Bob RB

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 4/28/99 Subject Lena Rd Landfill Improvements

Time 9:35 Permit No.

County MANA

M GUS DIFONZO Telephone No. (941) 795-3673

Representing MANATEE County

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

Other Individuals Involved in Conversation/Meeting

Summary of Conversation/Meeting

DISCUSSED PROGRESS AND ITEMS NEEDED

(1) CERTIFICATION & RECORD DRAWINGS FOR NEW IMPROVEMENTS

(2) PAST LEACHATE & GRADIENT REPORTS

(3) EARLIEST DATE TO 'TURN ON' NEW SYSTEM

(4) SAND IS AHEAD OF SCHEDULE AND CERTIFICATION MAY BE PROVIDED BY EARLY MAY

(continue on another sheet, if necessary)

Signature

Title

PA-01
1/93
hjs

April 7, 1999

Mr. Kim Ford, P.E.
Solid Waste Engineer
Florida Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, FL 33619-8318

RE: Manatee County
Lena Road Landfill
Operations Permit Application
Pending Permit Number: 39884-001-SO
HDR Project Number: 07982-024-096

Dear Mr. Ford:

We are responding to your December 12, 1998, March 9, 1999 and March 15, 1999 comments regarding the Lena Road Landfill Operation Plan submitted as part of the Operations Permit Renewal Application. Please find two copies of each the following replacement pages as requested:

1. Revised Table of Contents for Application Package
2. Page K-2 with requested changes to the second paragraph of Section 2b.
3. Revised Table K-1 with Mike Gore listed as an emergency contact in place of Ben Alex and Cari Walz added as the Recycling Service Technician.
4. Page K-6 with requested with the requested relocation of "Procedures for storage and disposal of unauthorized waste can be found in Section K.6." from the section on asbestos to the discussion of "Control of types of Materials Received."
5. Figure 2 of the Stormwater/Leachate Management Plan with a revised Staff Gauge (SG-3) location.
6. Revised Appendix 2, Household Hazardous Waste Collection Plan including a Table of Contents. Changes were made in accordance with your March 15 comments.
7. Revised Drawing Number 2, Plot Plan and Topographic Map South showing the additional scrap metal storage area at the south side of Stage III.

Please call me at (813) 282-2402 with any comments or questions.

Sincerely,

HDR ENGINEERING, INC.

Fred W. Sebesta, P.E.
Senior Project Manager

D.E.R.
APR 09 1999
Southwest District Tampa

Enclosures

cc: Len Bramble, Manatee County
Gus Difenzo, Manatee County, (with three copies of enclosures)
Dan Gray
Mike Gore
Robert Butera, P.E., FDEP Tampa, Solid Waste Section
Greg Goodwin

W:\MANATEE\OPERMITS\106H085.WPD

HDR Engineering, Inc.
Employee-owned
Suite 300
5100 W. Kennedy Boulevard
Tampa, Florida
33609-1840
Telephone
813 282-2300
Fax
813 282-2449

McKIM & CREED

April 7, 1999

1024.0008

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
APR - 8 1999
SOUTHWEST DISTRICT TAMPA

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

Re: Leachate System Modifications at Manatee County Municipal Landfill, Stage III

Dear Mr. Ford:

Due to the expansion activities at the Manatee County Southeast Regional Wastewater Treatment Plant, we are proposing to relocate the existing leachate collection system at the west side of Stage III of the Landfill.

A new access road will be constructed in the subject area for future access to the wastewater treatment plant. It is proposed that, prior to the road construction, the existing portions of the leachate system in the construction area be abandoned and replaced.

The system is lower and constructed of materials superior to the existing system thus should provide enhanced performance. The increased depth of the new collection piping will require construction of a new pumping station with a lower invert elevation than that of the existing station. The new pumping station will utilize the pumps and hardware from the existing station. The included construction plans display the location and details of the proposed leachate collection system modifications.

Please review the included construction plans and notify us of any required modifications and/or permitting issues which must be addressed prior to acceptance by the FDEP.

20 YEARS

601 CLEVELAND ST., SUITE 205, CLEARWATER, FLORIDA 33755
TEL 727.442.7196 FAX 727.461.3827 www.mckimcreed.com
AA0002667

If you have any questions or need further information, please call me at (727)442-7196.

Sincerely,

Michael R. Kuhn, P.E.

Project Engineer

Attachments

cc: Mr. Tim Hochuli, P.E.

Lena Rd permit F.C

MANATEE COUNTY GOVERNMENT
Public Works Department

D.E.P.
APR 0 1 1999
Southwest District Tampa

March 27, 1999

Allison Amram, P.G., Division of Waste Management
Department of Environmental Protection, South West District
3804 Coconut Palm Drive
Tampa, FL 33619

Re: Manatee County Lena Road Landfill
Monthly, Quarterly, and Semi-Annual Reports

Dear Ms. Amram:

Per our letter of February 25, 1999, regarding the status and future planning pertaining to the above referenced reports, we are nearing completion of the Lena Road and Erie Road Landfill semi-annual ground water quality monitoring reports. We have contacted Professional Service Industries, Inc. regarding the contour maps that accompany the reports and they have all information on hand with which to complete that task.

We have completed the monthly water balance and other pertinent reports for October, November, December, 1998 and January, and February, 1999. As you are aware, it is our intent to complete all reports and hand-deliver them as one package to your office. This will allow us time for report preparation and review. As previously written, we will present a confirmed delivery date in writing to you once we have completed the above noted goals.

It remains our priority to fulfill our reporting requirements at the earliest opportunity. Please know that the Department's understanding of our present staffing dilemma and your cooperation is greatly appreciated.

I will keep you advised as to the status of these reports. If you have any questions or require further information at this time, please contact me at 941/795-3473.

Sincerely,

G. A. DiFonzo

Gus A. DiFonzo,
Solid Waste Manager

GAD:gbp

cc: Len Bramble, P.E., Public Works Director
Dan Gray, Utilities Operations Manager
Bob Butera, P.E., FDEP
Kim Ford, P.E., FDEP
Danielle Nichols, FDEP

Lena Rd permit file

To Allison Amram
Company FDEP
Location S.W. District - Div. of Wst. Mgmt.
Fax # 813-744-6125 Telephone # 813-744-6100 x336
Comments Reporting Requirements UPDATE

From Gus A. DiFonzo
Company Manatee County P. Wks.
Location Landfill
Dept. Charge
Fax # 941-741-3396 Telephone # 941-795-3473
Original Disposition: ☐ Destroy ☐ Return ☐ Call for pickup

3-27-99 4:50 p.m.

MANATEE COUNTY GOVERNMENT
Public Works Department

March 27, 1999

Allison Amram, P.G., Division of Waste Management
Department of Environmental Protection, South West District
3804 Coconut Palm Drive
Tampa, FL 33619

Re: Manatee County Lena Road Landfill
Monthly, Quarterly, and Semi-Annual Reports

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Sincerely,

G. A. DiFonzo

Gus A. DiFonzo,
Solid Waste Manager

GAD:gbp

cc: Len Bramble, P.E., Public Works Director
Dan Gray, Utilities Operations Manager
Bob Butera, P.E., FDEP
Kim Ford, P.E., FDEP
Danielle Nichols, FDEP

ADMINISTRATION • 4410 - 66th Street West, Bradenton, Florida 34210 • (813) 792-8811 • FAX (813) 795-3490

Printed on Recycled Paper. P.O. Box 25010, Bradenton, Florida 34206

Allison AA 3/29

3/26

INTEROFFICE MEMORANDUM

Date: 25-Mar-1999 05:21pm
From: John H. Cox TAL
COX_JH@A1@DER
Dept: Division Water
Tel No: 850/921-9914

Facilities

To: Kim Ford TPA (FORD_K@A1@TPA1)

Subject: Lena Rd Landfill, NPDES Stormwater Permit

Kim,
Attached is my comments on the EPA permit. My response #3 is somewhat in conflict with Kim Barlow's #4. While I agree with Kim's point, the issue with
EPA is one of intermittence and the longevity of these stormwater discharges. The issue of % stormwater to receiving water flow is not a factor for EPA. They view it as if the entire receiving stream were composted entirely of stormwater but, only for a short period of time (i.e., several hours). I personally do not want to set the precedent of holding stormwater devices to State WQ Standards during overflow conditions. The performance standard established in 62-40 FAC for stormwater facilities is load reduction oriented for that reason.

Anyway, I have attached the certification letter we sent to EPA as well as my comments. They have already gone out. Let me know if there are any glaring mistakes so I can send an addendum to EPA OK. Thanks!

John

Mr. Roosevelt Childress, Chief
Surface Water Permits Section
Surface Water Permits and Facilities Branch
Water Management Division
US EPA Region IV
61 Forsyth Street SW
Atlanta, Georgia 30303-3104

Re: Waiver of State Certification
Lena Rd. Landfill
NPDES Permit No. FLS038881

Dear Mr. Childress:

On January 27, 1999, the EPA requested State Certification regarding the draft NPDES permit (FLS038881) for the Lena Rd. Landfill stormwater discharge facilities located in Manatee County, Florida. This letter provides official notification that the State waives certification of the referenced permit. The proposed NPDES stormwater permit conditions do not mimic but, appear consistent with Florida stormwater management requirements included in State Solid Waste Management Permit SO41-211176.

Attached please find the Departments' comments. These items, concerning the final permit and associated documents, do not affect the state's decision to waive certification of the referenced permit. Please direct questions associated with state (FDEP) requests to Mr. John Cox, at (850) 921-9383.

Sincerely,

Elsa A. Potts, P.E., Administrator
Office of Wastewater Management

Enclosures (2)
EP/jc
cc: Henry Dominick

Memorandum

Florida Department of Environmental Protection

ENCLOSURE 1

Review and Comments
Lena Road Landfill, Bradenton, Florida
NPDES Permit Number FLS038881

1. Reference to a "Support Documentation" report is found throughout Form 2F. This document was not attached with the information forwarded to the Department for our review.

2. Part I of the draft permit is not very explicit relative to the stormwater monitoring protocols that the permittee must follow. The permit fails to describe whether the applicant must characterize underdrain discharge, overflow (i.e., weir or culvert) discharge, or both. Since discharge is reported to be rare by the applicant, I suspect that the monitoring program must be limited to overflow of the underdrain (UD) system. Presuming that overflow is required to trigger monitoring, the applicant must pay a consultant or an employee to spend much time waiting to collect samples, only to find that they missed the event when it occurred.

   In contrast, the original state permit for this site required monitoring of the underdrain discharge on a quarterly basis. In the absence of contamination by leachate, the state permit writers presumed that the UD discharges would meet State Water Quality Standards (SWQSs). DEP also required monitoring of overflow, if practical. A similar approach would improve the level of reportable data at the facility. The permit writer would have a better picture of performance associated with the treatment system and whether changes are needed.

3. For overflows associated with state permitted stormwater treatment systems, the use of the acute criteria shown on Table 1, Statement of Basis, is probably appropriate. However, we believe that SWQSs should be applied to evaluate compliance relative to the treated water discharged from underdrain systems and detention ponds.

   Page I-2 paragraph A.2. The grab sampling protocol specified in this paragraph is not practical nor preferable to assess the performance and compliance of this treatment system. Grab samples required in the first 30 minutes of a storm are a hold over of *First Flush* and *Worst Case Conditions* concepts. The intent is to characterize the most contaminated portion of the event. Unfortunately, the first 30 minutes of most storms that produce overflow conditions are also the worst case in terms of danger for sampling personnel. Moreover, these concepts do not apply to treatment facilities that attenuate runoff and pollutants. The time when a detention facility will discharge its most contaminated water, especially during overflow, can not be predicted. Sampling personnel should not be subject to high risk given a low probability that their effort will accomplish the intent associated with this requirement.

Presuming federal rules stipulate that overflow discharge must be EPA's primary concern, we recommend following the provisions outlined in 40 CFR 122.21(g)(7). It states that a single grab sample may be taken from ponds with retention times greater than 24 hours. The sample should be collected after 2 hours of the discharge or upon termination of rainfall, whichever occurs first.

5. Information contained in the original certification package dated December 1992 indicates that this NPDES permit authorizes and requires monitoring of discharges associated with the State (DEP) permitted stormwater treatment system for this facility. For the most part, the NPDES monitoring is redundant. Most elements are also covered in the State's solid waste permit and 62-701.510 F.A.C. The primary exception is the WET testing provision. We assume that a past failure of this test prevents the facility from coverage under a general permit. However, this seems inconsistent given the level of intermittence associated with this discharge and the permit writer's decision to drop toxic metals from the NPDES sampling program.

   Please be advised that stormwater treatment specifications relative to structural controls (i.e., BMPs) and monitoring are contained in 62-701.400(9), 62-701.500(10) and, 62-701.510(8) F.A.C. Surface water management systems built in accordance with these solid waste criteria greatly exceed the minimum treatment capacity associated with the states stormwater rule, 62-25 F.A.C. Among other requirements, 62-701.400(9)(b) F.A.C. requires volume control for up to the 25 year 24 hour storm runoff level. Consequently, it is not surprising that information on form 2F indicates that there have only been two periods of discharge at this site over the past 10 years.

   We suggest that landfills that comply with Florida stormwater treatment criteria should be recognized as providing an added level of protection beyond the EPA minimum requirements. State of Florida stormwater treatment regulations recognize the impractical nature of trying to control the pollutant discharges associated with large storms and chronic wet weather conditions. Any treatment achieved during climatic conditions that exceed required treatment capacity is viewed as a plus. Assuming that this facility has not discharged water from its' UD system in violation of SWQSs, we suggest that EPA encourage the applicant to participate in the Multi-Sector GP program.

The soil is still contaminated after treatment, and should not be stored or otherwise managed outside of the landfill liner. In addition, the City of Tampa is required to file disposal notices in accordance with 40 CFR 268.9 with the Department. Please be advised that the treatment standards have changed several times in the past few years. We recommend checking the applicable standard prior to accepting any treated hazardous waste. You may not accept soils that were contaminated by listed hazardous waste, unless the Department has determined that the soils have been decontaminated and no longer contain the hazardous waste. If you have any questions regarding the applicable standards, please call me at 813/744-6100 ext. 383.

Sincerely

Elizabeth B. Knauss
Hazardous Waste Program
Southwest District

EBK/ebk

cc: Wil Horne, Jamson Environmental
George Thomas, PBS&J

file - Manatee County
Lena Road LF

--ATTENTION MAIL ROOM--

PLEASE ROUTE THIS DOCUMENT TO:

Bob Butera

Name of Individual/Office

Mail Station Number

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

March 12, 1999

Daniel Gray
Manatee County Utility Operations Manager
4410 66th Street West
Bradenton, Florida 34210

Dear Mr. Gray:

re: Treated Soil
City of Tampa Police Pistol Range

The soil from the City of Tampa's police pistol range contains lead in a high enough concentration that the untreated soil is a hazardous waste, EPA Waste No. D008. Characteristically hazardous soil may be treated in accordance with 40 CFR Part 268 and Rule 62-730.183 F.A.C., so that it is no longer regulated as a hazardous waste. The newest Federal treatment standards may be found in a Federal Register Notice dated May 26, 1998.

Per 40 CFR 268.49, soils that have contaminant levels at 10 times the standard found in 268.48 do not have to be treated further prior to landfilling at a hazardous waste facility. However, none of the soils sent to solid waste facilities can be characteristically hazardous as defined in 40 CFR Part 261. You may accept soils with leachable antimony levels higher than 11.5 mg/l antimony as measured by the TCLP test provided the generator can document that contaminant leachability has been reduced by 90% compared to untreated soil. Below is a table outlining the numeric treatment standards for the known constituents of concern.

Constituent	Soil treatment standard per 40 CFR 268.49 for disposal as non-hazardous		
Antimony	11.5 mg/l TCLP	OR	90% reduction
Arsenic	5 mg/l TCLP		
Lead	5 mg/l TCLP		

The county should also require the generator to provide assurances that there are no other constituent of concern, as identified in 40 CFR 268.48, in the soil.

Bob - I didn't see analyses that indicated it was haz for lead! ~~date~~
Do we have copies of lab tests? A

Lena Rd permit file

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 3/10/99
Time 3:20

Subject Disposal - City of Tampa Soils
Permit No.
County Manatee

M Gus DiFonzo
Representing Manatee

Telephone No.

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

Other Individuals Involved in Conversation/Meeting

Summary of Conversation/Meeting

cl called Gus in ref. to waste profile sheet, attached.
- Analyses were from pond bottoms, but cl thought they were for berms at firearms target range. cl/ pond bottom soils are to be disposed - make sure they don't have free liquids
- Waste profile says "chemically stabilized soils" Find out what it was stabilized w/ -- make sure it's not a waste that would give them problems -- is consistency good for use as cover?

(continue on another sheet, if necessary)

Signature AAmram

Title PGI

PA-01
1/96
pap

NATURE SAVER™ FAX MEMO 01010

To: Bob Butera	From: Gus DiFonzo
Co./Dept. FDEP/Tampa	Co. Manatee Cty-LDC/I
Phone #	Phone # 941-795-3473
Fax # 813-744-6125	Fax # 941-741-3396

3-10-99 | pages: 3

GENERATOR'S WASTE PROF

PLEASE PRINT IN INK OR T

Service Agreement on File? [X] YES [ ] NO

[ ] Hazardous [X] Non-Hazardous [ ] TSCA

A. Waste Generator Information

1. Generator Name: City of Tampa DPW
2. SIC Code:
3. Facility Street Address: 11001 Memorial Highway --
4. Phone: (813) 274-8733
5. Facility City: Tampa
6. State/Province: FL
7. Zip/Postal Code:
8. Generator USEPA/Federal ID #:
9. County: Hillsborough
10. State/Province ID #: FL
11. Customer Name: Jamson Environmental, Inc.
12. Customer Phone: (813) 891-0440
13. Customer Contact: Will Horn
14. Customer Fax: 813 814-9081
15. Billing Address: 105 South Bayview Boulevard, Oldsmar, FL 34677 [ ] Same as above

B. Waste Stream Information

1. Description

a. Name of Waste: Lead-impacted chemically stabilized soil

b. Process Generating Waste: Chemical stabilization of soils at a former pistol range impacted with heavy metals (lead, arsenic, antimony and copper)

c. Color	d. Strong odor (describe):	e. Physical state @ 70°F	f. Layers	g. Free liquid range
Black	None	[X] Solid [ ] Liquid [ ] Gas [ ] Sludge [ ] Other	[X] Single Layer [ ] Multi-layer	0 to 0 %
				h. pH: Range to %

i. Liquid Flash Point: [ ] <73°F [ ] 73-99°F [ ] 100-139°F [ ] 140-199°F [ ] ≥ 200°F [X] Not applicable

j. Chemical Composition. (List all constituents (including halogenated organics, dioxins, and URCIs) present in any concentration and submit representative analysis):

Constituents	Concentration Range	Constituents	Concentration Range
Heavy metals contaminated soil	100%	Antimony	Less than 26 ppm TCLP
Lead	Less than .75 pp	Copper	Less than 105 ppm TCLP
Arsenic	Less than 5 ppm	TCLP	

TOTAL COMPOSITION MUST EQUAL OR EXCEED 100%

k. [ ] Oxidizer [ ] Pyrophoric [ ] Explosive [ ] Radioactive
[ ] Carcinogen [ ] Infectious [ ] Shock Sensitive [ ] Water Reactive

l. Does the waste represented by this profile contain any of the carcinogens which require OSHA notification? (list in Section B.1.j) ..... [ ] YES [X] NO

m. Does the waste represented by this profile contain dioxins? (list in Section B.1.j) ..... [ ] YES [X] NO

n. Does the waste represented by this profile contain asbestos? ..... [ ] YES [X] NO
If yes, ... [ ] friable [ ] non-friable

o. Does the waste represented by this profile contain benzene? ..... [ ] YES [X] NO
If yes, concentration _____ ppm
Is the waste subject to the benzene waste operations NESHAP? ..... [ ] YES [ ] NO

p. Is the waste subject to RCRA Subpart CC controls? ..... [ ] YES [X] NO
If yes, volatile organic concentration _____ ppmw

q. Does the waste contain any Class I or Class II ozone-depleting substances? ..... [ ] YES [X] NO

r. Does the waste contain debris? (list in Section B.1.j) ..... [ ] YES [X] NO

2. Quantity of Waste
Estimated Annual Volume 5,000 to 20,000 [X] Tons [ ] Yards [ ] Drums [ ] Other (specify) _____

3. Shipping Information
a. Packaging:
[X] Bulk Solid; Type/Size: Dump [ ] Bulk Liquid; Type/Size: _____
[ ] Drum; Type; Size: _____ [ ] Other: _____

b. Shipping Frequency: Units 6,000 Per: [ ] Month [ ] Quarter [ ] Year [ ] One time [X] Other Week

c. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If no, skip d, e, and f) ..... [ ] YES [X] NO

Form WRD-4159

GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

d. Reportable Quantity (lbs.; kgs.): _____ e. Hazard Class/ID #: _____
f. USDOT Shipping Name: _____
g. Personal Protective Equipment Requirements: _____
h. Transporter/Transfer Station: Waste Management

C. Generator's Certification (Please check appropriate responses and print and date below)

1. Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2. ☐YES ☒NO
   a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D, F, K, P, U) _____
   b. If a characteristic hazardous waste, do underlying hazardous constituents (UHCs) apply? (If yes, list in Section B.1.j) ☐YES ☐NO
   c. Does this waste contain debris? (If yes, list size and type in Chemical Composition - B.1.) ☐YES ☐NO
2. Is this a state hazardous waste? ☐YES ☒NO
   Identify ALL state hazardous waste codes _____
3. Is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up? ☐YES ☒NO
   If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site clean-up activity. For state mandated clean-up, provide relevant documentation.
4. Does the waste represented by this waste profile sheet contain radioactive material, or is disposal regulated by the Nuclear Regulatory Commission? ☐YES ☒NO
5. Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated Biphenyls (PCBs) regulated by 40 CFR 761? (If yes, list in Chemical Composition - B.1.j) ☐YES ☒NO
   a. If yes, were the PCBs imported into the U.S.? ☐YES ☐NO
6. Do the waste profile sheet and all attachments contain true and accurate descriptions of the waste material, and has all relevant information within the possession of the Generator regarding known or suspected hazards pertaining to the waste been disclosed to the Contractor? ☒YES ☐NO
7. Will all changes which occur in the character of the waste be identified by the Generator and disclosed to the Contractor prior to providing the waste to the Contractor? ☒YES ☐NO

☒Check here if a Certificate of Destruction or Disposal is required.

Any sample submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. I authorize WMI to obtain a sample from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs as authorized agent of the generator and has confirmed the information contained in this Profile Sheet from information provided by the generator and additional information as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary permits and licenses for the waste that has been characterized and identified by this approved profile.

Certification Signature: _____ Title: _____
Name (Type or Print): _____ Company Name: _____ Date: _____
☐Check if additional information is attached. Indicate the number of attached pages _____

D. WMI Management's Decision — FOR WMI USE ONLY

1. Management Method ☐Landfill ☐Non-hazardous Solidification ☐Bioremediation ☐Incineration ☐Hazardous Stabilization ☐Other (Specify) _____
2. Proposed Ultimate Management Facility: _____
3. Precautions, Special Handling Procedures, or Limitation on Approval: _____
4. Waste Form _____ 5. Source _____ 6. System Type _____
Special Waste Decision ☐Approved ☐Disapproved
Salesperson's Signature: _____ Date: _____
Division Approval Signature (Optional): _____ Date: _____
Special Waste Approvals Person Signature: _____ Date: _____

SOUTHERN ANALYTICAL LABORATORIES, INC.
110 BAYVIEW BOULEVARD, OLDSMAR, FLORIDA 34677 813-855-1844

Jamson Environmental, Inc.
105 Bayview Blvd.
Oldsmar, Florida 34677

March 9, 1999
Project No. 16020

LABORATORY REPORT

FAXED

Project Description: Tampa Pistol Range – Pond Bottom, W/O #992228
Sample Description: 01 – TCLP Extract, Pond Bottom, M-STC-2, sampled 3/6/99
Date Received: 3/6/99, 1300

Parameter	Units	(01) TCLP Extract, M-STC-2	Method Blank
Antimony, Total	mg/l	0.05 U	0.05 U
Arsenic, Total	mg/l	0.02	0.01 U
Copper, Total	mg/l	0.03	0.01 U
Lead, Total	mg/l	0.17	0.05 U

U - Analyte was not detected; indicated concentration is method detection limit.

