	56,957	0	0	NR	0	13.0
15	5.0	58.8	NR	NR	NR	NR	0.2	0	0	0	0	NR	0	NR
16	5.0	67.2	NR	NR	NR	NR	0.0	63,800	56,928	0	0	NR	0	11.6
17	5.0	68.4	NR	52.8	72.0	NR	0.0	64,490	56,919	0	0	NR	0	11.0
18	5.0	63.6	NR	40.8	69.6	NR	0.0	64,675	50,546	0	0	NR	0	10.0
19	5.0	63.6	NR	37.2	67.2	NR	0.0	64,818	57,073	0	0	NR	0	9.6
20	5.0	58.8	NR	44.4	63.6	NR	0.0	65,504	56,321	0	0	NR	0	11.0
21	5.0	57.6	NR	42.0	62.4	NR	0.0	67,492	56,622	0	0	NR	0	12.5
22	5.0	63.6	NR	NR	NR	NR	0.0	0	0	0	0	NR	0	NR
23	5.0	69.6	NR	51.6	72.0	NR	0.0	53,061	56,134	0	0	NR	0	9.0
24	5.0	58.8	NR	44.4	57.6	NR	0.0	80,150	42,250	0	0	NR	0	9.0
25	5.0	58.8	NR	42.0	60.0	NR	0.0	68,018	56,186	0	0	NR	0	10.5
26	5.0	56.4	NR	40.8	58.8	NR	0.0	67,774	56,145	0	0	NR	0	11.8
27	5.0	56.4	NR	39.6	49.3	NR	0.0	67,975	56,608	0	0	NR	0	12.0
28	5.0	55.2	NR	39.6	49.3	NR	0.0	67,555	55,900	0	0	NR	0	12.0
29	5.0	56.4	NR	NR	NR	NR	0.0	0	0	0	0	NR	0	NR
30	5.0	54.0	NR	37.2	44.4	NR	0.1	68,589	56,592	0	0	NR	0	15.0
31	5.0	54.0	NR	39.6	60.0	NR	0.8	67,392	55,292	0	0	NR	0	12.0
1	First day of next month. Record depth in 500,000 gal tank only.													12.0

Notes:

1. NR, No Records.
2. Column VI, if level exceeds 27.6 inches (2.3 ft.), leachate withdrawal from landfill must increase.
3. Columns IX and X, quantities calculated from truck weight.
4. Columns XIII and XIV, quantities from flow meters.



Department of Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

May 11, 1995

Mr. Daryl Smith, Director
Department of Solid Waste
Hillsborough County
Post Office Box 1110
Tampa, FL 33601

Re: S.E. County Leachate Treatment and Reclamation Facility
Permit No.: SC29-199393, Hillsborough County
Certification of Construction Completion

Dear Mr. Smith:

On April 28, 1995, an inspection of the above referenced facility relative to construction completion and adherence to the permit issued by the Florida Department of Environmental Protection (FDEP) was made by John Johnson (HCDSW), Richard Siemering (SCS), Paul Schipfer (HCEPC) and Kim Ford (FDEP).

Certification of Construction Completion dated January 11, 1995 was received by the Department on January 12, 1995. Based on the information submitted January 12, April 4 (record drawings), and May 11, 1995, and the site investigation, FDEP approves the construction of the above referenced facility in accordance with the conditions of the current permit #SC29-199393.

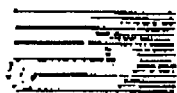
If you have any questions, please contact Kim Ford, P.E. at (813) 744-6100, extension 382.

Sincerely,

Robert Butera, P.E.
Solid Waste Manager
Division of Waste Management

KBF/ab

cc: John Johnson, HCDSW
Richard Siemering, SCS Engineers
Paul Schipfer, HCEPC
Kim Ford, P.E., FDEP Tampa
Steve Morgan, FDEP Tampa

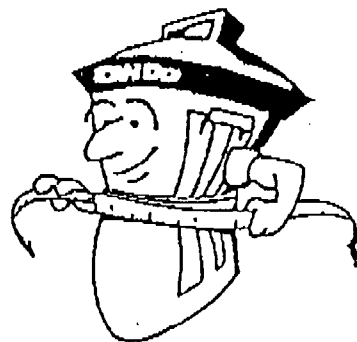


Hillsborough County

Department of Solid Waste * P.O. Box 1110
Tampa, FL 33601

Sender's Telephone Number 276-2927

24-Hour FAX Line -- (813) 276-2960



"Together We CAN-DO It"

DATE: MAY 11, 1995
TO: KIM FORD, P.E. FDEP
FAX: 744-6125 SUBJECT: LEACHATE TREATMENT FACILITY
FROM: J. JOHNSON

COMMENTS (If Any): ORIGINAL IS BEING SENT
BY MAIL.