FDOH Environmental Lab No. E84129
FDOH Drinking Water Lab No. 84269
Comprehensive QA Plan No. 870317

Francis I. Daniels
Laboratory Director

Jamson Environmental, Inc.
105 Bayview Blvd.
Oldsmar, Florida 34677

March 9, 1999
Project No. 16020

LABORATORY REPORT

Project Description: Tampa Pistol Range – Pond Bottom, W/O #992228

Parameter	Method	Detection Limit	Analyst ID	Analysis Date
TCLP Extraction	EPA 1311	N/A	J. Huebbers	3/6/99
Antimony, Total	EPA 200.7	0.05 mg/l	J. Huebbers	3/8/99
Arsenic, Total	EPA 200.7	0.01 mg/l	J. Huebbers	3/8/99
Copper, Total	EPA 200.7	0.01 mg/l	J. Huebbers	3/8/99
Lead, Total	EPA 200.7	0.05 mg/l	J. Huebbers	3/8/99

Francis I. Daniels
Laboratory Director

Southern Analytical Laboratories, Inc.

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD. OLDSMAR, FLORIDA 34677 813-855-1844

CHAIN of CUSTODY RECORD

Pg. 1 of 1

Client Name: Tamsun	Phone: 813-814-1745
Project Name / Location: Tampa Pistol Range	Client Proj. No.
Samplers: (Signature)	PARAMETER / CONTAINER DESCRIPTION

SAL Use Only Proj. No.	Sample Nos.	Sample Description	Date	Time	Matrix (Water, Soil, Other)	Grab or Composite	Lead, Arsenic, Copper, Antimony TCLP								No. of Containers (Total each location)
16020	01	Pond Bottoms - M-97C-2	3-6-99		X	X									
Number of Containers (Total each aliquot)															
Item No.							1	2	3	4	5	6	7	8	Total Number of Containers Rec'd.

Item No.	Prepared Containers Relinquished By:	Received:	Seal Intact?	Instructions / Remarks
	Date: Time:	Date: Time:	Yes No N/A	
	Relinquished: C. Mitchellmore	Received: J. Hall	Seal Intact?	
	Date: 3-6-99 Time: 1:57	Date: 3/6/99 Time: 1200	Yes No N/A	
	Relinquished:	Received:	Seal Intact?	
	Date: Time:	Date: Time:	Yes No N/A	
	Relinquished:	Received:	Seal Intact?	
	Date: Time:	Date: Time:	Yes No N/A	

3-10-1999 11:10AM FRM S. WASTE/RECYCLING 19417413339 P.5

D.E.P.
MAR 0 5 1999
Southwest District Tampa

MANATEE COUNTY GOVERNMENT
Public Works Department

March 3, 1999

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

Re Lena Road Landfill Corrective Actions
Gradient and Stormwater Management Systems
Permit No.: SO41-211176, Manatee County
Pending Permit No. 39884-001-SO

Dear Mr. Ford:

The following represents the project status and construction completion projection for the above referenced subject. The Stages of construction completed as of March 1, 1999 are as follows:

* Southwest ditch weir structure
* Dewatering filter bed site
* Excavation of material for filter bed site
* Installation of sand
* Installation of manholes
* Installation of pipe systems both inside and outside of filter bed system
* Installation of all berms and sloping to grade - filter beds

The projection of completion for the following construction phases are as follows:

* Installation of sod on the berms and slopes:
  estimated completion date: week of March 5, 1999
* Ditch regrading:
  estimated completion date: week of May 7, 1999 (weather permitting)
* Down drain construction:
  estimated completion date: week of May 21, 1999 (weather permitting)

All construction for the Lena Road Landfill corrective actions being performed by the Maintenance and Field Forces Section of Public Works should be completed the week of May 21, 1999. An updated construction schedule and progress report will be submitted to you next month for the month of April, 1999.

FAXed 3-3-99

If we can be of further assistance and/or provide additional information, please contact me at 941/795-3473 or Clayton Barth at 941/792-8811, Extension 5078. The Department's cooperation with this matter has been, and continues to be, greatly appreciated.

Sincerely,

G. A. DiFonzo

Gus A. DiFonzo
Solid Waste Manager

GAD/gbp

cc: Robert Butera, P.E., FDEP
Len Bramble, P.E., Public Works Director
Daniel T. Gray, Utilities Operations Manager
Dan Rosier, Distribution Superintendent
C. Michael Gore, Landfill Superintendent
Clayton Barth, Engineer II

Lena Rd permit file

MANATEE COUNTY GOVERNMENT
Public Works Department

D.E.P.

MAR 01 1999

Southwest District Tampa

February 25, 1999

Allison Amram, P.G.
Division of Waste Management
Department of Environmental Protection, South West District
3804 Coconut Palm Drive
Tampa, FL 33619

Re: Manatee County Lena Road Landfill
Monthly, Quarterly, and Semi-Annual Reports

Dear Ms. Amram:

Per our recent conversation, I am providing the status and future planning pertaining to the above referenced reports. We have received the Lena Road and Erie Road Landfill semi-annual ground water quality monitoring reports on February 22, 1999 from Flowers Chemical Laboratories, Inc. We are going to contact Professional Service Industries, Inc. on this date to order the contour map that accompanies the reports.

We have on hand the data for the monthly water balance and other pertinent reports for October, November, December, 1998 and January, 1999. As you are aware, Ben Alex, Technical Coordinator, is no longer with Manatee County. We are going to contact Mr. Alex regarding the format necessary for the quarterly gas monitoring report. It is our intent to complete all reports and hand-deliver them as one package to your office. This will allow us time for report preparation and review. As we proceed further in completion, we will present a confirmed delivery date in writing to you. Once we have completed the above noted goal, it is our intent to provide future reports to your office in a timely fashion.

It is a priority to us to fulfill our reporting requirements with the void left by Mr. Alex's departure at the earliest opportunity. I hope that the Department is somewhat understanding of our present staffing dilemma and your cooperation would be greatly appreciated.

ADMINISTRATION • 4410 - 66th Street West, Bradenton, Florida 34210 • (941) 792-8811 • FAX (941) 795-3490

P.O. Box 25010, Bradenton, Florida 34206

I will keep you advised as to the status of these reports. If you have any questions or require further information at this time, please contact me at 941/795-3473.

Sincerely,

Gus A. DiFonzo,
Solid Waste Manager

GAD:gbp

cc: Len Bramble, P.E., Public Works Director
Dan Gray, Utilities Operations Manager
Bob Butera, P.E., FDEP
Kim Ford, P.E., FDEP
Danielle Nichols, FDEP

Zena Rd
SO permit file

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 2/23/99 Subject Zena Road - missing reports

Time 12:30 Permit No.

County Manatee

M Gus DiFonzo Telephone No. 941/748-5543

Representing Manatee Co. Solid Waste

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

Other Individuals Involved in Conversation/Meeting

Summary of Conversation/Meeting

"Missing reports"-

Gradient - Nov + Dec 1998) in process.
Jan 1999

Gas - 2nd + 4th quarters 1998 - Gus will check on these

GW - 2nd ½ 1998) Due Jan 15, 1999 -

Leachate - ") received from lab recently

They will send the reports "as soon as they can"
They have not replaced Ben Alex - they are trying to reclassify the position to get an engineer.

(continue on another sheet, if necessary)

Signature Allison Amram

Title PG

PA-01
1/96
pap

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

February 22, 1999

Manatee County SE Regional WWTP
c/o Mike Kuhn, P.E.
McKim & Creed
601 Cleveland St., Suite 205
Clearwater, FL 33755

File No.: 41-149008-001

Dear Mr. Kuhn:

Enclosed is Environmental Resource Permit, File No. 41-149008-001 issued pursuant to Part IV of Chapter 373, Florida Statute and Chapter 40D-4, Florida Administrative Code.

Appeal rights for you as the permittee and for any affected third party are described in the text of the permit along with conditions which must be met when permitted activities are undertaken. Please review this document carefully to ensure compliance with both the general and specific conditions contained herein.

You are advised to contact representatives from the Department's Domestic Waste and Solid Waste programs before beginning construction or operation of any new activity. Please be advised that issuance of this Environmental Resource Permit is not a waiver of or approval of any other Department permit(s) that may be required for other aspects of the total project which are not addressed in this permit.

Thank you for your cooperation with the permit process and your interest in managing the natural resources of the state of Florida.

Mike Kuhn
File #: 41-149008-001
February 22, 1999

If you have any questions, please contact me at (813) 744-6100, extension 470 or by e-mail at **cooper_r@tpa1.dep.state.fl.us.** When referring to this project, please use the file number indicated.

Sincerely,

Randal R. Cooper, P.E.
Surface Water Engineer
Submerged Lands and Environmental Resources

/rrc

enclosure

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

SUBMERGED LANDS AND ENVIRONMENTAL RESOURCES
FINAL PERMIT
ENVIRONMENTAL RESOURCE STANDARD GENERAL PERMIT

PERMITTEE/AUTHORIZED ENTITY:
Manatee County SE Regional WWTP
Lenox E. Bramble, P.E., Director of Public Works
Manatee County Government
P.O. Box 25010
Bradenton, FL 34206

AGENT:
A. Street Lee, P.E.
Senior Project Engineer
McKim & Creed Engineers
601 Cleveland St., Suite 205
Clearwater, FL 33755

Permit/Authorization Number: 41-149008-001

Date of Issue: February 22, 1999

Expiration Date of Construction Phase: February 22, 2004

County: Manatee

Project: Surface water management system for Manatee County SE Regional WWTP

This permit is issued under the authority of Part IV of Chapter 373, F.S., 40D-4, and Title 62, Florida Administrative Code (F.A.C.). The activity is not exempt from the requirement to obtain an environmental resource permit. Pursuant to Operating Agreements executed between the Department and the water management districts, as referenced in Chapter 62-113, F.A.C., the Department is responsible for reviewing and taking final agency action on this activity.

This permit also constitutes certification compliance with water quality standards under Section 404 of the Clean Water Act, 33 U.S.C. 1344.

A copy of this authorization also has been sent to the U.S. Army Corps of Engineers (USACOE) for review. The USACOE may require a separate permit. Failure to obtain this authorization prior to construction could subject you to enforcement action by that agency. You are hereby advised that authorizations also may be required by other federal, state, and local entities. This authorization does not relieve you from the requirements to obtain all other required permits and authorizations.

The above named permittee is hereby authorized to construct the work shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof. **This permit is subject to the limits, conditions, and locations of work shown in the attached drawings, and is also subject to the attached General Conditions and Specific Conditions, which are a binding part of this permit.** You are advised to read and understand these drawings and conditions prior to commencing the authorized activities, and to ensure the work is conducted in conformance with all the terms,

conditions, and drawings. If you are utilizing a contractor, the contractor also should read and understand these drawings and conditions prior to commencing the authorized activities. Failure to comply with all drawings and conditions shall constitute grounds for revocation of the permit and appropriate enforcement action.

Operation of the facility is not authorized except when determined to be in conformance with all applicable rules and with the general and specific conditions of this permit/certification/authorization, as specifically described below.

ACTIVITY DESCRIPTION:
The project consists of construction of a surface water management system for expansion of the Manatee County Southeast Regional Wastewater treatment plant and improvements to an existing access road. The facility is as described on the set of drawings (sheets C1 through C16) and bound design report prepared by McKim & Creed and received at the Department on November 30, 1998.

The proposed system consists of two wet detention ponds, Pond 1 (0.44 acres @ TOB) and Pond 2 (1.0 acres @ TOB), which receive and treat runoff from the equivalent of 4.53 acres and 10.5 acres, respectively (18.97 acres total land area minus 3.94 acres of open tanks). The system is designed to treat the first one inch of runoff from the project area and provide attenuation for the 25 year, 24 hour storm event.

An existing paved landfill perimeter road will be widened, repaved and realigned in order to provide access to the facility. The new paved road will be 24 foot wide by ±1550 feet long and will extend from Lena Road to the new main entrance into the WWTP. Pavement from portions of the existing access road that will not be repaved will be removed and the old road bed will be destabilized. Stormwater treatment and attenuation for runoff from the road is provided by an existing surface water management system located within the landfill perimeter ditch.

Wetland impacts associated with a ditch crossing for the paved access road will be compensated for by the removal of nuisance plants (mostly Brazilian Pepper) in the upland and wetland areas located between the west side of landfill and Cypress Strand.

Encroachment into the 100 year floodplain of Cypress Strand by 33,350 CF of fill required for a sludge holding tank will be compensated for by 69,790 CF of floodplain compensation in wet detention pond #1.

The project is located adjacent to the Lena Road landfill in Section 1, Township 35, Range 18, in Manatee County.

SPECIFIC CONDITIONS:
1. "If historical or archaeological artifacts, such as Indian canoes, pottery are discovered at any time within the project site the permittee shall immediately notify Wetlands Resource Management at the Southwest District Office of the Department of Environmental Protection and the Division of Historical Resources, History and Records Management, R.A. Gray Building, 500 South Bronough, Tallahassee, FL 32399-0250 or phone (904)488-1480."

2. All submittals required herein shall be directed to:

Department of Environmental Protection
Environmental Administrator
Submerged Lands & Environmental Resources
Southwest District
3804 Coconut Palm Dr.
Tampa, FL 33619

hereafter referred to as "the Department". Such submittals include, but are not limited to, record drawings, progress reports, mitigation monitoring reports and water quality monitoring reports.

All submittals shall include the permittee's name and permit number.

3. In the event that the permittee files for bankruptcy prior to completion of all work permitted and required by this permit, the permittee must notify the Department within 30 days of filing. The notification shall identify the bankruptcy court and case number and shall include a copy of the bankruptcy petition.

4. If the approved permit, drawings and the Specific Conditions contradict each other, then the Specific Conditions shall prevail.

5. The permittee shall notify the Department in writing within 14 days of any change in agents designated in the approved permit application.

6. The permittee is responsible for retaining a professional engineer registered in the State of Florida to certify that the construction of the project is in compliance with the approved permit plans.

7. All drawings, record drawings, land surveys and as-built surveys required herein shall be certified by a Professional Engineer or Registered Land Surveyor, as appropriate, registered in the State of Florida.

8. Progress reports for the project shall be submitted to the Department beginning twelve months after permit issuance and shall continue to be submitted every twelve months until all permitted construction of the project is completed. Progress reports must be submitted to the Department even if there is no ongoing construction. Reports shall include the current project status and the construction schedule for the following twelve month period.

9. The permittee shall notify the Department in writing at least 14 days prior to commencing the work authorized in this permit utilizing the form listed in General Condition #11.

10. Excavation of the wet detention ponds are limited to the permitted design elevation. If limestone bedrock is encountered during construction the Department shall be notified and construction in the affected area shall cease.

11. In addition to the forms required in General Condition #13, the permittee shall submit two copies of signed, dated and sealed as-built drawings to the Department within 30 days of completion of construction. The as-built drawings shall be based on the Department permitted construction drawings which shall be revised to reflect any changes made

during construction. Both the original design and constructed elevation must be clearly shown. The plans must be clearly labeled as "as-built" or "record" drawings. All surveyed dimensions and elevations required shall be verified and signed, dated and sealed by a Florida registered surveyor or engineer. Record drawings shall include the invert elevations of all culverts and controlling elevations of all permitted structures as shown in the permitted drawings.

For wet detention ponds only: The successful establishment and survival of littoral shelf vegetation within the wet detention pond is necessary for stormwater quality treatment. A minimum of 35 percent littoral shelf coverage, as shown on Figures 1 and 2 of the attached Littoral Planting Plan, concentrated at the outfall is required before the system will be approved and transferred to the operation phase. The successful establishment of non-emergent vegetation, such as trees and shrubs, may also be included in the littoral shelf area.

12. The Operation and Maintenance Entity shall submit inspection reports in the form required by the Department, FDEP Form # 62-343.900(6), *Inspection Certification,* in accordance with the following schedule unless specified otherwise herein or in Application Information.

(X) For systems utilizing wet detention, the inspections shall be performed 12 months after transfer to operation is authorized and every 24 months thereafter.

13. Mitigation for wetland impacts associated with the access road ditch crossing shall consist of the removal and eradication of Brazilian Pepper (Schnius terebinthifouius) on County owned property adjacent to Cypress Strand. Within 120 days of the issuance date of this permit the permittee shall remove all Brazilian Pepper located in the area between Cypress Strand and the west side of the landfill and wastewater treatment plant property. This area shall be maintained at a minimum of 95% free of Brazilian Pepper for a period of 3 years.

14. With the exception of removal of exotic plant species, the permittee shall not mow or otherwise alter vegetation within the wetland buffer areas identified on sheet C-4 of the construction drawings. This area includes the 9260 SF buffer mitigation area and the 30' wetland buffer between the FDEP wetland line and buffer mitigation area and the 15' wetland buffer located next to wet detention pond #2. These area shall be clearly posted with "No Mowing" or similar signs around the perimeter of the buffer areas.

15. You are advised to contact representatives from the Department's Domestic Waste and Solid Waste programs before beginning construction or operation of any new activity. Issuance of this Environmental Resource Permit is not a waiver of or approval of any other Department permit(s) that may be required for other aspects of the total project which are not addressed in this permit.

16. The permittee shall be aware of and operate under #1 through #25 of the attached "General/Limiting Conditions for Environmental Standard General and Individual Permits". General/Limiting Permit Conditions are binding upon the permittee and enforceable pursuant to Chapter 403 of the Florida Statutes.

RIGHTS OF AFFECTED PARTIES

This permit is hereby granted unless a timely petition for an administrative hearing is filed under sections 120.569 and 120.57 of the Florida Statutes, before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received by the clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000.

Petitions by the applicant or any of the parties listed below must be filed within fourteen days of receipt of this written notice. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the notice or within fourteen days of receipt of the written notice, whichever occurs first.

Under section 120.60(3) of the Florida Statutes, however, any person who has asked the Department for notice of agency action may file a petition within fourteen days of receipt of such notice, regardless of the date of publication.

The petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition or request for mediation within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 of the Florida Statutes. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information:

(a) The name, address, and telephone number of each petitioner; the Department permit identification number and the county in which the subject matter or activity is located;

(b) A statement of how and when each petitioner received notice of the Department action;

(c) A statement of how each petitioner's substantial interests are affected by the Department action;

(d) A statement of the material facts disputed by the petitioner, if any;

(e) A statement of facts that the petitioner contends warrant reversal or modification of the Department action;

(f) A statement of which rules or statutes the petitioner contends require reversal or modification of the Department action; and

(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take.

A petition that does not dispute the material facts on which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by

any such final decision of the Department have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

In addition to requesting an administrative hearing, any petitioner may elect to pursue mediation. The election may be accomplished by filing with the Department a mediation agreement with all parties to the proceeding (i.e., the applicant, the Department, and any person who has filed a timely and sufficient petition for a hearing). The agreement must contain all the information required by rule 28-106.404. The agreement must be received by the clerk in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, within ten days after the deadline for filing a petition, as set forth above. Choosing mediation will not adversely affect the right to a hearing if mediation does not result in a settlement.

As provided in section 120.573 of the Florida Statutes, the timely agreement of all parties to mediate will toll the time limitations imposed by sections 120.569 and 120.57 for holding an administrative hearing and issuing a final order. Unless otherwise agreed by the parties, the mediation must be concluded within sixty days of the execution of the agreement. If mediation results in settlement of the administrative dispute, the Department must enter a final order incorporating the agreement of the parties. Persons seeking to protect their substantial interests that would be affected by such a modified final decision must file their petitions within fourteen days of receipt of this notice, or they shall be deemed to have waived their right to a proceeding under sections 120.569 and 120.57. If mediation terminates without settlement of the dispute, the Department shall notify all parties in writing that the administrative hearing processes under sections 120.569 and 120.57 remain available for disposition of the dispute, and the notice will specify the deadlines that then will apply for challenging the agency action and electing remedies under those two statutes.

This action is final and effective on the date filed with the Clerk of the Department unless a petition (or request for mediation) is filed in accordance with the above. Upon the timely filing of a petition (or request for mediation) this order will not be effective until further order of the Department.

Any party to the order has the right to seek judicial review of the order under section 120.68 of the Florida Statutes, by the filing of a notice of appeal under rule 9.110 of the Florida Rules of Appellate Procedure with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida, 32399-3000; and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within 30 days from the date when the final order is filed with the Clerk of the Department.

Executed in Tampa, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

for Randal Rlooper
Bob Stetler
Environmental Administrator
Submerged Lands and
Environmental Resources

Copies furnished to:
Lenox E. Bramble, P.E., Director of Public Works, Manatee County Government, P.O. Box 25010, Bradenton, FL 34206
U.S. Army Corps of Engineers
Ed Snipes, FDEP, Domestic Waste section
✓Bob Butera, FDEP Solid Waste section
file

CERTIFICATE OF SERVICE

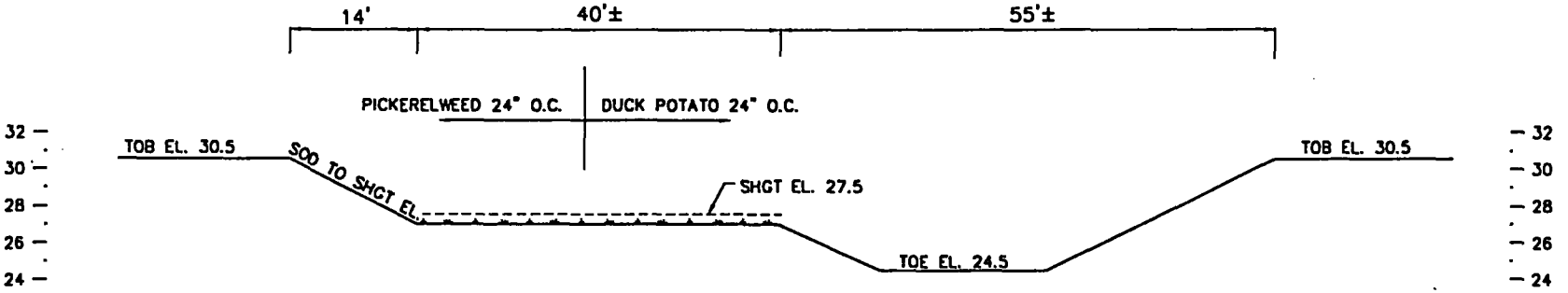
The undersigned duly designated deputy clerk hereby certifies that this permit, including all copies were mailed before the close of business on 2/22/99, 1999, to the above listed persons.

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to 120.52(9), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

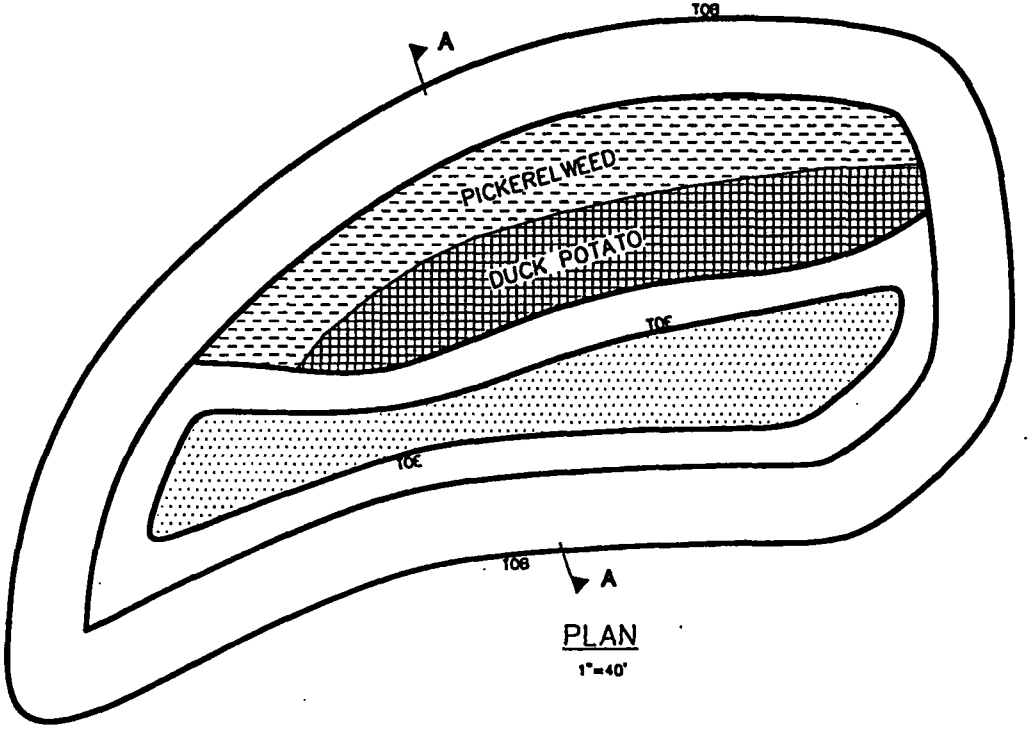
E Robinson 2/22/99
Clerk Date

Recommend by : Randal R. Cooper, P.E., Melanie Strauss, ES I, Mark Peterson, ES III
Prepared by: Ernestine Robinson



SECTION A–A

1"=20' HOR.
1"=10' VERT.



PLAN

1"=40'

LEGEND

TOB	TOP OF BANK
TOE	TOE OF POND
SHGT	SEASONAL HIGH GROUNDWATER TABLE

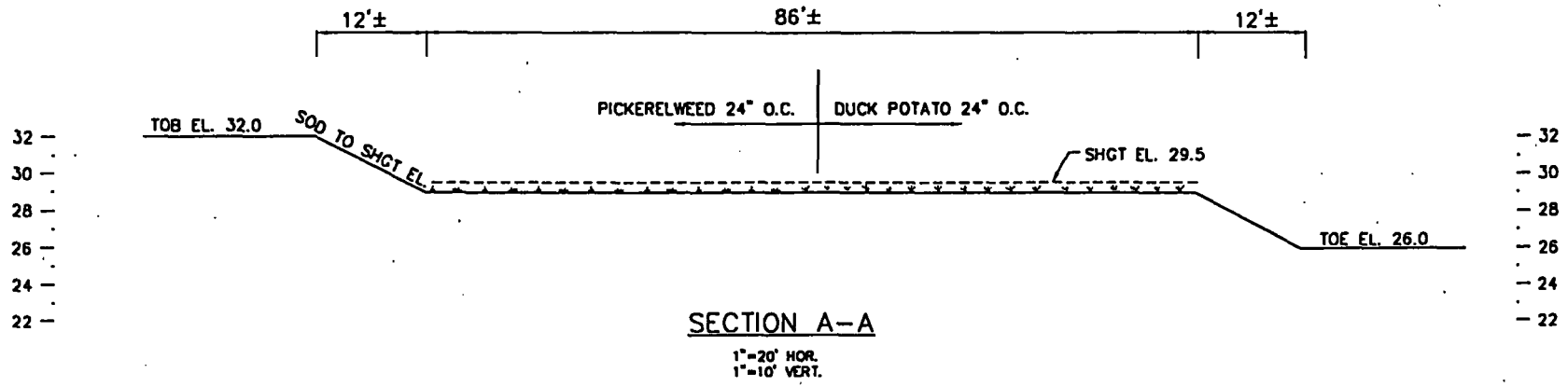
McKIM&CREED

LITTORAL PLANTING PLAN
POND 1

SOUTHEAST REGIONAL WASTEWATER TREATMENT PLANT EXPANSION – MANATEE COUNTY

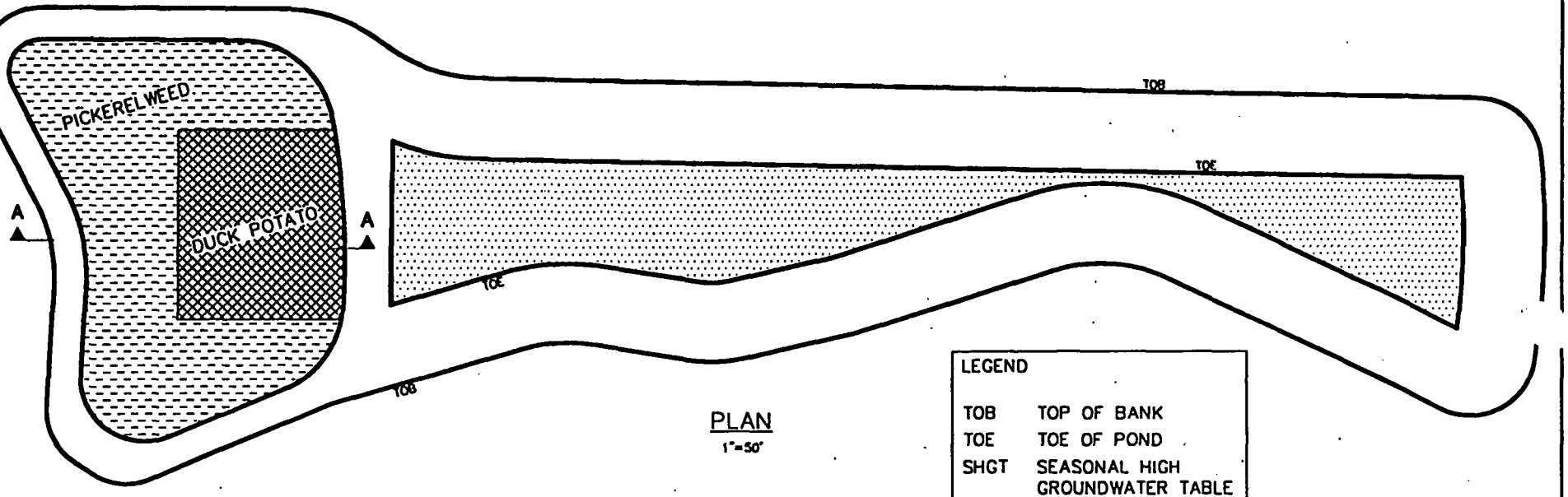
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
DATE:
PROJ. NUMBER:
FIGURE NUMBER: 1
REV

FILE NO.



SECTION A–A

1"=20' HOR.
1"=10' VERT.



PLAN

1"=30'

LEGEND

TOB	TOP OF BANK
TOE	TOE OF POND
SHGT	SEASONAL HIGH GROUNDWATER TABLE

McKIM&CREED

LITTORAL PLANTING PLAN
POND 2

SOUTHEAST REGIONAL WASTEWATER TREATMENT PLANT EXPANSION – MANATEE COUNTY

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
DATE:
PROJ. NUMBER:
FIGURE NUMBER: 2
REV

FILE NO.

GENERAL LIMITING CONDITIONS FOR ENVIRONMENTAL STANDARD GENERAL AND INDIVIDUAL PERMITS

1. All activities shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit.

2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications, shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by Department staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.

3. Activities approved by this permit shall be conducted in a manner which does not cause violations of state water quality standards. The permittee shall implement best management practices for erosion and a pollution control to prevent violation of state water quality standards. Temporary erosion control shall be implemented prior to and during construction and permanent control measures shall be completed within 7 days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.

4. Water quality data for the water discharged form the permittee's property or into the surface waters of the state shall be submitted to the Department as required by the permit. Analyses shall be performed according to procedures outlined in the current edition of Standard Methods for the Examination of Water and Wastewater by the American Public Health Association or Methods for Chemical Analyses of Water and Wastes by the U.S. Environmental Protection Agency. If water quality data are required, the permittee shall provide data as required on volumes of water discharged, including total volume discharged during the days of sampling and total monthly volume discharged from the property or into surface waters of the state.

5. Department staff must be notified in advance of any proposed construction dewatering. If the dewatering activity is likely to result in offsite discharge or sediment transport into wetlands or surface waters, a written dewatering plan must either have been submitted and approved with the permit application or submitted to the Department as a permit prior to the dewatering event as a permit modification. The permittee is advised that the rules of the Southwest Florida Water Management District state that a water use permit may be required prior to any use exceeding the thresholds in Chapter 40D-2, F.A.C.

6. Stabilization measures shall be initiated for erosion and sediment control on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.

7. Off site discharges during construction and development shall be made only through the facilities authorized by this permit. Water discharged from the project shall be through structures having a mechanism suitable for regulating upstream stages. Stages may be subject to operation schedules satisfactory to the Department.

8. The permittee shall complete construction of all aspects of the surface water management system, including wetland compensation (grading mulching,

planting), water quality treatment features, and discharge control facilities prior to beneficial occupancy or use of the development being served by this system.

9. The following shall be properly abandoned and/or removed in accordance with the applicable regulations:

a. Any existing wells in the path of construction shall be properly plugged and abandoned by a licensed well contractor.

b. Any existing septic tanks on site shall be abandoned at the beginning of construction.

c. Any existing fuel storage tanks and fuel pumps shall be removed at the beginning of construction.

10. All surface water management systems shall be operated to conserve water in order to maintain environmental quality and resource protection; to increase the efficiency of transport, application and use; to decrease waste; to minimize unnatural runoff from the property and to minimize dewatering of offsite property.

11. At least 48 hours prior to commencement of activity authorized by this permit, the permittee shall submit to the Department a written notification of commencement using an "Environmental Resource Permit Construction Commencement" notice (Form No. 62-343.900(3), F.A.C.) indicating the actual start date and the expected completion date.

12. Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the occupation of the site or operation of site infrastructure located within the area served by that portion or phase of the system. Each phase or independent portion of the system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of that phase or portion of the system to a local government or other responsible entity.

13. Within 30 days after completion of construction of the permitted activity, the permittee shall submit a written statement of completion and certification by a registered professional engineer or other appropriate individual as authorized by law, utilizing the required "Environmental Resource Permit As-Built Certification by a Registered Professional" (Form No. 62-343.900(5), F.A.C.), and "Request for Transfer of Environmental Resource Permit Construction Phase to Operation Phase" (Form 62-343-900(7), F.A.C.). Additionally, if deviation from the approved drawings are discovered during the certification process the certification must be accompanied by a copy of the approved permit drawings with deviations noted.

14. This permit is valid only for the specific processes, operations and designs indicated on the approved drawings or exhibits submitted in support of the permit application. Any substantial deviation from the approved drawings, exhibits, specifications or permit conditions, including construction within the total land area but outside the approved project area(s), may constitute grounds for revocation or enforcement action by the Department, unless a modification has been applied for and approved. Examples of substantial deviations include excavation of ponds, ditches or sump areas deeper than shown on the approved plans.

15. The operation phase of this permit shall not become effective until the permittee has complied with the requirements of the conditions herein, the Department determines the system to be in compliance with the permitted plans, and the entity approved by the Department accepts responsibility for operation and maintenance of the system. The permit may not be transferred to the operation and maintenance entity approved by the Department until the operation phase of the permit becomes effective. Following inspection and approval of the

permitted system by the Department, the permittee shall request transfer of the permit to the responsible operation and maintenance entity approved by the Department, if different from the permittee. Until a transfer is approved by the Department pursuant to Section 62-343.110(1)(d), F.A.C., the permittee shall be liable for compliance with the terms of the permit.

16. Should any other regulatory agency require changes to the permitted system, the Department shall be notified of the changes prior to implementation so that a determination can be made whether a permit modification is required.

17. This permit does not eliminate the necessity to obtain any required federal, state, local and special district authorizations including a determination of the proposed activities' compliance with the applicable comprehensive plan prior to the start of any activity approved by this permit.

18. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40D-4 or Chapter 40D-40, F.A.C.

19. The permittee is hereby advised that Section 253.77, F.S., states that a person may not commence any excavation, construction, other activity involving the use of sovereign or other lands of the state, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund without obtaining the required lease, license, easement, or other form of consent authorizing the proposed use. Therefore, the permittee is responsible for obtaining any necessary authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.

20. The permittee shall hold and save the Department harmless from any and all damages, claims, or liabilities which may arise by reason of the activities authorized by the permit or any use of the permitted system.

21. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation , shall not be considered binding unless a specific condition of this permit or a formal determination under section 373.421(2), F.S., provides otherwise.

22. The permittee shall notify the Department in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of the permitted system or the real property at which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of section 62-343.130, F.A.C. The permittee transferring the permit shall remain liable for any corrective actions that may be required as a result of any permit violations prior to such sale, conveyance or other transfer.

23. Upon reasonable notice to the permittee, Department authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with Department rules, regulations and conditions of the permits.

24. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the Department and the Florida Department of State, Division of Historical Resources.

25. The permittee shall immediately notify the Department in writing of any previously submitted information that is later discovered to be inaccurate.

Form #62-343.900(3), F.A.C.
Form Title: Construction Commencement Notice
Date: October 3, 1995

ENVIRONMENTAL RESOURCE PERMIT
Construction Commencement Notice

PROJECT:_____ PHASE:_____

I hereby notify the Department of Environmental Protection that the construction of the surface water management system authorized by Environmental Resource Permit No._____ has commenced / is expected to commence on _____ 199__, and will require a duration of approximately _____ months _____ weeks _____ days to complete. It is understood that should the construction term extend beyond one year, I am obligated to submit the Annual Status Report for Surface Water Management System Construction.

PLEASE NOTE: If the actual construction commencement date is not known, Department staff should be so notified in writing in order to satisfy permit conditions.

_____	_____	_____
Permittee or Authorized Agent	Title and Company	Date

_____	_____
Phone	Address

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
3804 COCONUT PALM DR.
TAMPA, FLORIDA 33619

Form #62-343.900(5), F.A.C.
Form Title: As-Built Certification by a Registered Professional
Date: October 3, 1995

ENVIRONMENTAL RESOURCE PERMIT
AS-BUILT CERTIFICATION BY A REGISTERED PROFESSIONAL

Permit Number: _____

Project Name: _____

I hereby certify that all components of this surface water management system have been built substantially in accordance with the approved plans and specifications and are ready for inspection. Any substantial deviations (noted below) from the approved plans and specifications will not prevent the system from functioning as designed when properly maintained and operated. These determinations are based upon on-site observation of the system conducted by me or by my designee under my direct supervision and/or my review of as-built plans certified by a registered professional or other appropriate individual as authorized by law.

Name (please print)	Signature of Professional
Company Name	Florida Registration Number
Company Address	Date
City, State, Zip Code	
Telephone Number	(Affix Seal)

Substantial deviations from the approved plans and specifications:

_____

_____

_____

_____

(Note: attach two copies of as-built plans when there are substantial deviations)

Within 30 days of completion of the system, submit two copies of the form to:

~~STATE OF FLORIDA~~
DEPARTMENT OF ENVIRONMENTAL PROTECTION
~~3804 COCONUT PALM DR.~~
TAMPA, FLORIDA 33619

Form # 62-343.900(6), F.A.C.
Form Title: Inspection Certification
Date: October 3, 1995

ENVIRONMENTAL RESOURCE PERMIT
INSPECTION CERTIFICATION

Permit Number: _____

Project Name: _____

Inspection Date(s): _____

Inspection Results: (check one)

____I hearby certify that I or my designee under my direct supervision have inspected the system at the above referenced project and that the system appears to be functioning in accordance with the requirements of the permit and Chapter 373 F.S. (as applicable).

____The following necessary maintenance was conducted:

_____

_____

____I hearby certify that I or my designee under my direct supervision has inspected the system at the above referenced project and that the system does not appear to be functioning in accordance with the requirements of the permit and Chapter 373 F.S. (as applicable). I have informed the operation and maintenance entity of the following: (a) that the system does not appear to be functioning properly, (b) that maintenance is required to bring the system into compliance, and (c) if maintenance measures are not adequate to bring the system into compliance, the system may have to be replaced or an alternative design constructed subsequent to Department approval.

_____ _____
Name (please print) Signature of Professional Engineer

_____ _____
Company Name Florida Registration Number

_____ _____
Company Address Date

_____
City, State, Zip Code

_____
Telephone Number (Affix Seal)

Within 30 days of completion of the inspection, submit two copies of this form to the following Department Office:

Department of Environmental Protection

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
3804 COCONUT PALM DR.
TAMPA, FLORIDA 33619

Form #62-343.900(7), F.A.C.
Form Title: Request for Transfer to Operation Phase
Date: October 3, 1995

REQUEST FOR TRANSFER OF ENVIRONMENTAL RESOURCE PERMIT CONSTRUCTION PHASE TO OPERATION PHASE

(To be completed and submitted by the operating entity)

Florida Department of Environmental Protection

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
3804 COCONUT PALM DR.
TAMPA, FLORIDA 33619

It is requested that Department Permit No. _____ authorizing the construction and operation of a surface water management system for the below mentioned project be transferred from the construction phase permittee to the operation phase operating entity.

PROJECT:_____

FROM: Name:_____
Address:_____
City:_____ State:_____
Zipcode:_____

TO: Name:_____
Address:_____
City:_____ State:_____
Zipcode:_____

The surface water management facilities are hearby accepted for operation and maintenance in accordance with the engineers certification and as outlined in the restrictive covenants and articles of incorporation for the operating entity. Enclosed is a copy of the document transferring title of the operating entity for the common areas on which the surface water management system is located. Note that if the operating entity has not been previously approved, the applicant should contact the Department staff prior to filing for a permit transfer.

The undersigned hearby agrees that all terms and conditions of the permit and subsequent modifications, if any, have been reviewed, are understood and are hearby accepted. Any proposed modifications shall be applied for and obtained prior to such modification.

Operating Entity _____

Name _____ Title _____

Telephone _____

Enclosure:
( ) Copy of recorded transfer of title surface water management system
( ) Copy of plat(s)
( ) Copy of recorded restrictive covenants, articles of incorporation, and certificate of incorporation

MANATEE COUNTY GOVERNMENT
Public Works Department

D.E.P.
FEB 0 1 1999
Southwest District Tampa

January 28,1999

Danielle Nichols, Environmental Specialist, Division of Waste Management
Florida Department of Environmental Protection, South West District
3804 Coconut Palm Drive
Tampa, Florida 33619

Re: Manatee County-White Goods and Scrap Metal

Dear Ms. Nichols:

As requested during our conversation on January 4th, enclosed is the tonnage for scrap metals and white goods removed from the Lena Road Landfill. Scrap started leaving December 29th, and as of January15th,1999, a total of 224.90 tons have been removed. The removal of freon started January 14th, ending January 19th,1999. Two loads of appliances have been removed which is not included in tonnage.

The contracted vendor has scheduled the claw equipped crane for week of February 1, 1999 to complete removal of appliances. I will notify you after the job has been completed.

If you have any questions or require further information at this time, please contact me at 941/795-3423.

Sincerely,

Cari L. Walz

Cari L. Walz
Recycling Service Technician

cc: Len Bramble, P.E., Director
Daniel T. Gray, Utilities Operations Manager
Gus A. DiFonzo, Solid Waste Manager
Kim Ford, P.E., FDEP
Robert Butera, P.E., FDEP

MANATEE COUNTY GOVERNMENT

Public Works Department

D.E.P.

JAN 20 1999

Southwest District Tampa

January 14, 1999

Kim Ford, P.E.
Division of Waste Management
Department of Environmental Protection, South West District
3804 Coconut Palm Drive
Tampa, FL 33619

Re: Lena Road Landfill, Operation Permit Application
Gradient and Storm Water Management Systems
Request to Modify Approved Plans

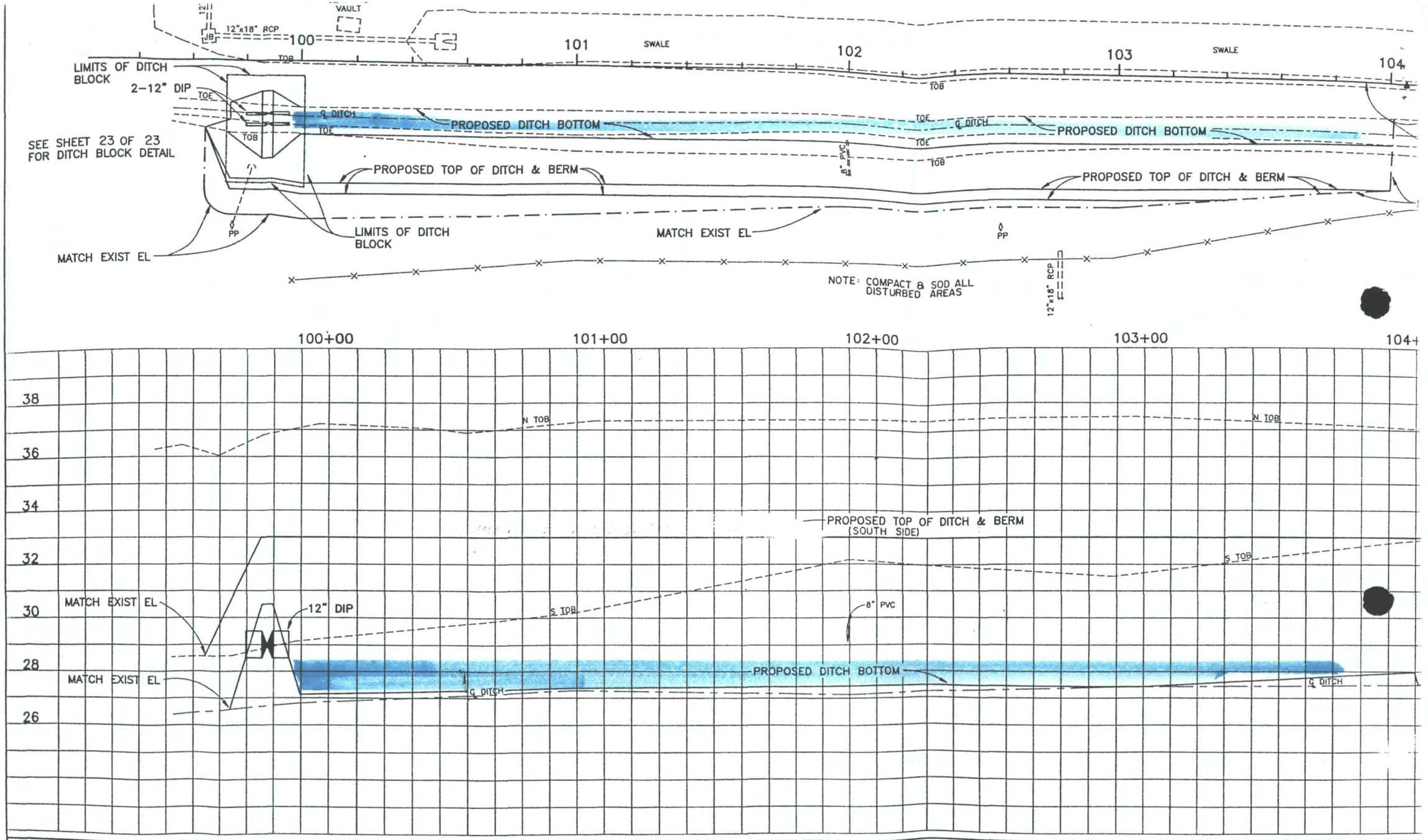
Dear Mr. Ford:

Staff has received and taken into consideration your fax of December 15, 1998, in which you offered alternate methods to FDEP approved means to resolve gradient issues related to renewing our operating permit. After meeting with staff and a subsequent phone conversation with you, it was agreed that an alternate method would expedite construction, achieve the desired outcome and lessen the total cost of the project. The method now proposed to mitigate storm water and gradient issues include the following:

- Installation of a flap gate at station 27+79;
- Line the ditch from station 12+85 to 13+80 with clay having a permeability no less than 10^{-7}cm/sec;
- Regrade the ditch bottom as shown on the plans;
- Include one additional storm water sample location at the point of discharge, approximately 100 feet west of station 100+00;
- Line the remaining ditches with on-site clayey soils;
- Removal of the 18" PCMP from station 13+00 to 13+79;
- Removal of the 24" CMP at station 13+50; and
- Relocate the point of discharge of the 80 foot 18" RCP from station 12+97 to the western side of NPDES outfall 001, at the point of discharge of the second 18" RCP.