THANKS

N.

Total Pages Sent (including cover sheet) 5

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Residential & Commercial Collection Services • Curbside Recycling • Resource Recovery
Household Chemical Collection • Adopt-A-Road & Adopt-A-Shore
Environmental Enforcement • Yard & Wood Waste Processing • Landfill Services
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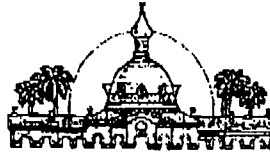
HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS

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Cletta Johnson
Jimmie Keel
Robert Taylor

May 11, 1995

Mr. Kim Ford, P. E.
Solid Waste Section - Division of Waste Management
Florida Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Certification of Construction Completion Inspection on April 28, 1995 for the
Hillsborough County Southeast County Landfill Leachate Treatment and Reclamation
Facility, Permit Number, SC29-199393

Dear Mr. Ford:

On April 28, 1995, an inspection was conducted for Certification of Construction Completion of the above referenced project by Kim Ford of the Florida Department of Environmental Protection (FDEP), Paul Schipfer of the Hillsborough County Environmental Protection Commission (HCEPC), Rich Siemering of SCS Engineers (SCS) and John Johnson of the Hillsborough County Department of Solid Waste (HCDSW).

During the inspection, the FDEP and HCEPC requested that the HCDSW provide a written response to concerns regarding the Leachate Treatment and Reclamation Facility's (LTRF) truck loading stands/leachate spill containment and the main leachate sump pump/irrigation sump pump repairs. In response to the FDEP's and the HCEPC's request, the HCDSW is providing the following information:

Truck Loading Stands/Leachate Spill Containment

The LTRF has two concrete truck loading stands; one is located at the main Facility and the other is located at the Main Leachate Pump Station. These two loading areas include a center line trench drain which is pipe-drained to a sump at that location. On Monday, May 1, 1995, the HCDSW simulated a tanker loading operation spill with clean LTRF production well water. The test spill waters flowed down the sides of the tanker and into the center trench drain from the tankers underside (see attached photos) thus demonstrating the effectiveness of the design of the truck loading stands and trench drains.

Mr. Kim Ford
May 11, 1995
Page 2

Main Leachate Sump Pump #1/Irrigation Sump Pump #2

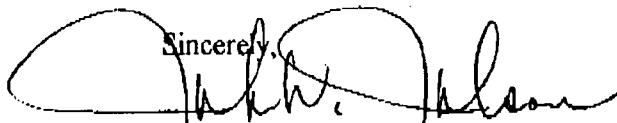
On March 12, 1995, the HCDSW personnel observed Main Leachate Pump No. 1 to be excessively loud and vibrating. The LTRF contractor, Great Monument Construction Company (GMCC) disabled and removed the pump for inspection to determine the need for repairs. Upon inspection of the pump, it was observed to have suffered bearing failure which in turn damaged the pump shaft. The pump manufacturer's representative contends that the bearing failure resulted from abrasives in and around the carbon graphite bearing. The source of the abrasives has not yet been determined. In addition to pump repair costs, GMCC has been requested to submit pricing for the retrofitting of the existing two main leachate pumps with a flush water lubrication system, including an in-line filter as recommended and manufactured by the pump manufacturer, Crane-Deming, Inc. This effort will protect the bearings from future contact with sand and/or other abrasives.

On February 6, 1995, during a tanker (effluent) filling operation at the main leachate pump station, the County's Contract hauler pumped the effluent basin below the 6 inch suction line. This action caused irrigation pump #2 to run dry, resulting in significant bearing and shaft damage. GMCC has recently submitted pricing for repairs/replacement of the pump and the HCDSW is currently processing the Allowance Authorization Release (AAR) to GMCC. The County's contract hauler has been given instruction, both verbal and written, by the HCDSW on proper procedures for pumping/filling operations at both the leachate treatment plant and main pump station.

The HCDSW will promptly notify the FDEP upon the reinstallation of both the main leachate pump #1 and irrigation pump #2. In addition, the HCDSW will notify the FDEP of any future disabling/removal of any LTRF pumps for anything other than routine maintenance or service.

The HCDSW hopes that the information provided satisfies the FDEP's and the HCEPC's concerns regarding the County's LTRF. Should you have any other questions concerning this matter, please contact me at 276-2927.