ADMINISTRATION • 4410 - 66th Street West, Bradenton, Florida 34210 • (941) 792-8811 • FAX (941) 795-3490

P.O. Box 25010, Bradenton, Florida 34206



PLAN/PROFILE ~ BOOK NOS.	By	Checked	Date
Surveyed	K LA BARR		12/97
Plotted	LLP		2/98
Alignment			

	BY	CHECKED	DATE
Designed	LLP	RTH	4/98
Drawn	LLP	RTH	4/98

ENGINEER

PUBLIC WORKS DEPT.

MANATEE COUNTY

LENA ROAD LANDFILL

STAGE III SOUTH DITCH

We have no reg. authority until the stormwater discharges from the site - for compliance, they should sample @ where their discharg goes into the creek. Maybe we can write the condition so that is it tested when it discharges. Do you think it will be < 24/yr?

A 1/26/09

Department of Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

January 25, 1999

Mr. Gus DiFonso
Solid Waste Management
Manatee County
3333 Lena Road
Bradenton, FL 34202

Re Lena Road Landfill Corrective Actions,
Gradient and Stormwater Management Systems
Permit No.: SO41-211176, Manatee County
Pending Permit #39884-001-SO

Dear Mr. DiFonso:

The Department has no objection to the alternate methods to expedite construction concerning improvements to the gradient and stormwater management systems as proposed in Mr. Ben Alex's January 14, 1999 letter and plans changes received January 20, 1999 subject to the following conditions:

1. The clay ditch liner from station 12+85 to 13+80 shall have a permeability less than 10^{-7} cm/sec;

2. The additional stormwater sample location may be required prior to the point of discharge or sample taken at the time of discharge in Cypress Strand; and

3. Certification and record drawings shall be submitted as required in the Department's August 13, 1998 letter attached.

The Department appreciates all efforts being made to resolve this matter. On all future correspondence, please include Robert Butera on distribution. 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/ab
Attachment
cc: Clayton Barth, P.E., Manatee County
Timothy Hochuli, Manatee County
Randy Cooper, P.E., FDEP Tampa, ERP Section
Robert Butera, P.E., FDEP Tampa, Solid Waste Section

Department of Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

August 13, 1998

Mr. Ben Alex
Solid Waste Management
Manatee County
3333 Lena Road
Bradenton, FL 34202

Re Lena Road Landfill Corrective Actions,
Gradient and Stormwater Management Systems
Permit No.: SO41-211176, Manatee County
Pending Permit #39884-001-SO

Dear Mr. Alex:

The Department has no objection to the corrective actions concerning improvements to the gradient and stormwater management systems as proposed in your May 11, 1998 letter, Mr. Clayton Barth's July 20, 1998 letter and attachments, and plans entitled Stormwater Ditch Improvements received August 3, 1998 subject to the following conditions:

1. No later than September 1, 1998, the County shall submit a construction schedule which includes estimated dates for each component of the construction to the Department. The Engineer of Record or another qualified professional engineer shall make periodic inspections during construction to ensure that design integrity is maintained. An updated construction schedule and progress chart shall be submitted to the Department monthly.

2. Within thirty (30) days after the specified construction has been completed, the following activities shall be completed:

   a. The County shall submit a Certification of Construction Completion, Form 62-701.900(2) (attached), signed and sealed by the professional engineer in charge of construction to the Department for approval, and shall arrange for Department representatives to inspect the construction in the company of the engineer and the facility operator.

b. The County shall submit Record Drawings showing all changes (i.e. additions, deletions, revisions to the plans previously approved by the Department including site grades and elevations). The Record Drawings shall include, but not be limited to, details such as the as-built invert elevations of the piping, stormwater structures, wiers and overflow windows, and ditch bottoms.

c. The County shall submit a narrative indicating all changes in plans and the cause of the deviations and certification by the design engineer to the Department.

3. In the event of damage to any portion of the site facilities or failure of any portion of the associated systems, the County shall **immediately (within 24 hours)** notify the Department explaining such occurrence and remedial measures to be taken and time needed for repairs. Written detailed notification shall be submitted to the Department **within seven (7) days** following the occurrence.

Completion of these corrective actions and subsequent demonstration of compliance are required prior to issuance of the pending operation permit renewal. Delays in completion of corrective actions and compliance may result in enforcement action.

The Department appreciates all efforts being made to resolve this matter. On all future correspondence, please include Robert Butera on distribution. 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/ab
Attachment

cc: Clayton Barth, P.E., Manatee County
Gus DiFonso, Manatee County
Timothy Hochuli, Manatee County
Randy Cooper, P.E., FDEP Tampa, ERP Section
Robert Butera, P.E., FDEP Tampa, Solid Waste Section

Florida Department of Environmental Protection
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, FL 32399-2400

DEP Form # 62-701.900(2)
Form Title Certification of Construction Completion
Effective Date May 19, 1994
DEP Application No. _____ (Filled by DEP)

Certification of Construction Completion of a Solid Waste Management Facility

DEP Construction Permit No:_____County:_____

Name of Project:_____

Name of Owner:_____

Name of Engineer:_____

Type of Project:_____

_____

Cost: Estimate $_____ Actual $_____

Site Design: Quantity:_____ ton/day Site Acreage:_____ Acres

Deviations from Plans and Application Approved by DEP:_____

_____

_____

_____

_____

Address and Telephone No. of Site:_____

_____

Name(s) of Site Supervisor:_____

Date Site inspection is requested:_____

This is to certify that, with the exception of any deviation noted above, the construction of the project has been completed in substantial accordance with the plans authorized by Construction

Permit No.:_____ Dated:_____

Date:_____ _____
Signature of Professional Engineer

Northwest District
160 Governmental Center
Pensacola, FL 32501-5794
904-444-8360

Northeast District
7825 Baymeadows Way, Ste. B200
Jacksonville, FL 32256-7590
904-448-4300

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

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

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
941-332-6975

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

MANATEE COUNTY GOVERNMENT

Public Works Department

D.E.P.
JAN 20 1999
Southwest District Tampa

January 14, 1999

Kim Ford, P.E.
Division of Waste Management
Department of Environmental Protection, South West District
3804 Coconut Palm Drive
Tampa, FL 33619

Re: Lena Road Landfill, Operation Permit Application
Gradient and Storm Water Management Systems
Request to Modify Approved Plans

Dear Mr. Ford:

Staff has received and taken into consideration your fax of December 15, 1998, in which you offered alternate methods to FDEP approved means to resolve gradient issues related to renewing our operating permit. After meeting with staff and a subsequent phone conversation with you, it was agreed that an alternate method would expedite construction, achieve the desired outcome and lessen the total cost of the project. The method now proposed to mitigate storm water and gradient issues include the following:

- Installation of a flap gate at station 27+79;
- Line the ditch from station 12+85 to 13+80 with clay having a permeability no less than 10^{-7}cm/sec;
- Regrade the ditch bottom as shown on the plans;
- Include one additional storm water sample location at the point of discharge, approximately 100 feet west of station 100+00;
- Line the remaining ditches with on-site clayey soils;
- Removal of the 18" PCMP from station 13+00 to 13+79;
- Removal of the 24" CMP at station 13+50; and
- Relocate the point of discharge of the 80 foot 18" RCP from station 12+97 to the western side of NPDES outfall 001, at the point of discharge of the second 18" RCP.

ADMINISTRATION • 4410 - 66th Street West, Bradenton, Florida 34210 • (941) 792-8811 • FAX (941) 795-3490

P.O. Box 25010, Bradenton, Florida 34206

- Install a minimum of five (5) storm water down drains as indicated on the Fill Sequence Plans, page C-3. Because the plans are based on projected waste quantities landfilled, not all of the down drains shown on the plans require installation at this time.

The above changes refer to the plan set entitled Storm Water Ditch Improvements, Project No. 480-0010900. A marked up plan set is included for your review. With these changes staff anticipates that construction should be complete by May 28, 1999. Submittal of the record drawings and certification of construction completion form will be submitted by July 1, 1999. Staff appreciates your help in resolving these issues. If you have any questions or need additional information, please contact me at (941) 795-3474.

Sincerely,

Ben Alex

Ben Alex, E.I.
Solid Waste Technical Coordinator

cc: Len Bramble, P.E., Director of Public Works
Dan Gray, Utilities Operations Manager
Gus DiFonzo, Solid Waste Manager
Clay Barth, P.E., Engineer II
Bob Butera, P.E., FDEP

[redacted]

FLORIDA N-VIRO, L.P.

Business Office
8466 N. Lockwood Ridge Rd., Suite 330
Sarasota, Florida 34243
941-378-2055
941-378-8278 fax

Operations Facility
3650 Highway 17 North
Ft. Meade, Florida 33841
941-534-3975
941-534-1928 fax

D.E.P.
JAN 08 1999
Southwest District Tampa

January 7, 1999

Mr. Daniel T. Gray
Public Works Department - Administration
Manatee County Government
P.O. Box 25010
Bradenton, Florida 34206

Dear Dan:

As we have discussed, the use of N-ViroSoil™ and BioBlend™ can save the County's landfill operations a significant amount of expense as a replacement for borrow materials and cover soil purchased. As you requested, I met with Bob Butera, Kim Ford and Susan Pelz at FDEP yesterday to discuss the utilization of these products as both a daily and final cover material at the landfill. These products can also create an asset out of yard waste that may be difficult to distribute elsewhere.

Since all N-Viro product specifications meet or exceed the U.S. EPA CFR Chapter 40 Part 503 for class A - EQS (Exceptional Quality) standards and Florida "AA" requirements, we can beneficially utilize them with unlimited distribution. The specific conditions of our FDEP permit No. FLA013068 cite that our class AA product as specified in Chapter 62-640 F.A.C. is produced for unlimited distribution and it's use in *"playgrounds, parks, golf courses, lawns, hospital grounds, or other unrestricted access areas is permissible."* They can therefore be used at the landfill with no further restrictions.

I left an information packets with FDEP (copy enclosed for you also) which included studies addressing the utilization of our product at landfills, specifically the product characteristics for landfill cover. Compaction, permeability, flammability, odors/emissions and litter control results were all very favorable. Fly grill counts never reached the threshold value and no rodents were ever trapped on site.

Kim Ford indicated that upon receipt of your written request, he would authorize a six month product demonstration project as the first step toward achieving long term approval of the product as a cover material. Concurrently I will be contacting Mary Jean Yon, the FDEP Solid Waste Program Administrator in Tallahassee to obtain an endorsement at the state level.

We can treat Manatee's wastewater sludge into a AA, EQS material, eliminating current land spreading problems and restrictions for the County. This also allows the commissioners the latitude to do away with class "B" sludge land spreading, thereby eliminating the importation of out of county sewage. Wouldn't you agree that reusing Manatee's product as a cover material, saving the costs of cover soil combined with a revenue producing slip-stream of BioBlend product makes a great deal of practical, political and economic good sense for the County?

Dan, I am looking forward to working with the Public Works Department to determine the economic costs and benefits of this project. I will contact you next week to get the list of information from last month's correspondence so that we can provide Public Works with the cost savings analysis we discussed at our last meeting.

Sincerely,

Harris Bowers
General Manager
cc: Len Bramble, Ed McAdam, Manatee County
Bob Butera, Kim Ford, Susan Pelz and Clyde Hill, FDEP
HB/nds

Department of Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

DATE: 1-6-99

TIME: 10:10 A.M.

SUBJECT: N-VIRO-SOIL

ATTENDEES

Name	Affiliation	Telephone
Bob Butera	FDEP	813-744-6100
Kim Ford	"	" x382
Susan Pelz	"	813-744-6100 x386
Tom Otermat	Florida N-Viro LP.	941 534 3975
Harris Bowers	Florida N-Viro LP	941 929 9305

Florida N-Viro, L.P.
Harris Bowers

Business Office
8466 N. Lockwood Ridge Rd.
Suite 330
Sarasota, FL 34243
Phone 941.929.9305
Fax 941.929.0289

Florida N-Viro
Operations Facility
3650 Highway 17 N.
Ft. Meade, FL 33841
Phone 800.340.3975
Fax 941.534.1928

Florida N-Viro, L.P.
Tom Otermat
Operations Manager

Regional Office
8466 N. Lockwood Ridge Rd.
Suite 330
Sarasota, FL 34243
Phone 941-378-2055
Fax 941-378-8278

N-Viro Processing
Facility Unit # 1
3650 Highway 17 N.
Ft. Meade, FL 33841
Phone 941-534-3975
Fax 941-534-1928

% SOLIDS 12-18% ~~DE~~ TO NUIRO
=> 50-60% RETURNED TO LF

CHEMICAL ANALYSIS
? = (PROVE UNLIMITED DISTRIBUTION
(YES - THE DEP PERMIT)

COVER ?
ODOR, O
VECTORS
BLEND - TO BE PROPOSED BY
DAN GRAY -
HOW TO MIX AT SITE ?

LETTER TO MJ Y =
(1) QUICK BLEND - INITIAL COVER
(2) 90 DAYS WINDROWS - INTERMEDIATE
& FINAL COVER

~~6~~ 6 MONTH DEMO
UNTIL LETTER FROM TALLAHASSEE

NOTICE OF MEETING

Today's date: 12-17-98 Writer: Bob Butera

Date of meeting: 1-6-99

Time: 10:00 A.M.

Place: WCR

Subject: Use of Treated Sludge for Initial Cover

Explanation:

Requested by: Harris Bowers FAX Ph.# 541

Names of attendees other than DER: Harris Bowers

Local Program notified: ___/yes ___/no Attending?

Copies to anticipated in-house attendees:

Kim Ford
Susan Pelz
Bob Butera

Information copies to:

TPA-04
07/88

MANATEE COUNTY GOVERNMENT
Public Works Department

RECEIVED
DEC 3 1 1998
Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

December 29, 1998

Danielle Nichols, Environmental Specialist, Division of Waste Management
Florida Department of Environmental Protection, South West District
3804 Coconut Palm Drive
Tampa, Florida 33619

Re: Manatee County - White Goods and Scrap Metal

Dear Ms. Nichols:

As follow up to a letter directed to you by Ben Alex, Solid Waste Technical Coordinator, on December 11, 1998, please be advised that the following steps have been taken regarding removal of white goods and scrap metal. A Purchase Order for removal of the referenced materials has been issued to Trademark Metals Recycling, LLC for a term commencing on December 15, 1998 and ending on April 30, 1999.

Removal of scrap metal from the Landfill will begin on December 29, 1998, by the contracted vendor. Removal will be accomplished during a four-day span with two loads per day expected to be transported. Arrangements for removal of the freon containing appliances will begin Monday, January 4, 1999, with actual service expected to begin during that same week. Freon will be removed by a certified licensed vendor prior to removal by the scrap metal dealer.

As requested, please find attached a copy of a letter from Marco Industrial Salvage Brokers, the previous vendor, acknowledging lack of payment from January, 1998. In addition, please find copy of letter sent by Manatee County terminating their contract.

If you have any questions or require further information at this time, please contact me at 941/795-3428.

Sincerely,

Gwen Pagington

Gwen Pagington
Solid Waste Program Specialist

cc: Daniel T. Gray, Utilities Operations Manager
Gus A. DiFonzo, Solid Waste Manager
Ben Alex, E.I., Solid Waste Technical Coordinator
Cari L. Walz, Recycling Service Technician
Kim Ford, P.E., FDEP
Robert Butera, P.E., FDEP

MARCO
INDUSTRIAL SALVAGE BROKERS
P.O. Box 5362 - Tampa, Fl. 33675

813- 931-2808

RECEIVED
AUG 26 1998
SOLID WASTE

August 25, 1998

Gus A. DiFonzo
Solid Waste Manager
Manatee County Public Works Department
P.O. Box 25010
Bradenton, Florida 34206

RE: Agreement for Purchase and Collection of White Goods and Scrap Metal

Dear Mr. DiFonzo:

We are in receipt of your letter, dated 8/17/98. Our records indicate that the amount owed to Manatee County is $11030.96, as follows:

January 1998	$2475.85
February 1998	$2848.03
March 1998	$1956.85
April 1998	$1894.35
June 1998	$1855.88
TOTAL	$11030.96

We are not aware, or have been aware of any missing tickets, until receipt of your letter. Please provide us, with signed scale weight tickets from the landfill, so that I might research these items.

As you well know, the scrap steel market has been nosediving in pricing since the beginning of the year. We will make every effort to get our account caught up as rapidly as possible. I would like to suggest, to keep from getting this material backed up at the landfill, that we would instruct the steel mill to continue to pick up and issue checks directly to Manatee County Public Works Department.

At your convenience, please feel free to contact me to discuss these issues. I would be available at any time to meet with you.

Sincerely,

Marvin Oster
President

CC.: Gwen Pagington, Solid Waste Program Specialist

BEST AVAILABLE COPY

MANATEE COUNTY GOVERNMENT
FINANCIAL MANAGEMENT DEPARTMENT
PURCHASING DIVISION
"TO SERVE WITH EXCELLENCE"

cc: Dan Diaz

October 30, 1998

CERTIFIED #P 243 398 381

Marvin Oster, President
Marco Industrial Salvage Brokers, Inc.
Post Office Box 5362
Tampa, Florida 33675

RECEIVED
NOV - 4 1998
SOLID WASTE

Re: Agreement (Bid #96-7520-DC), White Goods/Scrap Metal Sale

Dear Mr. Oster:

This letter is to inform you that Manatee County shall exercise its option not to renew the Agreement with your firm for collection and purchase of white goods and scrap metal in accordance with the Agreement Terms and Conditions, effective November 5, 1998.

The choice not to renew this Agreement is based upon your inability to satisfy the requirements of the County and is in accordance with:

> Terms and Conditions of the Agreement Paragraph 7, Page 2, "This Agreement may be automatically renewed/extended beyond the first 12 month required base contract period for two consecutive 12 month optional periods not to exceed a total contract duration of 36 months."

Our office mailed an "unsatisfactory Vendor Performance Notice" to your office on October 15, 1998 by certified mail. No response to this notice has been received although you verbally have stated a repayment plan will be forthcoming. On several previous occasions County staff has contacted you by letter and telephone regarding overdue reports and payment of revenues. We will review these actions with the County Attorney to pursue payment and to determine if we will debar or suspend your firm from consideration of award of contracts.

Sincerely,

R.C. "Rob" Cuthbert, C.P.M.
Purchasing Director

RCC: tfc
F:\USER\TOM\CWPDOCS\CONTRACT\991399TC.TRM

cc: Mr. Len Bramble, P.E., Public Works Director

Bob RB

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 12/18/98 Subject LEAR RD - STREET SWEEPING

Time 2:30 Permit No.

County MANATEE

M BEN ALEO Telephone No.

Representing MANATEE COUNTY

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

Other Individuals Involved in Conversation/Meeting

DAN GRAY, CLAY BARR

Summary of Conversation/Meeting

DISCUSSED ACCEPTANCE OF STREET SWEEPING AS COVER

1. INITIAL COVER ONLY
2. USED ONLY IN BERMED WORKING AREA
3. WILL BE SCREENED SOIL.
4. STOCKPILE IN BERMED AREA — STAGE III - ALL RUNOFF — TO LCRS

ALL AGREED - NO PROBLEM

(continue on another sheet, if necessary)

Signature

Title

PA-01
1/96
pap

Bob RB

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 12/18/98
Time 2:00

Subject CORTEZ RD STORMWATER
Permit No.
County MANATEE COUNTY

M BENALEX
Telephone No.

Representing MANATEE COUNTY

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

Other Individuals Involved in Conversation/Meeting
DAN GRAY, CLAY BARTH

Summary of Conversation/Meeting
DISCUSS STORMWATER SYSTEM IMPROVEMENTS @
(1) FLAP GATE AT 27+79, (2) LINE DITCH BETWEEN 36" RCP AND 30" PIPE: 12+85 TO 13+80, (3) REGRADE REMAINING DITCH WITH CLAYEY SOIL AS PER PLAN ELEVATIONS (MDOT 10"), (4) SAMPLE STORMWATER OUTFALL
MANATEE COUNTY WILL PROPOSE AS CHANGES - PLAN DETAIL & in COVER LETTER WITH REASON TO SAVE $ AND TIME DELAYS IN COMPLETING IMPROVEMENTS
- DEP WILL RESPOND IN WRITING

(continue on another sheet, if necessary)

Signature ELR

Title

PA-01
1/96
pap

FDEP	3804 Coconut Palm Drive, Tampa, FL 33619-8318

FAX

Date: FAXED 12/18/98

Number of pages including cover sheet: 3

To: BEN ALEX

MANATEE COUNTY

Phone: 941 7953474

Fax phone: 941 7953451

CC:

From: Kim FORD

Phone: (813) 744-6100 + 382

Fax phone: (813) 744-6125

REMARKS: ☐ Urgent ☑ For your review ☐ Reply ASAP ☐ Please comment

CONVERSATION RECORDS /
FOR YOUR FILES
TAX
Kim

Bob ✓

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 12/18/98 Subject LEAR RD - STREET SWEEPING

Time 2:30 Permit No.

County MANATEE

M BEN ALEO Telephone No.

Representing MANATEE COUNTY

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

Other Individuals Involved in Conversation/Meeting

DAN GRAY, CLAY BARR

Summary of Conversation/Meeting

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ALL AGREED - NO PROBLEM

(continue on another sheet, if necessary)

Signature

Title

PA-01
1/96
pap

Bob

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 12/18/98
Time 2:00

Subject LENA RD STORMWATER
Permit No.
County MANATEE COUNTY

M BEN ALEX
Representing MANATEE COUNTY
Telephone No.

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

Other Individuals Involved in Conversation/Meeting
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- DEP WILL RESPOND IN WRITING

(continue on another sheet, if necessary)

Signature ELR

Title

PA-01
1/96
pap

BEST AVAILABLE COPY

Transmit Confirmation Report

No.	005
Receiver	8-1-941-795-3451
Transmitter	WASTE MGT TAMPA SWDIST
Date	Dec 18 98 14:49
Time	01'48
Mode	Norm
Pages	03
Result	OK

MANATEE COUNTY GOVERNMENT

Public Works Department

RECEIVED
DEC 17 1998
Department of Environmental Protection
BY SOUTHWEST DISTRICT

December 11, 1998

Danielle Nichols, Environmental Specialist
Division of Waste Management
Department of Environmental Protection, South West District
3804 Coconut Palm Drive
Tampa, FL 33619

Re: Manatee County, Lena Road Landfill
White Goods and Scrap Metal

Dear Ms. Nichols:

As indicated on your November 30, 1998 inspection checklist the quantity of white goods stockpiled in Stage III is excessive. While staff takes full responsibility for this, a brief description explaining how this occurred is given so you can better understand the situation.

The removal of white goods and scrap metal were provided by Marco Salvage, a private company contracted by Manatee County. Marco Salvage would pay Manatee County a fixed unit price, based on tonnage, for the removal of the material. Normally staff would invoice the vendor and receive payments. According to the vendor however, because of unstable scrap market conditions he was unable to profit from the collection of the material. This condition led him to stop payment on invoices for the removal of white goods and scrap metal. After several conversations with the vendor, it became apparent he was no longer going to honor the contract. Thus staff was left with no option but to sever contractual obligations with him. This occurred in November 1998.

To remedy the situation, staff has requisitioned for a new vendor to collect and process white goods and scrap metal. A copy of the requisition is attached for your review. Removal of the material will occur in mid December 1998.

ADMINISTRATION • 4410 - 66th Street West, Bradenton, Florida 34210 • (941) 792-8811 • FAX (941) 795-3490

P.O. Box 25010, Bradenton, Florida 34206

Collection of the material will be on an on call basis. The length of the service is through April 1999. If services are deemed satisfactory, staff will enter into a long term contract with the vendor. If you have any questions or need additional information, please contact me at (941) 795-3474.

Sincerely,

Ben Alex

Ben Alex, E.I.
Solid Waste Technical Coordinator

cc: Dan Gray, Utilities Operations Manager
Gus DiFonzo, Solid Waste Manager
Cari Walz, Recycling Service Technical
Kim Ford, P.E., FDEP
Bob Butera, P.E., FDEP

146230

MANATEE COUNTY PURCHASING
2908 - 12TH STREET COURT EAST
BRADENTON, FLORIDA 34208

REC

THIS IS NO

PURCHASE ORDER NUMBER	REQUISITION NUMBER
VENDOR NUMBER	P.O. NUMBER
1	
2	
3	
4	

SUGGESTED VENDORS OR BID NUMBERS/STATE CONTRACT NO./GSA NO.

1. Trademark Metals Recycling LLC* 813/247-7325 Tampa, FL
2. Altha Scrap Metal 8504762-4303 Rt. 2, Box 334, Altha FL 32421
3.

SUGGESTED ACCEPTABLE BRANDS/MODELS/MANUFACTURERS

1. *Trademark Metals is a subsidiary of David Joseph, Inc.
2.
3.

ITEM NO.	QUANTITY	UNIT	GIVE FULL DESCRIPTION DOUBLE SPACE / TYPE OR PRINT	UNIT COST Trademark	UNIT COST Altha Recy.	UNIT COST	TOTAL COST	ACCOUNT NUMBER
1	181.4	tons	Collection and Processing of freon containing appliances and scrap metal from the Lena Road Landfill. All freon is to be removed from appliances by the vender,and is not the responsibility of the County.	$30.00	$5.00		5,442.00	480-000000-343407 REVENUE GENERATING PROGRAM
			Removal of materials is to commence prior to 12/15/98. Removal is expected to continue through 4/30/99.	COLLECTION WILL BE ON AN ON-CALL BASIS. CARI L. WALZ, RECYCLING SERV. TECH, 941/795-3423, CONTACT PERSON FOR COLLECTION ARRANGMENTS.				
			PRIORITY REMOVAL IS REQUIRED BY THE FL DEPARTMENT OF ENVIRONMENTAL PROTECTION					
			A request for Proposal is being prepared to continue this program.					

REQUESTING DEPT.

ATTACHMENTS: NO OF PAGES 6 CONTACT PERSON: Cari L. Walz PHONE NO: 5423 or 5428

SHIP TO: Manatee County Solid Waste Management Facility
3333 Lena Road, Bradenton, FL 34202

REQUESTED DELIVERY DATE: RUSH

1. ALWAYS PRESENT SUFFICIENT DETAIL ABOUT EQUIPMENT, MATERIALS, SUPPLIES, AND SERVICES DESIRED TO AVOID THE DELAY OF CONTACTING YOU FOR ADDITIONAL INFORMATION.
2. REFER TO PURCHASE BY YOUR REQUISITION NUMBER UNTIL RECEIPT OF COPY OF PURCHASE ORDER THEREAFTER BY PURCHASE ORDER NUMBER

THE ARTICLES OR SERVICES REQUESTED ARE NECESSARY TO PROPERLY CONDUCT THE ACTIVITIES OF THIS AGENCY AND HAVE BEEN PROVIDED FOR IN THE BUDGET AND FUNDS ARE AVAILABLE IN MY BUDGET TO COVER THIS PROCUREMENT.

DEPARTMENT HEAD OR AUTHORIZED DESIGNEE

DATE SIGNED

MANATEE COUNTY GOVERNMENT

Public Works Department

RECEIVED
NOV 0 6 1998
Department of Environmental Protection
SOUTHWEST DISTRICT
BY _____

November 4, 1998

Allison Amram, P.G.
Division of Waste Management
Department of Environmental Protection, South West District
3804 Coconut Palm Drive
Tampa, FL 33619

Re: Manatee County, Semi-annual Ground Water Quality Monitoring Report, January - June 1998

Dear Ms. Amram:

As discussed in my September 14, 1998 submittal for the above referenced subject, please find the ground water contour maps for the Lena Road and Erie Road landfill sites. This should complete the requirements for the monitoring report for the first half of 1998. If you need additional information please call me at 941-748-5543.

Sincerely,

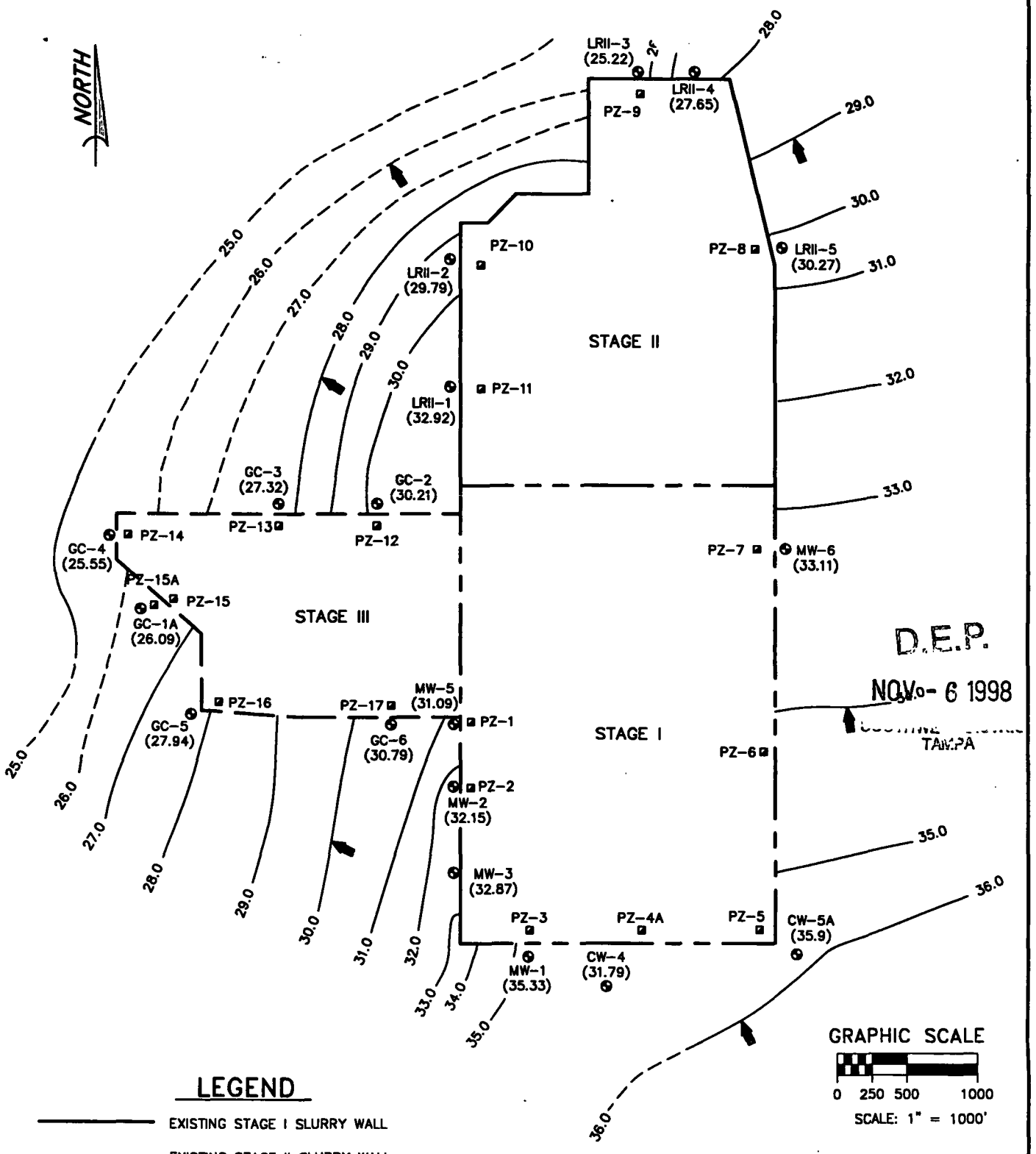
Ben Alex

Ben Alex, E.I.
Solid Waste Technical Coordinator

cc: Len Bramble, P.E., Public Works Director
Dan Gray, Utilities Operations Manager
Gus DiFonzo, Solid Waste Manager
Bob Butera, P.E., FDEP
Kim Ford, P.E., FDEP

ADMINISTRATION • 4410 - 66th Street West, Bradenton, Florida 34210 • (941) 792-8811 • FAX (941) 795-3490

P.O. Box 25010, Bradenton, Florida 34206



D.E.P.

NOV - 6 1998

TAMPA

GRAPHIC SCALE

0 250 500 1000

SCALE: 1" = 1000'

LEGEND

- EXISTING STAGE I SLURRY WALL
- EXISTING STAGE II SLURRY WALL
- EXISTING STAGE III SLURRY WALL
- APPROXIMATE SURFICIAL AQUIFER MONITOR WELL LOCATION
- APPROXIMATE SURFICIAL AQUIFER PIEZOMETER LOCATION
- 20.0 GROUNDWATER ELEVATION CONTOUR LINE DASHED WHERE INFERRED CONTOUR INTERVAL: 1.00 FT.
- DIRECTION OF WATER FLOW
- NOTE: DATA FROM CW-4 OMITTED FROM CONTOUR MAP

JUNE 12, 1998

SHALLOW AQUIFER GROUNDWATER ELEVATION CONTOUR MAP

LENA ROAD LANDFILL

3333 LENA ROAD

MANATEE COUNTY, FLORIDA

psi Information To Build On

Engineering • Consulting • Testing

DRAWN BY: NMR	SCALE: 1" = 1,000	PROJ. NO.: 552-4L015
CHKD. BY: DAS	DATE: 10/15/98	DWG.:

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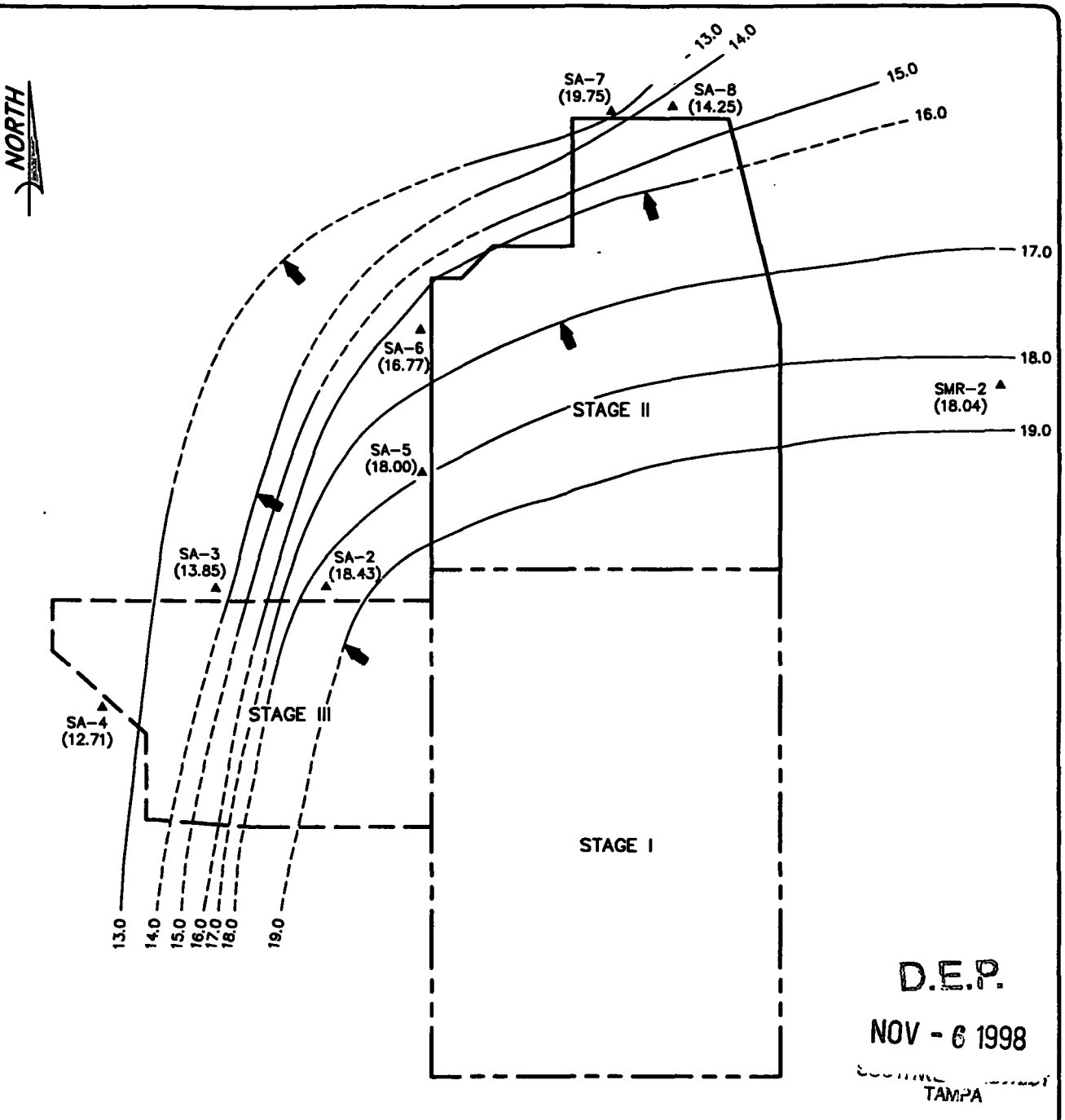

D.E.P.

NOV - 6 1998

TAMPA

GRAPHIC SCALE

0 250 500 1000

SCALE: 1" = 1000'

LEGEND

- EXISTING STAGE I SLURRY WALL
- EXISTING STAGE II SLURRY WALL
- EXISTING STAGE III SLURRY WALL
- ▲ APPROXIMATE DEEP AQUIFER WELL LOCATION
- 20.0 GROUNDWATER ELEVATION CONTOUR LINE DASHED WHERE INFERRED CONTOUR INTERVAL: 1.00 FT.
- DIRECTION OF WATER FLOW
- NOTE: DATA FROM SA-7 OMITTED FROM CONTOUR MAP

JUNE 12, 1998

DEEP AQUIFER GROUNDWATER ELEVATION CONTOUR MAP

LENA ROAD LANDFILL

3333 LENA ROAD

MANATEE COUNTY, FLORIDA

psi *Information To Build On*

Engineering • Consulting • Testing

DRAWN BY: NMR	SCALE: 1" = 1,000	PROJ. NO.: 552-4L015
CHKD. BY: DAS	DATE: 10/15/98	DWG.:

552015O6.DWG

RECEIVED
OCT 30 1998
DEP

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

Lena Rd Landfill operation Renewal

License (Permit, Certification) Application No. 39884-001-50

Applicant's Name: Manatee County

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 Regulation 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 Regulation.

This waiver shall expire on the 1st day of August 1999.

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

Signature

Lenox E. Bramble
Name (Please Type or Print)

Revised April, 1990

FDEP	3804 Coconut Palm Drive, Tampa, FL 33619-8318

FAX

FAXED 12/17/98

Date:

Number of pages including cover sheet: 2

To: Clayton Bartlett

Manatee County

Phone: 941 792 8811

Fax phone: 941 795 3490

CC:

From: Kim Ford

Phone: (813) 744-6100 x382

Fax phone: (813) 744-6125

REMARKS: ☐ Urgent ☑ For your review ☐ Reply ASAP ☐ Please comment

filter facility pipes
- performance
and objection

HAWK 12454 B PSM SDR 35
12 9 '98

12 9 '98

LENARD CF
STORMWATER
FILTER POND
UNDERDRAIN PIPE

LENARD CF
STORMWATER
FILTER POND

MANATEE COUNTY GOVERNMENT
Public Works Department

OK
12/17/98

RECEIVED
DEC 1 1998
ID E P

Randy
Holes looked small
is 3/16" ok? OK
KW
12/15/98

December 10, 1998

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

Re: Perforated Pipe Specification, Lena Landfill Filter Facility

Dear Mr. Ford:

According to your request, I have researched the specification that pertains to the pipe material, perforation hole placement, and hole diameter for the pipe materials that are to be installed in the filter facility. The plan calls for underdrain pipe material to conform to FDOT Standard Specification 440. In turn, 440 refers to material Specification 948-1 for PVC pipe. Paragraph 948-1.5 requires the pipe to conform to ASTM F 758 or ASTM F 949, and it also may conform to ASTM D 3034, when perforated according to ASTM F 758 or F 949.

According to these ASTM Specifications, the holes are to be drilled in four rows. The top two rows are to be drilled 10 degrees below the mid-line of the pipe. The bottom two rows are to be spaced 90 to 120 degrees apart and centered on the pipe invert. Holes may be 3/16" to 3/8" in diameter and must provide at least 0.2200 square inches of inlet area per foot of pipe length.

I have observed the perforated pipe material that is stockpiled at the job site awaiting installation, and have found that the pipe materials, wall thicknesses, hole diameters and hole patterns are all in conformance with the approved specification.

I hope this answers your question about the applicability of this material. Please let me know if you have any further concern about it.

Signed,

Clayton Barth

Clayton L. Barth, P.E.
Engineering Division

Copy to:
Ben Alex, Solid Waste Technical Coordinator
Dan Gray, Utilities Operations Manager
Dan Rosier, Maintenance Superintendent

ADMINISTRATION • 4410 - 66th Street West, Bradenton, Florida 34210 • (941) 792-8811 • FAX (941) 795-3490

P.O. Box 25010, Bradenton, Florida 34206

Transmit Confirmation Report

No.	:	001
Receiver	:	8-1-941-795-3490
Transmitter	:	WASTE MGT TAMPA SWDIST
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Result	:	OK

FDEP	3804 Coconut Palm Drive, Tampa, FL 33619-8318

FAX

Date: FAXED 2/13/98

Number of pages including cover sheet: 8

To: BEN ALEX

MANATEE COUNTY

Phone: 941 795 3704

Fax phone: 941 795 3451

CC:

From: tim ford

Phone: (813) 744-6100 x382

Fax phone: (813) 744-6125

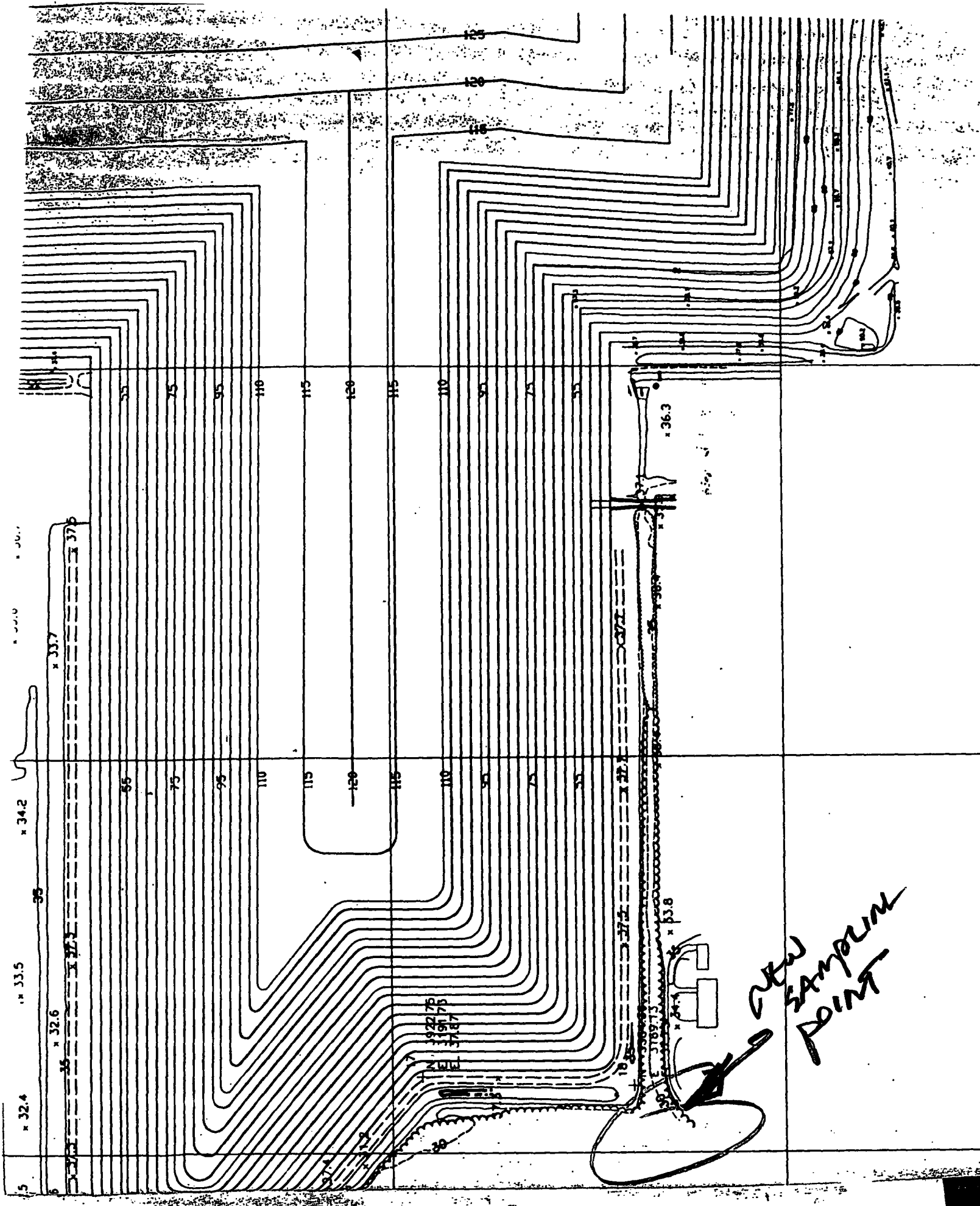
REMARKS: ☐ Urgent ☑ For your review ☑ Reply ASAP ☐ Please comment

Ben

DO CLAY IN DITCH IF—

1. FLAP GATE AT 27+79
2. CONNECT 36" RCP TO 30" AT 13+80
3. REGRADE DITCH BOTTOM (SOIL=CLAYEY SOIL BEST)
4. SAMPLE STORMWATER in CYPRESS STRAND—NEW LOCATION

ALSO PLS SEND REVISIONS SHEET TO CHANGE PIPES FROM FILTER SYSTEM AND WHERE TO CUT & PLUG. THX



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33.8
NEW SAMPLING POINT

(c) The requirements of this rule are the minimum standards for monitoring water quality and leachate. Nothing in this rule shall be construed to prevent the Department from imposing more stringent standards as necessary to protect the environment and the public health and safety due to site specific conditions and types of wastes to be disposed of in landfills or solid waste disposal units.

(2) Water quality monitoring plan and system.

(a) The permit applicant shall provide to the Department a water quality monitoring plan for the landfill that describes the proposed ground water, surface water, and leachate monitoring systems. The plan shall be based on the hydrogeological investigation required in Rule 62-701.410, F.A.C., and be prepared by, or under the supervision of, a professional geologist or professional engineer with experience in hydrogeologic investigations. The plan shall be signed and sealed by the professional geologist or professional engineer.

(b) The water quality monitoring system shall be installed and consist of: a sufficient number of ground water wells installed at appropriate locations and depths to yield ground water samples from the uppermost aquifer, as well as other aquifers reasonably expected to be affected by the landfill; surface water monitoring points installed at locations to yield samples of surface water that may be affected by the landfill; and leachate monitoring points to yield representative leachate samples. All sampling and analysis activities shall be performed by organizations that have Comprehensive Quality Assurance Plans approved in accordance with Rule 62-160.300(8), F.A.C.

(c) The water quality monitoring plan shall comply with the provisions of Rule 62-522.600(3), F.A.C. The applicant shall specify sampling locations and frequency in the water quality monitoring plan, and shall provide justification for these locations and frequencies based upon site conditions.