Sincerely,



John W. Johnson, Engineer I
Project Manager,
Department of Solid Waste

c: Patricia V. Berry, DSW
Paul Schipfer, HCEPC
Steve Hamilton, SCS







Department of Environmental Protection

Lawton Chiles
Governor

Southwest District
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Tampa, Florida 33619

Virginia B. Wetherell
Secretary

FAX TRANSMITTAL SHEET

5/2/95
Date

FAXED
11:25 AA

TO:

Jim Clayton

DEPT.: HCD SW

FAX #: 276-2965

FROM:

Allison Amram

DEPT.: D.E.P., Tampa Office Solid Waste

PHONE: 813-744-6100 or SunCom 542-6100 Ext. 336
FAX(local) 744-6125 or (SunCom) 542-6125

SUBJECT:

Priority Pollutant List

COMMENT:

From 40 CFR Pt 131 (latest revision
is 12/22/92

TOTAL NUMBER OF PAGES, INCLUDING COVER PAGE:

4

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SECTION VII.

LIST OF PRIORITY POLLUTANTS

2,4-dinitrotoluene
2,4-dinitrotoluene
2,6-dinitrotoluene
1,2-diphenylhydrazine
Ethylbenzene
Flouranthene
4-chlorophenyl phenyl ether
4-bromophenyl phenyl ether
Bis(2-chloroisopropyl) ether
Bis(2-chloroethoxy) methane
Methylene chloride (dichloromethane)
Methyl chloride (dichloromethane)
Methyl bromide (bromomethane)
Bromoform (tribromomethane)
Dichlorobromomethane
Hexachlorobutadiene
Chlorodibromomethane
Hexachloromyclopentadiene
Isophorone
Naphthalene
Nitrobenzene
2-nitrophenol
4-nitrophenol
2,4-dinitrophenol
4,6-dinitro-o-cresol
N-nitrosodimethylamine
N-nitrosodiphenylamine
N-nitrosodi-n-propylamin
Pentachlorophenol
Phenol
Bis(2-ethylhexyl) phthalate
Butyl benzyl phthalate
Di-N-Butyl phthalate
Di-n-octyl phthalate
Diethyl phthalate
Dimethyl phthalate
1,2-benzanthracene (benzo(a) anthracene)
Benzo(a)pyrene (3,4-benzo-pyrene)
3,4-Benzofluoranthene (benzo(b) fluoranthene)
11,12-benzofluoranthene (benzo(b) fluoranthene)
Chrysene
Acenaphthylene
Anthracene
1,12-benzoperylene (benzo(ghi) perylene)
Fluorene
Phenanthrene

1,2,5,6-dibenzanthracene (dibenzo(,h)anthracene)
 Indeno (,1,2,3-cd) pyrene (2,3-o-pheynylene pyrene)
 Pyrene
 Tetrachloroethylene
 Toluene
 Trichloroethylene
 Vinyl chloride (chloroethylene)
 Aldrin
 Dieldrin
 Chlordane (technical mixture and metabolites)
 4,4-DDT
 4,4-DDE (p,p-DDX)
 4,4-DDD (p,p-TDE)
 Alpha-endosulfan
 Acenaphthene
 Acrolein
 Acrylonitrile
 Benzene
 Benzidine
 Carbon tetrachloride (tetrachloromethane)
 Chlorobenzene
 1,2,4-trichlorobenzene
 Hexachlorobenzene
 1,2-dichloroethane
 1,1,1-trichloroethane
 Hexachloroethane
 1,1-dichloroethane
 1,1,2-trichloroethane
 1,1,2,2-tetrachloroethane
 Chloroethane
 Bis(2-chloroethyl) ether
 2-chloroethyl vinyl ether (mixed)
 2-chloronaphthalene
 2,4,6-trichlorophenol
 Parachlorometa cresol
 Chloroform (trichloromethane)
 2-chlorophenol
 1,2-dichlorobenzene
 1,3-dichlorobenzene
 1,4-dichlorobenzene
 3,3-dichlorobenzidine
 1,1-dichloroethylene
 1,2-trans-dichloroethylene
 2,4-dichlorophenol
 1,2-dichloropropane
 1,2-dichloropropylene (1,3-dichloropropene)
 2,4-dimethylphenol
 Beta-endosulfan
 Endosulfan sulfate

Endrin
Endrin aldehyde
Heptachlor
Heptachlor exopide (BHC-hexachlorocyclohexane)
Alpha-BHC
Beta-BHC
Gamma-BHC (lindane)
Delta-BHC (PCB-polychlorinated biphenyls)
PCB-1242 (Arochlor 1242)
PCB-1254 (Arochlor 1254)
PCB-1221 (Arochlor 1221)
PCB-1232 (Arochlor 1232)
PCB-1248 (Arochlor 1248)
PCB-1260 (Arochlor 1260)
PCB-1016 (Arochlor 1016)
Toxaphene
Antimony
Arsenic
Asbestos
Beryllium
Cadmium
Chromium
Copper
Cyanide, Total
Lead
Mercury
Nickel
Selenium
Silver
Thallium
Silver
Zinc
2,3,7,8-tetrachloro-dibenzo-p-dioxin (TCDD)