(3) Ground water monitoring.

(a) Two or more detection wells shall be located, and within the zone of discharge hydraulically downgradient from the solid waste disposal unit, to detect leachate releases. These wells shall be located no more than 50 feet from the edge of the solid waste disposal unit, unless site specific conditions make such placement impractical. These wells shall be capable of monitoring each solid waste disposal unit as it is operated. However, in accordance with Section 403.704(14), F.S., only one detection well is required at Class II landfills unless it is affirmatively demonstrated by the Department that a significant change in the initial quality of the water has occurred in the detection well which adversely affects the beneficial uses of the water.

(b) Multiple downgradient compliance wells shall be located at or immediately adjacent to the compliance line of the zone of discharge, if required in subsection (7) of this section. If site-specific conditions require installation of compliance wells within the zone of discharge, then a confirmed exceedance of a ground water standard at such wells will be considered a violation of that standard.

(c) A sufficient number of background wells installed as part of the site hydrogeological investigation required in Rule 62-701.410, F.A.C., shall be maintained throughout the design life of the landfill to provide information on background water quality.

(d) Monitoring wells.

1. The location of each well, in degrees, minutes and seconds of latitude and longitude, the Universal Transverse Mercator coordinates, and the elevation of the top of the well casing to the nearest .01 foot, National Geodetic Vertical Datum, shall be determined by a registered Florida land surveyor.

2. An identification number shall be assigned by the Department to each monitoring well in accordance with the Department's Ground Water Monitoring System computer file. The identification number shall be used on all water quality cmonitoring reports.

3. Well spacing shall be spaced no greater than 500 feet apart across the downgradient direction of ground water flow, and no greater than 1500 feet apart across the upgradient direction of ground water flow, in the uppermost aquifer within the zone of discharge, unless site specific conditions support the use of alternate well spacing. Conditions to be considered include, but are not limited to, ground water flow directions and rates, estimated longitudinal and transverse dispersivity rates, proximity to or presence of sensitive environments and ground water users, nature of the wastes, method of disposal, and the proposed design and size of the facility.

4. Well screens shall be located to readily detect representative ground water conditions within the saturated thickness of the uppermost aquifer within the zone of discharge. Well screens shall not act as conduits through confining layers between water bearing strata. The annular space (the space between the borehole and well casing) above the sampling depth shall be sealed to prevent contamination of samples and ground water. Wells monitoring the unconfined water table shall be screened so that the water table can be sampled at all times. The applicant shall provide technical justification for the actual screen length chosen.

5. Any monitoring wells which are abandoned or which will be covered due to lateral expansions of a landfill or the construction of new solid waste disposal units shall be plugged as necessary so that they do not act as a conduit for any leachate release to the ground water. The Department shall be notified in writing before any monitoring wells are abandoned or plugged.

6. Detection sensors capable of detecting changes in ground water that may indicate leachate releases, linked to a data recorder, may be used to augment detection wells or may be used as an alternative to detection wells, upon demonstration of their effectiveness to the Department.

(4) Surface water monitoring.

(a) All surface water bodies that may be affected by a contaminant release from the facility shall be monitored, except bodies of water contained completely within the property boundaries of the disposal site which do not discharge from the site to surface waters. In bodies of standing water, one or more representative monitoring points shall be located as close as practical to the facility. For flowing water bodies, a sufficient number of upgradient and downgradient locations shall be used to allow the effect of the landfill to be measured.

(b) Discharges from detention ponds for storm water shall be sampled at the point of discharge to waters of the state or from the property, whichever is closer to the detention pond.

(c) The details concerning the sampling locations and the analysis requirements shall be specified in the water quality monitoring plan. Each monitoring location shall be marked and its position shall be determined by a registered Florida land surveyor in degrees, minutes and seconds of latitude and longitude and Universal Transverse Mercator coordinates.

(5) Leachate sampling. The water quality monitoring plan shall specify the location of, and proposed protocol for, landfill leachate sampling to obtain a representative characterization of the leachate composition in the leachate collection and removal system as the leachate comes from the wastes and before it is subjected to conditions that may change the characteristics of the leachate. All sampling points shall be located to minimize pumping of leachate before sampling.

(6) Routine sampling frequency and requirements. Except as otherwise specified in a Department permit or order or in subsection (7) of this section, frequency of sampling and analysis shall comply with the following. However, the owner or operator of a solid waste disposal unit may request a permit modification from the appropriate District Office of the Department to delete specific monitoring parameters or field parameters from routine analyses of detection wells and surface water. The Department will grant such modification upon a demonstration that these parameters are not reasonably expected to be in or derived from the waste contained in the unit.

(a) Background water quality.

1. Background water quality for a proposed landfill shall be determined by analysis of at least one water sample taken from each well that was installed, and each surface water monitoring location that was established, during the site hydrogeological investigation. The water quality information shall be submitted to the Department as part of the supporting information for the permit application.

2. Sampling and analysis for background ground water quality shall be for the parameters listed in paragraphs (8)(a) and (8)(d) of this section.

3. Sampling and analysis for background surface water quality shall be for the parameters listed in paragraph (8)(b) of this section.

(b) Leachate sampling.

1. Leachate shall be sampled and analyzed semi-annually for the parameters listed in paragraph (8)(c) of this section. In addition, leachate shall be sampled and analyzed annually for the parameters listed in paragraph (8)(d) of this section.

2. For landfills which are receiving waste, if this annual analysis indicates that a contaminant listed in 40 CFR 261.24 exceeds the regulatory level listed therein, the permittee shall initiate monthly sampling and analysis and shall notify the Department in writing. If in any three consecutive months the same listed contaminant exceeds the regulatory level, the permittee shall notify the Department and shall, within 90 days, initiate a program designed to identify the source and reduce the presence of the contaminant in the leachate so that it no longer exceeds the regulatory level. This program may include additional monitoring of waste received and additional up-front separation of waste materials. The permittee shall coordinate with the Department regarding implementation of the program. Any leachate which is not recirculated or taken to a permitted domestic wastewater treatment facility shall be treated or managed

so that no contaminant exceeds the regulatory level. If in any three consecutive months no listed contaminant is found to exceed the regulatory level, the permittee may discontinue the monthly sampling and analysis and return to a routine sampling schedule.

(c) All detection wells, and a representative sample of background wells, shall be sampled and analyzed for the ground water parameters listed in paragraph (8)(a) of this section, in accordance with the water quality monitoring plan. For lined landfills, this shall be done at least semi-annually.

(d) Surface waters shall be sampled and analyzed semi-annually for the parameters listed in paragraph (8)(b) of this section, in accordance with the water quality monitoring plan.

(7) Assessment monitoring and corrective action.

(a) Assessment monitoring. If monitoring parameters are detected in detection wells in concentrations which are significantly above background water quality, or which are at levels above the Department's water quality standards or criteria specified in Chapter 62-520, F.A.C., the permittee may resample the wells within 15 days after the sampling data is received, to confirm the data. Should the permittee choose not to resample, the Department will consider the water quality analysis as representative of current ground water conditions at the facility. If the data is confirmed, or if the permittee chooses not to resample, the permittee shall notify the Department in writing within 14 days of this finding. Upon notification by the Department, the permittee shall initiate assessment monitoring as follows:

1. Routine monitoring of all monitoring wells, surface water monitoring locations and leachate sampling locations shall continue according to the requirements of subsection (6) of this section.

2. Within 90 days of initiating assessment monitoring and annually thereafter, the permittee shall sample and analyze a representative sample of the background wells and all affected detection wells for the parameters listed in paragraph (8)(d) of this section. Any new parameters detected and confirmed in the affected downgradient wells shall be added to the routine ground water monitoring parameter lists required in subsection (6) of this section.

3. Within 90 days of initiating assessment monitoring, the permittee shall install and sample compliance monitoring wells at the compliance line of the zone of discharge and downgradient from the affected detection monitoring wells. These wells shall be installed according to the requirements of paragraph (3)(d) of this section, and samples shall be analyzed quarterly for the parameters listed in paragraphs (8)(a) and (d) of this section.

4. Within 180 days of initiating assessment monitoring, the permittee shall submit a contamination assessment plan to the appropriate Department District Office. This plan shall be designed to delineate the extent and cause of the contamination, in order to predict the likelihood that Department water quality standards will be violated outside the zone of discharge, and to evaluate methods to prevent any such violations. After the Department and the permittee agree that the plan is so designed, the permittee shall implement this plan and submit a contamination assessment report in

accordance with the plan. All reasonable efforts shall be made by the permittee to prevent further degradation of water quality from the landfill activities.

5. If for two consecutive sampling events the concentrations of all parameters listed in paragraphs (8)(a) and (d) of this section are at or below background values, the permittee, after notifying the Department, may discontinue assessment monitoring and return to the routine monitoring requirements in subsection (6) of this section.

(b) Corrective actions.

1. If the contamination assessment report indicates that water quality standards are likely to be violated outside the zone of discharge, the permittee shall, within 90 days, submit a remedial action plan to the Department. Upon approval, the permittee shall initiate corrective actions to prevent such violations.

2. If any contaminants are detected and confirmed in compliance wells in concentrations which exceed both background levels and Department water quality standards or criteria, or are detected and confirmed in detection wells in concentrations which are above Department water quality minimum criteria, the permittee shall notify the Department within 14 days of this finding and shall initiate corrective actions. Assessment monitoring shall continue according to the requirements of paragraph (7)(a) of this section.

(8) Water quality parameters. The following list of water quality monitoring parameters shall be used for each type of sampling to be done.

(a) Ground water monitoring parameters:

Field parameters	Laboratory parameters
Static water level in wells before purging	Total ammonia - N
Specific conductivity	Chlorides
pH	Iron
Dissolved oxygen	Mercury
Turbidity	Nitrate
Temperature	Sodium
Colors and sheens (by observation)	Total dissolved solids (TDS)
	Those parameters listed in 40 CFR Part 258 Appendix I

(b) Surface water monitoring parameters:

Field parameters	Laboratory parameters
Specific conductivity	Unionized ammonia
pH	Total hardness
Dissolved oxygen	Biochemical oxygen demand (BOD_5) Temperature
Turbidity	Copper
Colors, sheens (by observation)	Iron
	Mercury
	Nitrate
	Zinc

Total dissolved solids (TDS)
Total organic carbon (TOC)
Fecal coliform
Total phosphates
Chlorophyll A
Total nitrogen
Chemical oxygen demand (COD)
Total suspended solids (TSS)
Those parameters listed in 40 CFR Part 258 Appendix I

(c) Leachate moniotring parameters:

Field parameters	Laboratory parameters
Specific conductivity	Total ammonia - N
pH	Bicarbonate
Dissolved oxygen	Chlorides
Colors, sheens	Iron
	Mercury
	Nitrate
	Sodium
	Total dissolved solids (TDS)
	Those parameters listed in 40 CFR Part 258 Appendix I

(d) Those parameters listed in 40 CFR Part 258, Appendix II.

(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;

Transmit Confirmation Report

No.	:	009
Receiver	:	819417953451
Transmitter	:	WASTE MGT TAMPA SWDIST
Date	:	Dec 15 98 10:12
Time	:	05'50
Mode	:	Norm
Pages	:	08
Result	:	OK

Transmit Confirmation Report

No.	:	022
Receiver	:	8-1-941-795-3451
Transmitter	:	WASTE MGT TAMPA SWDIST
Date	:	Dec 15 98 14:04
Time	:	06'15
Mode	:	Norm
Pages	:	09
Result	:	OK

MANATEE COUNTY GOVERNMENT

Public Works Department

OK CBF 12/17/98

RECEIVED DEC 1 1998 ID E

December 10, 1998

Randy Holes looked small is 3/16" ok? OK KW 12/15/98

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

Re: Perforated Pipe Specification, Lena Landfill Filter Facility

Dear Mr. Ford:

According to your request, I have researched the specification that pertains to the pipe material, perforation hole placement, and hole diameter for the pipe materials that are to be installed in the filter facility. The plan calls for underdrain pipe material to conform to FDOT Standard Specification 440. In turn, 440 refers to material Specification 948-1 for PVC pipe. Paragraph 948-1.5 requires the pipe to conform to ASTM F 758 or ASTM F 949, and it also may conform to ASTM D 3034, when perforated according to ASTM F 758 or F 949.

According to these ASTM Specifications, the holes are to be drilled in four rows. The top two rows are to be drilled 10 degrees below the mid-line of the pipe. The bottom two rows are to be spaced 90 to 120 degrees apart and centered on the pipe invert. Holes may be 3/16" to 3/8" in diameter and must provide at least 0.2200 square inches of inlet area per foot of pipe length.

I have observed the perforated pipe material that is stockpiled at the job site awaiting installation, and have found that the pipe materials, wall thicknesses, hole diameters and hole patterns are all in conformance with the approved specification.

I hope this answers your question about the applicability of this material. Please let me know if you have any further concern about it.

Signed

CLAYTON L. BARTH CERTIFICATE NO. 40200 STATE OF FLORIDA PROFESSIONAL ENGINEER

Clayton L. Barth, P.E.
Engineering Division

Copy to:
Ben Alex, Solid Waste Technical Coordinator
Dan Gray, Utilities Operations Manager
Dan Rosier, Maintenance Superintendent

ADMINISTRATION • 4410 - 66th Street West, Bradenton, Florida 34210 • (941) 792-8811 • FAX (941) 795-3490

P.O. Box 25010, Bradenton, Florida 34206

SECTION 947
CLAY PIPE

ther than for Underdrain.

e other than as underdrain shall meet the requirements of AASHTO

Pipe for Underdrains.

e for underdrains shall be perforated and shall be of first quality, hub and yle, vitrified clay. It shall be sound, and without warps, cracks or other ctions. The pipe shall be thoroughly and perfectly burned and shall be fully and th salt-glazed. The pipe shall be sufficiently tough that it may be cut with a chisel hammer to a reasonably uniform cleavage.

This pipe shall be furnished in uniform lengths for any order of pipe or for any particular installation operation, with a minimum length of two feet.

The perforations shall meet the requirements for dimensions, size, location, etc. as specified in AASHTO M 65.

SECTION 948
MISCELLANEOUS TYPES OF PIPE

948-1 Polyvinyl-Chloride Pipe, or Acrylonitrite-Butadiene-Styrene Plastics Pipe.

948-1.1 For Bridge Drains: Polyvinyl-chloride pipe, for use in bridge drains which will be exposed shall conform to the requirements of ASTM D 1785, for Type II, Grade 1, Schedule 40 PVC pipe. For the portion of bridge drains which will be encased in concrete, pipe as specified in 948-1.4 will also be permitted.

948-1.2 Pressure Pipe: Pressure pipe for direct burial under pavement shall conform to the requirements of ASTM D 1785, for Type I, Grade I, Schedule 40, for sizes up to and including $2^1/_2$ inches, and Schedule 80 for sizes up to four inches. Pressure pipe four inches in diameter and larger shall conform to the requirements of AWWA C900-75, DR18, and ASTM D 1785, Type I, Grade I or other type as may be specifically called for in the plans or special provisions.

948-1.3 Pipe Marking: All polyvinyl-chloride pipe shall be marked as required by Article 8 of ASTM D 1785, and acceptance of the pipe may be based on this data.

948-1.4 Nonpressure Pipe: Polyvinyl-chloride pipe and acrylonitrite-butadiene-styrene pipe, intended for direct-burial or concrete encasement, shall meet the following requirements:

(a) PVC Pipe: ASTM D 3034, SDR-35, or ASTM F 949, profile wall without perforations.

(b) ABS Pipe: ASTM D 1788, Type 1, Grade 1, or Type 4, Grade 1 with no more

than 10 percent of reground material.

The manufacturer of the PVC or ABS pipe shall furnish to the Engineer six copies of mill analysis covering chemical and physical test results.

948-1.5 Underdrain: Polyvinyl-chloride pipe for use as underdrain shall conform to the requirements of ASTM F 758 or ASTM F 949. Also, PVC underdrain manufactured from PVC pipe meeting ASTM D 3033 or ASTM D 3034, perforated in accordance with the perforation requirements given in AASHTO M 36, or AASHTO M 196 will be permitted.

948-1.6 Edgedrain: Polyvinyl-chloride pipe for use as edgedrain shall conform to the requirements of ASTM F 758, ASTM F 949, ASTM D 3033 or ASTM D 3034. ASTM D 3033 and ASTM D 3034 pipe shall be perforated in accordance with the perforation requirements given in AASHTO M 36 or AASHTO M 196. Additional perforations will be required as indicated on Roadway and Traffic Design Standards, Index No. 286 for pipes designated under ASTM F 758, ASTM D 3033 and ASTM D 3034.

948-2 Corrugated Polyethylene Tubing and Pipe.

948-2.1 General: For edgedrain and underdrain, Corrugated Polyethylene Tubing and fittings shall meet the requirements of AASHTO M 252, except as modified in 948-2.2. For gutter drain, side drain and ditch closures, Corrugated Polyethylene Pipe shall meet the requirements of AASHTO M 294-83I and the additional provisions specified in 948-2.3.

The tubing or pipe shall not be left exposed to sunlight for periods exceeding the manufacturer's recommendation or six weeks, whichever is less.

948-2.2 Edgedrain and Underdrain (four-inch to ten-inch): The requirements for Edgedrain and Underdrain as specified in AASHTO M 252 are modified as follows:

(a) Section 6.2.4, The minimum wall thickness of the crown, sidewalls or valley shall be 0.025 inches. Coiling of tubing six inches in diameter or greater is not permitted.

(b) Section 6.5, (Pipe Stiffness is expanded to add the following minimum stiffness.) When extra heavy duty (XHD) tubing is specified, tubing four to ten-inches shall have a minimum pipe stiffness of 40 psi at five percent deflection and 30 psi at ten percent deflection.

948-2.3 Corrugated Polyethylene Pipe (12-inch to 24-inch): Corrugated Polyethylene Pipe for gutter drain, side drain, ditch closures and other specified applications shall have the minimum pipe stiffness required by AASHTO M 294-83I. Pipe ends shall not be permanently exposed to direct sunlight. Protection from direct sunlight shall be provided by covering the end of the pipe with a coupling the same thickness as the pipe extending two times the pipe diameter or with a metal or concrete end treatment. AASHTO M 294-83I requirements are modified to permit only those uses permitted in the plans or Special Provisions. Side drain applications require the use of a mitered end section fabricated for another approved culvert material as provided for on Index 273.

948-2.4 Filter Fabric Sock: Filter sock shall be an approved strong rough porous, polyester or other approved knitted fabric which completely covers and is secured to the perforated plastic tubing underdrain in such a way as to prevent infiltration of trench

MANATEE COUNTY GOVERNMENT

Public Works Department

December 4, 1998

RECEIVED
DEC 08 1998
Department of Environmental Protection
SOUTHWEST DISTRICT
BY

Kim Ford, P.E.
Division of Waste Management
Department of Environmental Protection, South West District
3804 Coconut Palm Drive
Tampa, FL 33619

Re: Manatee County Solid Waste Management Facility
Operations Permit Application

Dear Mr. Ford:

As requested I am sending you the following information:

- Storm Water Leachate Management Plan;
- Operations Plan;
- Updated October Water Balance; and
- Revised schedule for the construction of the clay lined ditch.

If you have any questions or need additional information, please contact me at (941) 795-3474.

Sincerely,

Ben Alex

Ben Alex, E.I.
Solid Waste Technical Coordinator

cc: Len Bramble, P.E., Director of Public Services
Dan Gray, Utilities Operations Manager
Gus DiFonzo, Solid Waste Manager
Bob Butera, P.E., FDEP

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P.O. Box 25010, Bradenton, Florida 34206

MANATEE COUNTY GOVERNMENT

MEMORANDUM

DATE: December 1, 1998

TO: Ben Alex, Solid Waste Technical Coordinator

FROM: Clay Barth, P.E., Engineer II

SUBJECT: Lena Landfill Ditch Liner

D.E.P.
DEC - 8 1998
SOUTH DISTRICT
TAMPA

Today I received from Purchasing a second set of comments regarding the Bid Specifications. This package will require my attention to the comments and approval by Robert Hall before it is sent to Len Bramble's office and then back to Deborah Carry-Reed.

Given the date and the progress made so far, it is now apparent that we have fallen behind schedule. I now estimate that it will take an additional 30 days more for the bid packaging process and bid letting to be completed. The schedule below depicts my revised present expectation of when Engineering, Purchasing and construction tasks will be completed:

Task	Original Date	Revised Date
Begin Preparation of Bid Documents	8-28-98	8-28-98 *
Complete Bid Documents and Deliver to Purchasing	9-25-98	9-22-98 *
Bid Package Complete and Bid Letting	11-23-98	12-23-98
Bid Opening	12-31-98	1-25-99
Bid Award and Notice to Proceed	1-6-99	2-1-99
Begin Construction	2-8-99	3-3-99
End Construction	7-9-99	7-30-99

* Actual date task completed.

cc: Len Bramble, P.E., Public Works Director
Robert Hall, P.E., Engineering Manager
Dan Gray, Utilities Operations Manager
Dan Rosier, Maintenance Superintendent

MANATEE COUNTY GOVERNMENT

TELEFAX COVER MEMO

PLEASE DELIVER THE FOLLOWING PAGE(S)

TO: Kim Ford

FROM: Ben Alef

DATE: 11/13/98

SUBJECT: S.W.L.M.P.

Please call upon receipt ___ **Please handle confidentially** ___

COMMENTS: I will be out all next week on Business. my new phone Number is 941 795 5474

Total number of pages including cover memo 13

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL 941/748-5543 AS SOON AS POSSIBLE.

Public Works Department

STORM WATER/LEACHATE MANAGEMENT PLAN
LENA ROAD LANDFILL
MANATEE COUNTY

Manatee County
Public Works Department
Solid Waste Section
3333 Lena Road
Bradenton Florida, 34202

November 1998

FDEP	3804 Coconut Palm Drive, Tampa, FL 33619-8318

FAX

FAXED

Date: 11/11/98

Number of pages including cover sheet: 9

To: Ben Alex

Manatee County

Phone: 941 7485543

Fax phone: 941 7953451

CC:

From: Tom Ford

Phone: (813) 744-6100 x382

Fax phone: (813) 744-6125

REMARKS: ☐ Urgent ☑ For your review ☑ Reply ASAP ☐ Please comment

PLS FAX BACK DRAFT W/REVISIONS
WITH OUT GRADIENT SHEET
& LEACHATE REPORTS.

Fax

Tom

MANATEE COUNTY GOVERNMENT

TELEFAX COVER MEMO

PLEASE DELIVER THE FOLLOWING PAGE(S)

TO: Kim Ford

FROM: Ben Alex

DATE: 11/9/98

SUBJECT: S.W.L.M.P - Permit App.

Please call upon receipt ___ **Please handle confidentially** ___

COMMENTS: Per our Discussions - Please call To Finalize.

Total number of pages including cover memo 13

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL 941/748-5543 AS SOON AS POSSIBLE.

Public Works Department

STORM WATER/LEACHATE MANAGEMENT PLAN
LENA ROAD LANDFILL
MANATEE COUNTY

Manatee County
Public Works Department
Solid Waste Section
3333 Lena Road
Bradenton Florida, 34202

July 1998

STORM WATER/LEACHATE MANAGEMENT PLAN
LENA ROAD LANDFILL
MANATEE COUNTY

(Prepared by Manatee County Public Works Department, Solid Waste Section)

Manatee County
Public Works Department
Solid Waste Section
3333 Lena Road
Bradenton Florida, 34202

April 1998

STORM WATER/LEACHATE MANAGEMENT PLAN
LENA ROAD LANDFILL
MANATEE COUNTY

Manatee County
Public Works Department
Solid Waste Section
3333 Lena Road
Bradenton Florida, 34202

December 1997

0.5" in 36 hrs ≠ 1" in 72 hrs

FDEP	3804 Coconut Palm Drive, Tampa, FL 33619-8318

FAX

Date: FAXED 10/28/98

Number of pages including cover sheet: 17

To: Len Bramble
Manatee County

Phone: 941 792 8811
Fax phone: 941 795 3490
CC:

From: Ken Ford

Phone: (813) 744-6100 x 382
Fax phone: (813) 744-6125

REMARKS: ☐ Urgent ☑ For your review ☑ Reply ASAP ☐ Please comment

Len

Bob and I wait to make sure you - the County will sign the consent agreement to allow operation and pay cost associate with delay in issuing permit ~~$~~ $166/mo

Please call Bob at x451 or myself.

Thx Ken

If ok please sign & fax waiver

Len Sin called 2:50 10/28/98 to say consent agreement on mail to Len

Ken

Department of
Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

Certified Mail
Return Receipt Requested

AUG 0 5 1996

Ms. Patricia V. Berry
Landfill Services Section Manager
Hillsborough County Department of Solid Waste
Post Office Box 1110
Tampa, Florida 33601

RE: Consent Agreement, OGC Case # 96-1649
Hillsborough County Southeast Landfill
Hillsborough County

Dear Ms. Berry:

Enclosed please find a copy of the above referenced executed Consent Agreement. Upon receipt of this executed agreement, please implement operation of the facility in accordance with the conditions specified in Attachment A of the Consent Agreeement.

You may contact me at (813) 744-6100, extension 385, if you have any questions on this document.

Sincerely,

Steven G. Morgan
Section Supervisor
Solid Waste Compliance/Enforcement
Southwest District

Attachments

cc: Robert Butera, SW w/attach.
Kim Ford, SW w/attach.
Ron Cope, HCEPC w/attach.

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

July 23, 1996

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

RE: Execution of Consent Agreement, O.C. Case # 96-1649

Dear Mr. Morgan:

Please find attached two (2) original referenced agreements signed by the Chairman of the Hillsborough County Board of County Commissioners (BOCC).

Please have the agreements executed by Dr. Garrity and return a fully signed original to the Solid Waste Management Department so that we may provide the original to the Clerks Office for the BOCC. The corrected page 11 of Attachment A has been incorporated into the agreement.

Please advise should you have any questions concerning this correspondence.

Sincerely,

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

Attachments

RECEIVED
JUL 23 1996
Department of Environmental Protection
SOUTHWEST DISTRICT
BY

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, Complainant, vs. Hillsborough County, by and through it Board of County Commissioners Respondent.	:	IN THE OFFICE OF THE SOUTHWEST DISTRICT OGC CASE NO. 96-1649

CONSENT AGREEMENT

This Consent Agreement is made and entered into between the State of Florida Department of Environmental Protection ("Department") and Hillsborough County, by and through its Board of County Commissioners ("Respondent") to reach settlement of certain matters at issue between the Department and Respondent.

The Department finds and Respondent agrees with the following:

1. The Department is the administrative agency of the State of Florida having the power and duty to administer and enforce the provisions of Chapter 403, Florida Statutes ("F.S."), and the rules promulgated thereunder in Florida Administrative Code ("F.A.C.") Title 62. The Department has jurisdiction over the matters addressed in this Consent Agreement.

2. Respondent is a political subdivision in the State of Florida and is a person within the meaning of Section 403.031(5), F.S.

3. Respondent owns, operates, and maintains the Hillsborough County Southeast County Class I Landfill ("Landfill") located at Latitude 27°46'25" North, Longitude 82°11'15" West in Sections 13,14,15,18,19,22,23,24, and 31 Township 32S, Range 21E, specifically on C.R. 672, 8.8 miles east of U.S. Hwy. 301, southeast of Tampa, Hillsborough County, Florida.

4. The Landfill is operated under expired Permit #SO29-158504 ("Permit") which was issued on December 12, 1989 and expired on December 1, 1994. On August 22, 1994, Respondent submitted an application for renewal of its operation permit, permit application #SO29-256427. In addition, the Department has delayed taking final agency action on permit application #SO29-256427 through waivers granted by the Respondent, in order to allow Respondent time to address concerns raised by the Department.

5. As a result of an inspection of the Landfill on September 16, 1994 and a review of Department files in regard to this site, the Department issued a notification letter to the Respondent dated September 27, 1994 and a follow up letter dated December 2, 1994 concerning issues at the Landfill. These letters addressed circumstances that the Department contends may constitute non-compliance with the requirements of Specific Condition #12 of the Permit and F.A.C. Rule 17-701.050(5)(e), (7-19-90).

he specific activity that constituted the alleged non-compliance is that Respondent has been unable to maintain a leachate depth of no greater than 1 foot over the liner in Phase IV of the Landfill, as required by Specific Condition #12 of the Permit and F.A.C. Rule 17-701.050(5)(e), (7-19-90). However, significant progress is being made by the Respondent to lower leachate levels in the Landfill.

6. The Respondent prepared and submitted a letter on October 14, 1994, responding to the Department's letter dated September 27, 1994. The Respondent argued that it was in compliance with the Permit conditions and F.A.C. Chapter 62-701 (formerly F.A.C. Chapter 17-701). The Respondent agrees that leachate has accumulated in excess of 1 foot in Phase IV, however, it contends that this condition does not constitute a condition that violates Rule 17-701.050(5)(e).

7. In subsequent numerous meetings and correspondences, the Respondent and the Department have met and discussed the technical and administrative merit of the Department's and Respondent's interpretation of the Permit condition specifying a maximum 1 foot depth of leachate over the liner as well as the requirements of F.A.C. Rule 62-701.400(3) which specifies a maximum head rather than a maximum depth over the liner.

a. The Department and the Respondent continue to disagree concerning the Respondent's alleged non-compliance with its Permit and F.A.C. Chapter 62-701. However, the Respondent has agreed to enter into this Consent Agreement to commit to remove

the leachate that has accumulated in Phase IV of the Landfill and comply with the Landfill's Leachate Management Plan referenced in paragraph 18 of Attachment A. Since early 1995, the Respondent has taken actions to accelerate the removal of the accumulated leachate. Those actions include construction of an on-site leachate treatment plant, a spray irrigation system, accelerated hauling and off-site disposal, and installation of a new temporary sump in Phase IV.

b. The Respondent has submitted a Leachate Management Plan to the Department specifying the parameters for operating the leachate management system at the Landfill. As of the date of this Agreement, Respondent has not met the leachate depth goals specified in the Leachate Management Plan.

c. The Respondent continues to operate the Landfill in accordance with the Permit and is taking steps to comply with current requirements of Chapter 403, F.S. and F.A.C. Chapter 62-701. The Landfill operating conditions that will bring the Landfill into compliance with current regulatory requirements are outlined in Attachment A and deal mainly with modifications of the Landfill's groundwater monitoring system, sampling frequency, and reporting requirements.

d. In addition, the Department has delayed taking final agency action on permit application #SO29-256427 through waivers granted by the Respondent, to allow Respondent to complete the removal of the leachate that has accumulated in Phase IV of the Landfill to meet the goals and objectives of the approved Leachate Management Plan.

8. On May 17, 1996, the Respondent submitted to the Department a written corrective action plan which outlined what actions the Respondent will take to bring the depth of leachate over the liner system in Phase IV of the Landfill to a level in compliance with the leachate depth levels specified in the Landfill's Leachate Management Plan referenced in paragraph 18 of Attachment A of this Consent Agreement by December 31, 1996. The Respondent also modified its existing monthly leachate balance report to include projections of the monthly incremental decrease in leachate depth levels which will occur between May 17, 1996 and December 31, 1996. The written corrective action plan was approved by the Department in a letter dated May 23, 1996.

9. Having reached resolution of the matter, the Department and the Respondent mutually agree,

AGREED:

10. This Consent Agreement will be Respondent's temporary authorization to modify the operation conditions of the Landfill and replaces the existing operating conditions specified in the Permit. This authorization shall continue until such time as the Respondent is issued a permit to operate the Landfill; a permit to operate the Landfill is denied, or the Department issues a petition to enforce the terms of this Consent Agreement. During this authorization, Respondent shall comply with all applicable rules in F.A.C. Chapters 62-3, 62-4, 62-701, 62-25, and all conditions of this Consent Agreement and shall operate the Landfill in compliance with those operation conditions specified in Attachment A of this Consent Agreement. If this authorization

expires and no permit to operate the Landfill has been issued by the Department, Respondent shall commence with closure of the Landfill in accordance with paragraph 25 of Attachment A. Until such time as a closure permit is obtained by the Respondent, the Respondent shall continue to maintain the Landfill in accordance with the requirements of Attachment A.

11. On or before December 31, 1996, Respondent shall provide written documentation to the Department that the leachate depth over the liner system of the Landfill is at a level in compliance with the Landfill's Leachate Management Plan referenced in paragraph 18 of Attachment A of this Consent Agreement. Compliance with the leachate depth specified in the Leachate Mangement Plan shall be a condition precedent for issuance of the operation permit by the Department.

12. If any event occurs which causes delay or the reasonable likelihood of delay in complying with the requirements of this Consent Agreement, Respondent shall have the burden of proving that the delay was or will be caused by circumstances beyond the reasonable control of Respondent and could not have been or can not be overcome by due diligence. Economic circumstances shall not be considered circumstances beyond the control of Respondent, nor shall the failure of a contractor, subcontractor, materialman or other agent (collectively referred to as "contractor") to whom responsibility for performance is delegated to meet contractually imposed deadlines be a cause beyond the control of Respondent, unless the cause of the contractor's late performance was also beyond the contractor's control. Upon occurrence of an event

causing delay, or upon becoming aware of a potential for delay, Respondent shall notify the Department orally within 24 hours or by the next working day and shall, within seven calendar days of oral notification to the Department, notify the Department in writing of the anticipated length, if known, and cause of delay, the measures taken or to be taken to prevent or minimize the delay and the timetable by which Respondent intends to implement these measures. If the parties can agree that the delay or anticipated delay has been or will be caused by circumstances beyond the reasonable control of Respondent, the time for performance hereunder shall be extended for a period equal to the agreed delay resulting from such circumstances. Such agreement shall adopt all reasonable measures necessary to avoid or minimize delay. Failure of Respondent to comply with the notice requirements of this paragraph in a timely manner shall constitute a waiver of Respondent's right to request an extension of time for compliance with the requirements or deadlines of this Consent Agreement.

13. Within 30 days after expiration of the authorization specified in paragraph 10 of this Consent Agreement, Respondent shall pay the Department an amount equal to $166.67 per month for the period of time from December 1,1994 until the date of expiration of the authorization specified in paragraph 10 of this Consent Agreement in settlement of the matters addressed in this Consent Agreement. This amount includes costs and expenses incurred by the Department during the investigation of this matter and the preparation and tracking of this Consent Agreement. Payment shall be made by cashier's check or money

order. The instrument shall be made payable to the Department of Environmental Protection and shall include thereon the OGC number assigned to this Consent Agreement and the notation "Pollution Recovery Fund". The payment shall be sent to Administrator, Division of Waste Management, Department of Environmental Protection, 3804 Coconut Palm Drive, Tampa, Florida 33619-8318.

14. Respondent agrees that the Department may require the Respondent to pay the Department stipulated penalties in the amount of $100 per day for each day Respondent fails to timely comply with the requirements of paragraphs 11 and 13. A separate stipulated penalty may be assessed for each violation of this Consent Agreement. In the event that the Department imposes stipulated penalties, the Respondent has the option of negotiating an in-kind settlement in lieu of the stipulated penalties. Within 30 days of written demand from the Department, Respondent shall make payment of the appropriate stipulated penalties to the "Department of Environmental Protection" by cashiers check or money order and shall include thereon the OGC number assigned to this Consent Agreement and the notation "Pollution Recovery Fund" or shall have negotiated an acceptable in-kind settlement with the Department in lieu of payment of the stipulated penalties. Payment shall be sent to the Department of Environmental Protection, Southwest District, 3804 Coconut Palm Drive, Tampa, Florida 33619-8318. The Department may make demands for payment at any time after violations occur. Nothing in this paragraph shall prevent the Department from filing suit to specifically enforce the terms of this Consent Agreement. Any

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LEMA ROAD
LF
OUTFAC
FROM
STAGE I

LEMA RD LF
~~[illegible]~~ OUTFAC
~~FROM~~
STAGE I

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
3804 COCONUT PALM DR.
TAMPA, FLORIDA 33619

Protecting Florida and Your Quality of Life

penalties assessed under this paragraph shall be in addition to the settlement sum agreed to in paragraph 13 of this Consent Agreement.

15. All plans, applications, penalties, stipulated penalties, costs and expenses, and information required by this Consent Agreement to be submitted to the Department should be sent to Administrator, Division of Waste Management, Department of Environmental Protection, 3804 Coconut Palm Drive, Tampa, Florida 33619-8318.

16. The Department for and in consideration of the complete and timely performance by Respondent of the obligations agreed to in this Consent Agreement, hereby waives its right to seek judicial imposition of damages and/or civil penalties for alleged violations outlined in this Consent Agreement. Respondent acknowledges but waives its right to an administrative hearing pursuant to Section 120.57, F.S. on the terms of this Consent Agreement. Respondent acknowledges its right to appeal the terms of this Consent Agreement pursuant to Section 120.68, F.S., but waives that right upon signing this Consent Agreement.

17. Respondent shall allow all authorized representatives of the Department access to the property at reasonable times for the purpose of determining compliance with the terms of this Consent Agreement and the rules of the Department.

18. The Department hereby expressly reserves the right to initiate appropriate legal action to prevent or prohibit any violations of applicable statutes, or the rules promulgated

thereunder that are not specifically addressed by the terms of this Consent Agreement.

19. No modifications of the terms of this Consent Agreement shall be effective until reduced to writing and executed by both the Respondent and the Department.

20. Entry of this Consent Agreement does not relieve Respondent of the need to comply with applicable federal, state or local laws, regulations or ordinances.

21. The terms and conditions set forth in the Consent Agreement may be enforced in a court of competent jurisdiction pursuant to Sections 120.69 and 403.708. Florida Statutes. Failure to comply with the terms of this Consent Agreement shall constitute a violation of Section 403.161(1)(b), Florida Statutes.

22. Respondent is fully aware a violation of the terms of this Consent Agreement may subject Respondent to judicial imposition of damages, civil penalties of up to $10,000 per offense and criminal penalties.

23. Persons who are not parties to this Consent Agreement but whose substantial interests are affected by this Consent Agreement have a right, pursuant to Section 120.57, Florida Statutes, to petition for an administrative hearing on it. The Petition must contain the information set forth below and must be filed (received) at the Department's Office of General Counsel, 3000 Commonwealth Boulevard, Tallahassee, Florida 32399-3000; within 21 days of receipt of this notice. A copy of the Petition must also be mailed at the time of filing to the District Office

named above at the address indicated. Failure to file a petition within the 21 days constitutes a waiver of any right such person has to an administrative hearing pursuant to Section 120.57, F.S.

The Petition shall contain the following information: (a) The name, address, and telephone number of each petitioner; the Department's Consent Agreement identification number and the county in which the subject matter or activity is located; (b) A statement of how and when each petitioner received notice of the Consent Agreement; (c) A statement of how each petitioner's substantial interests are affected by the Consent Agreement; (d) A statement of the material facts disputed by petitioner, if any; (e) A statement of facts which petitioner contends warrant reversal or modification of the Consent Agreement; (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Consent Agreement; (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Consent Agreement.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the subject Consent Agreement have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 21 days of receipt of this notice in the Office of General

Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 60Q-2.010, F.A.C.

24. The provisions of this Consent Agreement shall apply to and be binding upon the parties, their officers, their directors, agents, servants, employees, successors, and assigns all persons, firms, and corporations acting under, through or for them and upon those persons, firms, and corporations in active concert or participation with them.

25. If all requirements of this Consent Agreement have not been fully satisfied, Respondent, shall at least 14 days prior to a sale or conveyance of the property, (1) notify the Department of such sale or conveyance, and (2) provide a copy of this Consent Agreement with all attachments to the new owner.

26. This Consent Agreement is a settlement of the Department's civil and administrative authority arising from Chapters 403 and 376, Florida Statutes, to pursue the allegations addressed herein. This Consent Agreement does not address settlement of any criminal liabilities which may arise from Sections 403.161(3) through(5), 403.413(5), 403.727(3)(b), 376.302(3) and (4), or 376.3071(10), Florida Statutes, nor does it address settlement of any violation which may be prosecuted criminally or civilly under federal law.

27. This Consent Agreement is final agency action of the Department pursuant to Section 120.52(11), Florida Statutes, and it is final and effective on the date filed with the Clerk of the Department unless a Petition for Administrative Hearing is filed as required by Chapter 120, Florida Statutes. Upon the timely filing of a petition, this Consent Agreement will not be effective until further order of the Department.

FOR THE RESPONDENT:

Jim Norman, Chairman
Hillsborough County
Board of County Commissioners
Post Office Box 1110
Tampa, Florida 33601

Date: JUL 18 1996

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Richard D. Garrity, Ph.D.
Director of District Management
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619-8318

State of Florida Department
of Environmental Protection

ENTERED this 2 day
of Aug, 1996 in
Tampa

Copies furnished to:
Office of General Counsel
Department of Environmental Protection
3000 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

DOCU STAFF	APPROVAL	DATE
A.C.A.	CEB/BB	7/5/96
ATTORNEY	[illegible]	7/3/96
FISCAL/BUDGET	[illegible]	7/5/96
PURCH/CONTRACTS	[illegible]	7-3-96

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to S120.52 Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Patricia [illegible] 8/5/96
Clerk Date

BOARD OF COUNTY COMMISSIONERS
HILLSBOROUGH COUNTY FLORIDA
DOCUMENT No. 96-1344

CONSENT AGREEMENT OGC CASE # 96-1649

ATTACHMENT A

THIS IS THE PERMIT

1. This Landfill shall be classified as a Class I landfill and shall be operated and maintained in accordance with all applicable requirements of Chapters 62-4, 62-25, 62-520, 62-522, 62-550, 62-701 and 62-703, Florida Administrative Code (F.A.C.) and all applicable requirements of Department rules.

2. This authorization is valid for operation and maintainance of the Class I landfill and related facilities in accordance with the reports, plans and other information as follows:

- Operation Permit Application (3 volumes) including operation plans by SCS Engineers submitted on August 22, 1994;
- November 18, 1994 Plans and additional information by SCS Engineers submitted on November 18, 1994;
- January 13, 1995 Additional information by SCS Engineers submitted on January 13, 1995;
- March 24, 1995 Additional Information by SCS Engineers submitted on March 27, 1995;
- May 26, 1995 Additional Information by SCS Engineers submitted on May 26, 1995;
- August 4, 1995 Leachate Management Plan by SCS Engineers submitted on August 4, 1995;
- and in accordance with all applicable requirements of Department rules.

CONTINUE CONDITIONS PERMIT ETC ETC

Transmit Confirmation Report

No.	:	010
Receiver	:	8-1-941-795-3490
Transmitter	:	WASTE MGT TAMPA SWDIST
Date	:	Oct 28 98 14:38
Time	:	04'43
Mode	:	Norm
Pages	:	10
Result	:	OK

Transmit Confirmation Report

No.	:	011
Receiver	:	8-1-941-795-3490
Transmitter	:	WASTE MGT TAMPA SWDIST
Date	:	Oct 28 98 14:58
Time	:	03'56
Mode	:	Norm
Pages	:	08
Result	:	OK

Department of Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

Mr. Dave Brangaccio
Manatee County Public Works Dept.
4615 66th Street West
Bradenton, FL 34210

October 28, 1998

RE: Lena Road Landfill, Permit No. : SO41-211176, Manatee County
Financial Assurance Cost Estimates

Dear Mr. Brangaccio:

This letter is to acknowledge the receipt of the revised cost estimates, prepared by HDR Engineering, Inc., dated October 21, 1998 (received October 21, 1998), for closing and long-term care of the Manatee County Lena Road Landfill. The revised cost estimates dated October 21, 1998, (total for closing $21,756,568, including $47,320 for waste tires; and $500,747/year x 30 years=$15,022,411 total for long-term care), are **APPROVED for 1998**. The next annual update (revised or inflation-adjusted estimates) is due no later than September 1, 1999.

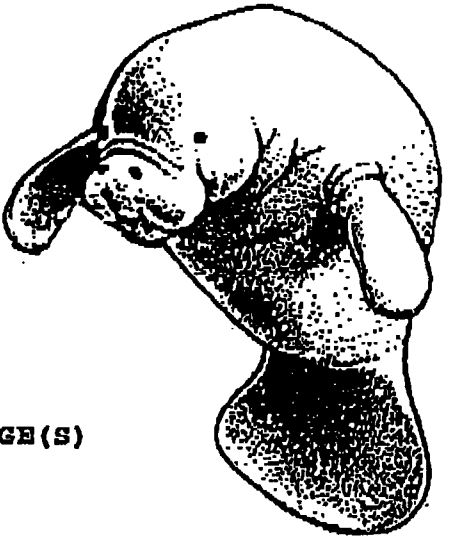
A copy of these estimates will be forwarded to Mr. Fred Wick, Solid Waste Section, FDEP, 2600 Blair Stone Road, Tallahassee, Florida 32399-2407. Please work with him directly to assess the facility's compliance with the funding mechanism requirements of Rule 62-701.630, F.A.C.

Sincerely,

Susan J. Pelz, P.E.
Solid Waste Section
Southwest District

sjp
cc: Fred W. Sebesta, P.E., HDR Engineering, 5100 W. Kennedy Blvd., Ste. 300, Tampa, Fl. 33609-1840
Fred Wick, FDEP, Tallahassee, w/attachment
Robert Butera, P.E., FDEP Tampa
Kim Ford, P.E., FDEP Tampa

MANATEE COUNTY GOVERNMENT
Public Works Department



TELEFAX COVER MEMO

TELEFAX (941) 795-3490
TELEFAX (IN-COUNTY) 5490

PLEASE DELIVER THE FOLLOWING PAGE(S)

TO: Kim Ford

ADDRESS: Florida DEP

FROM: Len Bramble/Elaine Apostol **EXT:** x5140 (Diana)

DATE: 10/28/98 **TIME TRANSMITTED:** 3:43 pm

SUBJECT: _____

PLEASE CALL UPON RECEIPT ____ **PLEASE HANDLE CONFIDENTIALLY** ____

COMMENTS: _____

TOTAL NUMBER OF PAGES INCLUDING COVER MEMO: 2

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL AS SOON AS POSSIBLE.

ADMINISTRATION - 4410 - 66th Street West, Bradenton, Florida 34210 - (941) 792-8811 - FAX (941) 795-3490

P.O. Box 25010, Bradenton, Florida 34206

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

License (Permit, Certification) Application No. Lena RS Landfill operation Renewal 39884-001-SO

Applicant's Name: Manatee County

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 Regulation 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 Regulation.

This waiver shall expire on the 1st day of August 1999.

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

Signature

Lenox E. Bramble
Name (Please Type or Print)

Revised April, 1990

FDEP	3804 Coconut Palm Drive, Tampa, FL 33619-8318

FAX

FAXED

Date: 10/26/98

Number of pages including cover sheet: 17

To: Ben

Phone: 941 7485543

Fax phone: 941 7953451

CC:

From: Kim

Phone: (813) 744-6100 x382

Fax phone: (813) 744-6125

REMARKS: ☐ Urgent ☑ For your review ☐ Reply ASAP ☐ Please comment

If you got all work done in 60 days - no one would want the consent agreement, but waiver still needed to avoid denial.

Kim

Transmit Confirmation Report

No.	:	010
Receiver	:	8-1-941-795-3451
Transmitter	:	WASTE MGT TAMPA SWDIST
Date	:	Oct 26 98 12:43
Time	:	23'52
Mode	:	Norm
Pages	:	16
Result	:	OK

Transmit Confirmation Report

No.	:	012
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Transmitter	:	WASTE MGT TAMPA SWDIST
Date	:	Oct 26 98 13:11
Time	:	08'23
Mode	:	Norm
Pages	:	09
Result	:	OK

EDEP	3804 Coconut Palm Drive, Tampa, FL 33619-8318

FAX

FAXED

Date: 10/26/98

Number of pages including cover sheet: 2

To: Ben Alex
Manatee County

Phone: (941) 748 5543
Fax phone: (941) 795 3457
CC:

From: Kim Ford

Phone: (813) 744-6100 x 382
Fax phone: (813) 744-6125

REMARKS: ☐ Urgent ☑ For your review ☐ Reply ASAP ☐ Please comment

Ben
Heres the waiver form as you requested. We will discuss on wed and would need it signed & returned by Friday Oct 30th.
Thank you for your help.
Kim

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

LENA RD LANDFILL OPERATION - RENEWAL

License (Permit, Certification) Application No. 39884-001-50

Applicant's Name: MANATEE COUNTY

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 Regulation 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 Regulation.

This waiver shall expire on the 1st day of AUGUST 1999.

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

DRAFT

Signature

Name (Please Type or Print)

Revised April, 1990

Transmit Confirmation Report

No.	:	006
Receiver	:	8-1-941-795-3451
Transmitter	:	WASTE MGT TAMPA SWDIST
Date	:	Oct 26 98 11:45
Time	:	03'01
Mode	:	Norm
Pages	:	02
Result	:	OK

Transmit Confirmation Report

No.	:	008
Receiver	:	8-1-941-795-3451
Transmitter	:	WASTE MGT TAMPA SWDIST
Date	:	Oct 26 98 11:58
Time	:	01'08
Mode	:	Norm
Pages	:	01
Result	:	OK

RECEIVED
OCT 21 1998
D E P

October 21, 1998

Ms. Susan J. Pelz, P.E.
Solid Waste Section
Division of Waste Management
Southwest District
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RE: Manatee County
Lena Road Landfill, Permit Number: S041-21176
Financial Assurance
HDR Project Number: 07982-024-096

Dear Ms. Pelz::

We are submitting, on behalf of Manatee County, two copies of the revised Financial Assurance Cost Estimates for the Lena Road Landfill. We have revised the price for top soil cover (Item 4. of the Closure Cost Estimate) as we discussed by telephone on October 19, 1998. This change along with the resulting increase in contingency increased the Total Closing Cost Estimate to $21,756,568. No changes were made in the Long-Term Care Cost Estimate.

Please call me if you have further questions regarding these estimates.

Sincerely,

HDR ENGINEERING, INC.

Fred W. Sebesta

Fred W. Sebesta, P.E.
Senior Project Manager

Enclosures

cc: Dave Brangaccio
Ben Alex
Kim Ford

W:\MANATEE\OPERMIT\FINAS98\S106G080.WPD

HDR Engineering, Inc.
Employee-owned
Suite 300
5100 W. Kennedy Boulevard
Tampa, Florida
33609-1840
Telephone
813 282-2300
Fax
813 282-2449

D.E.P.
OCT 2 1 1998
TAMPA DISTRICT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

FINANCIAL ASSURANCE COST ESTIMATES

Date: October 21, 1998

Date of FDEP Approval: _____

I. GENERAL INFORMATION:

Facility Name: Manatee County Lena Road Landfill GMS No.: 4041C02025

Permit No.: SO41-211176 Expiration Date: April 1, 1998
(Permit renewal application has been submitted.)

Address (facility): 3333 Lena Road, Bradenton, FL 34202

Address (mailing): 4615 66th Street West, Bradenton, FL 34210

Permittee (operating authority): Manatee County Government

Facility Lat. 27°28'00" N Long. 82°27'00" W or UTM's _____

Description of the Solid Waste Disposal Units included: Class I sanitary landfill, yard waste processing, waste tire processing and household hazardous waste collection center, (Stages I, II and III are included. See note below.)

Landfill Acreage included in this Estimate: See Note Below

Date Disposal Unit Began Accepting Waste 1972 Design Life of Disposal Unit 50 years

Type of Landfill: X Class I _____ Class III

_____ Exempt; Type of Exemption: _____

Closure Plan Approved: [Yes] / No

II. TYPE OF FINANCIAL DOCUMENT SUBMITTED TO ENSURE FINANCIAL ASSURANCE:

_____ Trust Fund Agreement
_____ Letter of Credit
_____ Insurance Certificate
_____ Financial Guarantee Bond
_____ Performance Bond (only for landfills with an approved closure plan)
_____ Standby Trust Fund Agreement
X Escrow Account
_____ Other (Explain) _____

Note:

Closure: 282 acres
Long-Term Care: 312 acres
The entire landfill is 312 acres in size, however 30 acres were closed during the first partial closure in 1995-1996. The entire landfill is included in the Long-Term Care Cost Estimate since the Long-Term Care Period will not begin on any of the landfill until final closure.

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 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:					
Borehole Excavation	CY				
Backfill	CY				
Gravel Pack	CY				
Casing	LF				
Screen	EA				
Cap	EA				
			Subtotal Monitoring Wells		NA
2. Slope and Fill:					
Excavation	CY				
Placement/Spreading	CY	1,133,043	$ 1.04	$ 1,178,365	
Compaction	CY	1,133,043	$ 0.78	$ 883,774	
Off-Site Material	CY	1,133,043	$ 3.38	$ 3,829,685	
			Subtotal Slope and Fill		$5,891,824
3. Cover Material (Barrier Layer):					
Off-Site Clay	CY				
On-Site Clay	CY				
Synthetics - 40 mil	SY	1,365,112	$ 2.25	$ 3,071,502	
Synthetics - 30 mil	SY				
Synthetics - GCL	SY	1,365,112	$ 2.57	$ 3,508,338	
			Subtotal Cover Material		$ 6,579,840

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL**	
4. Top Soil Cover:					
On-Site Material	CY				
Off-Site Material	CY	227,519	$ 6.40	$ 1,455,211.52	
Delivery	CY				
Spreading	LF				
Compaction	EA				
			Subtotal Top Soil Cover		$ 1,455,212
5. Stormwater Control:					
Excavation, Grading & Recontouring	CY	5,145	$ 1.67	$ 8,592.15	
Stormwater Sideslope Conveyances	EA	61	$ 11,017.12	$ 672,044.03	
Ditch Construction	LF				
Berm Construction	CY				
			Subtotal Stormwater Control		$ 680,636
6. Gas Migration Control:					
Wells	LF	3,900	$ 77.00	$ 300,300.00	
Pipe and Fittings	LF	14,150	$ 24.00	$ 339,600.00	
Traps	EA	2	$ 2,200.00	$ 4,400.00	
Sump	EA				
Flare Assembly	EA				
Flame Arrestor	EA				
Mist Eliminator	EA				
Flow Meter	EA				
Blowers	EA				
Monitoring Probes	EA				
			Subtotal Gas Migration Control		$ 644,300

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL**	
7. Revegetation:					
Sodding	SY	1,365,112	$ 1.80	$ 2,457,202	
Soil Preparation/Grading	SY				
Hydroseeding	AC				
Fertilizer	AC				
Mulch	AC				
			Subtotal Revegetation		$ 2,457,202
8. Landscape Irrigation System:					
Pipe and Fittings	LF				
Pumps	EA				
			Subtotal Landscape Irrigation System		NA
9. Security System:					
Fencing	LF				
Gate(s)	EA				
Sign(s)	EA				
			Subtotal Security System		NA
10. Engineering:					
Closure Plan Report	LS				
Certified Engineering Drawings (for construction)	LS	1	$ 186,550.00	$ 186,550.00	
Closure Permit	LS	1	$ 277,160.00	$ 277,160.00	
Other (Detail): Construction Specifications		1	$ 106,600.00	$ 106,600.00	
			Subtotal Engineering		$ 570,310

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL**
11. Benchmark Installation	EA			
Benchmark Survey	LS			
			Subtotal Benchmark Installation	NA
12. Certification of Closure	LS	1	$ 15,990.00	$ 15,990.00
			Subtotal Certification of Closure	$ 15,990
13. Administrative:		Hours	@ $/hour	
P.E. Supervisor	HR	692	$ 106.97	$ 74,026.28
On-Site Engineer	HR	3,009	$ 89.28	$ 268,655.56
Office Engineer	HR	301	$ 71.45	$ 21,505.85
On-Site Technician	HR	3,009	$ 51.17	$ 153,964.51
Other-(explain): Clerical	HR	572	$ 35.18	$ 20,124.79
			Subtotal Administrative	$ 538,277
14. Quality Assurance:		Hours	@ $/hour	
P.E. Supervisor	HR	373	$ 96.20	$ 35,882.60
On-Site Engineer	HR	90	$ 85.80	$ 7,722.00
Office Engineer	HR	149	$ 85.80	$ 12,784.20
On-Site Technician	HR	2,686	$ 50.44	$ 135,481.84
QA Testing	LS	1	$ 183,578.00	$ 183,578.00
Other-(explain):	HR			
Clerical, report prep, review				$ 21,320.00
			Subtotal Quality Assurance	$ 396,769

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL**

15. Site Specific Costs (explain):

Waste Tire Facility (if applicable)				$ 47,320.00
Construction Mobilization				$ 501,020.00
			Subtotal Site Specific Costs	$ 548,340
16. Contingency	% of Total	10%		$ 1,977,870
			TOTAL CLOSING COSTS	$ 21,756,568

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 judgment, 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 17-701.630 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 17-701.630(4).

Fred W. Sebesta 10/21/98

Signature

Fred W. Sebesta, P.E.

Senior Project Manager

Name and Title (please type)

38264

Florida Registration Number (please affix seal)

HDR Engineering, Inc.
5100 West Kennedy Blvd., Suite 300
Mailing Address

Tampa, Florida 33609
City, State, Zip Code

(813) 287-1960
Telephone Number

Date: October 21, 1998

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 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				
Quarterly				
Semi-Annual	2	27	$ 416.00	$ 22,464.00
Annual				
			Subtotal Groundwater Monitoring	$ 22,464
2. Gas Monitoring 62-701.400(10)	sampling frequency events/yr	# of locations	$/location/event	$/yr
Monthly				
Quarterly	4	20	$ 85.28	$ 6,822.40
Semi-Annual				
Annual				
			Subtotal Gas Migration Monitoring	$ 6,822
3. Leachate Monitoring 62-701.510(5),(6)(b), 62-701.510(8)(c)	sampling frequency events/yr	# of locations	$/location/event	$/yr
Monthly				
Quarterly				
Semi-Annual	2	1	$ 695.54	$ 1,391.08
Annual	1	1	$ 1,330.68	$ 1,330.68
			Subtotal Leachate Monitoring	$ 2,722

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				
Semi-Annual (NPDES)	2	1	$ 1,112.58	$ 2,225.16
Semi-Annual (Op. Permit)	2	2	$ 416.00	$ 1,664.00
Annual				
			Subtotal Surfacewater Monitoring	$ 3,889
5. Maintenance of Leachate Collection/Treatment Systems				
Collection Pipes	LF	23,500	$ 1.04	$ 24,440.00
Sumps, Traps	EA			
Lift Stations	EA	1	$ 109.80	$ 109.80
Impoundments-				
Liner Repair	SF			
Sludge Removal	CY	28	$ 24.16	$ 676.46
Aeration Systems-				
Floating Aerators	EA			
Spray Aerators	EA			
Off-Site Disposal (include transportation and disposal)	1000 gal	1,100	$ 2.53	$ 2,783.00
On-Site Pretreatment System Maintenance-(Describe)				
Other (Describe)-				
Replace/maintain valves, pumps & controls				$ 2,820.64
			Subtotal Leachate Collection/Treatment System Maintenance	$ 30,830

DESCRIPTION	UNIT (A)	QUANTITY (B)	UNIT COST (C)	ANNUAL COST** (D)=(A)x(B)x(C)	
6. Maintenance of Groundwater Monitoring Wells	LF	756	$ 7.39	$ 5,590.17	
		Subtotal Groundwater Monitoring Well Maintenance			$ 5,590
7. Maintenance of Gas Migration System					
Piping, Vents	LF	7,350	$ 2.72	$ 19,975.00	
Blowers	EA				
Flaring Units	EA	1	$ 12,000.00	$ 12,000.00	
Meters, Valves	EA	21	$ 171.19	$ 3,595.00	
		Subtotal Gas Migration System Maintenance			$ 35,570
8. Landscape Maintenance					
Mowing	AC	3,282	$ 57.65	$ 189,198.11	
Fertilizer	AC				
Irrigation	AC				
		Subtotal Landscape Maintenance			$ 189,198
9. Benchmark Maintenance	EA	1	$ 1,066.00	$ 1,066.00	
		Subtotal Benchmark Maintenance			$ 1,066
10. Administrative/Overhead		Hours	@ $/hour		
P.E. Supervisor	HR	278	$ 106.97	$ 29,738.88	
On-Site Engineer	HR	100	$ 89.28	$ 8,928.40	
Office Engineer	HR				
On-Site Technician	HR	632	$ 51.17	$ 32,338.18	
Other (explain):					
Electricity:	LS	See note 10.3	$ 53.30	$ 53.30	
- include Leachate Pumps, Blowers, Lighting, etc.					
		Subtotal Administrative			$ 71,059

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

11. Maintenance of Cover

Sodding, Soil	AC	312	$ 56.94	$ 17,765.28
Regrading	AC	312	$ 7.20	$ 2,245.40
Liner Repair-synthetic	SY	25	$ 109.80	$ 2,745.08
Clay	CY			

Subtotal Cover Integrity Maintenance $ 22,756

12. Surface Water Drainage Maintenance

Ditch Cleaning	LF	20,090	$ 0.78	$ 15,670.20
Stormwater Conveyance Maint.	EA	49	$ 111.44	$ 5,460.36

Subtotal Drainage Maintenance $ 21,131

13. Security System Maintenance

Fences	LF	29,900	$ 0.16	$ 4,664.40
Gate(s)	EA	2	$ 21.96	$ 43.93
Sign(s)	EA	10	$ 21.96	$ 219.65

Subtotal Security Sytem Maintenance $ 4,928

14. Remedial Actions LS

Subtotal Remedial Actions NA

15. Site Specific Costs (explain):

Permit Renewal				$ 31,200.00
Bi-Annual Water Quality Report (62-701.510 F.A.C.)				$ 6,000.00

Subtotal Site Specific Costs $ 37,200

16 Contingency % of Total 10% $ 45,522

LONG-TERM CARE COSTS ($/yr) 500,747

TOTAL LONG-TERM CARE COSTS ($) $15,022,411

($/year times required years of long-term care)

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 judgment, 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 17-701.630 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 17-701.630(4).

Fred W. Sebesta

Signature

Fred W. Sebesta, P.E.

Senior Project Manager

Name and Title (please type)

38264

Florida Registration Number (please affix seal)

HDR Engineering, Inc.

5100 West Kennedy Blvd., Ste. 300

Mailing Address

Tampa, Florida, 33609

City, State, Zip Code

(813) 287-1960

Telephone Number

Date October 21, 1998

Manatee County, Florida
Lena Road Landfill
Financial Responsibility

Notes to Accompany Closure Cost Estimate

Note Number	Notes
1.0	Not applicable for Lena Road Landfill. All wells have been previously installed.
2.0	Quantity includes intermediate cover and top cover material. Unit prices include provision and installation of material and are based on recent HDR experience. Quantity has been reduced from previous estimates because of partial closure completed in 1995-1996.
3.0	Cover material and barrier layer will consist of a 40 mil synthetic membrane.
3.1	No clay or clay admixture is proposed for final cover.
3.2	Current cost of synthetic membrane provided by vendor/installer. The unit price includes construction of the liner anchor system, material, delivery and installation. This price reflects falling prices caused by intense market competition. Quantity has been reduced from previous estimates because of partial closure completed in 1995-1996.
3.3	30 mil liner or GCL will not used on this project. This item was used for a geonet composite drainage layer. Quantity has been reduced from previous estimates because of partial closure completed in 1995-1996.
3.4	Unit price of geonet composite provided by vendor/installer and includes material delivery and installation. This price reflects falling prices caused by intense market competition.
4.0	Assumed that no on-site material would be used for topsoil.
4.1	Price of topsoil provided from first partial closure contractor bid inflated to obtain 1996 unit price
4.2	Delivery, spreading and compaction is included in the first partial closure contractors unit bid price
5.0	Unit cost for excavation estimated using Means assuming a hydraulic track mounted excavator with a 2 cubic yard bucket.
5.1	Storm water side slope conveyances include the following from the first partial closure contractors bid (properly inflated): Drain system, PVC, Drain cleanout PVC, Drain manholes, Outfall pipe, outfall structures, Down drains, Down structures and Geogrid. Number has been reduced from previous estimates because of partial closure completed in 1995-1996.
5.2	Ditch construction for storm water has been excluded from the closure cost estimate as they have been previously constructed.
5.3	Berm construction for storm water ponds has already been completed and therefore excluded from this cost estimate.

Manatee County, Florida
Lena Road Landfill
Financial Responsibility

Notes to Accompany Closure Cost Estimate

Note Number	Notes
6.0	Total length of wells estimated on a per acre basis from the upcoming landfill gas collection and flaring project.
6.1	Well price per foot is based on project experience, vender information and Means estimating guide. Price includes pipe, fittings, wellheads and installation. Quantity is reduced from previous estimates because most of the wells will be installed as a part of operations prior to closure.
6.2	Pipe and fittings estimate includes laterals and headers to connect the wells on approximately 40 acres which would not have gas wells installed until final closure.
6.3	The trap estimate is for two knockouts. Price is based on vender information.
6.4	No sumps will be used.
6.5	All meters, flare assemblies, flame arrestors, mist eliminators, flow meters, blowers and monitoring probes will be installed as a part of operations and will be in-place prior to closing.
7.0	Soil preparation and grading included in the cost of topsoil installation price.
7.1	Hydroseeding or mulch will not be used for this project. Any fertilizing is included in the cost of the sod bid price.
7.2	Unit price of sodding was obtained from a vender/installer. Quantity has been reduced from previous estimates because of partial closure completed in 1995-1996.
8.0	No irrigation is planned as existing on site vegetation appears to be flourishing without additional irrigation.
9.0	The site is completely fenced with all needed gates installed. No additional fencing will be required at closing.
9.1	No additional signs will be required as this will be accomplished as part of daily operations
10.0	The Closure Plan Report is included in the Closure Permit cost.
10.1	The cost of Certified Engineering Drawings is based on HDR experience with similar projects.
10.2	The cost of the Closure Permit is based on HDR experience.
10.3	The cost of Construction Specifications is based on HDR experience.
11.0	Benchmarks have been previously installed and therefore excluded from this estimate.
12.0	Certification of Closure cost is based on HDR experience.
13.0	Administrative hourly rates are based on HDR and Manatee County experience.
13.1	Hourly rates include overhead and profit multiplier.
13.2	Number of hours required are based on HDR experience. Time has been reduced from previous estimates because of partial closure completed in 1995-1996.

Manatee County, Florida
Lena Road Landfill
Financial Responsibility

Notes to Accompany Closure Cost Estimate

Note Number	Notes
14.0	Hourly rates include overhead and profit multiplier.
14.1	Number of hours required are based on HDR experience. Time has been reduced from previous estimates because of partial closure completed in 1995-1996.
14.2	QA testing includes laboratory tests for soils analysis and synthetic material testing.
15.0	Estimate for decommissioning waste tire processing area. The cost is calculated as 728 tons X $65/ton = $47,320. This is the tonnage requested on theTire Facility Permit Application and the County's present contract price the for removal, processing and diisposal.
15.1	Construction mobilization based on existing partial closure contractor's bid
16.0	Contingency based on HDR experience.
17.0	Means Site Work & Landscape Cost Data, 14th Annual Edition, Copyright 1995, was used to estimate those costs where Means is indicated as the source for the 1996 estimates.
18.0	Means Site Work & Landscape Cost Data, 15th Annual Edition, Copyright 1996, was used to estimate those costs where Means is indicated as the source for 1998 estimates.
19.0	All costs shown are for work performed by a third party.
20.0	An inflation rate of 2% (as advised by Fred Wick with FDEP) was used for both the 1996 to 1997 and 1997 to 1998 time periods for a combined inflation rate of 4% for the 1996 to 1998 time period. This inflation rate was applied to individual items where the estimator believed this approach would yield proper results.
21.0	Quantity of each item affected in direct proportion by partial closure reduced in amount from 96 estimate by: 9.6% Because of economies of scale, the first 30% of administrative and engineering time estimated in the 1996 estimate was not subjected to the reduction.

Manatee County, Florida
Lena Road Landfill
Financial Responsibility

Notes to Accompany Long-Term Care Cost Estimate

Note Number	Notes
1.0	The cost per well per monitoring event was based on "average" data provided by FDEP in 1996.
1.1	Unit cost per location includes field sampling and laboratory analysis.
1.2	Frequency of sampling based on existing permit requirements.
2.0	The 1996 unit price for gas monitoring was based on existing Manatee County experience and has been properly inflated for this estimate.
2.1	The frequency of gas monitoring is based on existing permit requirements.
3.0	The price for semi-annual monitoring is based on the 1996 cost estimate properly inflated. Present costs paid for monitoring are lower and do not compare favorably with the "average" data provided by FDEP in 1996 and is properly inflated for the current estimate.
3.1	The price for annual monitoring is based on the 1996 cost estimate properly inflated. Present costs paid for monitoring are lower and do not compare favorably with the "average" data provided by FDEP in 1996.
3.2	Unit cost per location includes field sampling, laboratory analysis, and reporting for semi-annual monitoring.
3.3	Unit cost per location includes laboratory analysis and reporting for annual monitoring. The cost of field sampling is included in the semi-annual monitoring cost, assuming one set of semi-annual and annual costs are collected at the same time.
3.4	Frequency of sampling based on existing permit requirements.
4.0	The unit price for NPDES analysis (assumed at two discharge events per year) is calculated by properly inflating the 1996 cost estimate. The Solid Waste Permit required monitoring cost per location per monitoring event was based on "average" data provided by FDEP in 1996 and is properly inflated for the current estimate.
4.1	Unit cost per location includes field sampling and laboratory analysis.
4.2	Frequency of sampling based on existing permit requirements.
5.0	Estimator assumed that all leachate collection lines and header lines would be cleaned with a hydrojet once every 10 years. Manholes are included with this estimate. This also assumes that one minor leachate header repair will be needed every 10 years. Prices obtained by inflating 1996 estimates.
5.1	One sump used as part of the lift station and included in the lift station estimate. Prices obtained by inflating 1996 estimates.
5.2	Estimator assumed the lift station will need a structural repair once each 10 years. Pump and valve repair is included under valves, pumps, and controls. Prices obtained by inflating 1996 estimates.
5.3	The landfill facility utilizes a slurry wall therefore there is no bottom liner.
5.4	This system uses no aerators.
5.5	Estimator assumed all valves, pumps, and controls would need to be replaced once every 10 year period. In addition, the pump motor is expected to be repaired/replaced every five years. Prices for these items are estimated from Means and HDR experience. Prices obtained by inflating 1996 estimates.
5.6	The projected leachate quantity was calculated by HDR in response to an FDEP comment regarding electricity usage during the long-term care period. The unit cost used for disposal is that presently paid by Lena Road Landfill.
5.7	The leachate price used is that established by Manatee County Resolution 97-135 (Water and Wastewater Rates Resolution).

Manatee County, Florida
Lena Road Landfill
Financial Responsibility

Notes to Accompany Long-Term Care Cost Estimate

Note Number	Notes
5.8	An evaluation of leachate generation data for September 1996 through July 1998 (all data since our last evaluation) shows the amount of leachate as a percentage of rainfall falls within the range predicted by the HELP Model for each twelve month period. Thus, the previous predicted amount of post-closure leachate was used for this estimate.
6.0	The total length of the monitoring well piping is 756 feet excluding the pipe extending above the ground.
6.1	The average well replacement cost was originally estimated based on HDR experience and inflated from the 1996 estimate to the present.
6.2	The estimator assumed that all wells (average depth = 28 LF) will be replaced every 10 years.
7.0	Vertical wells, well heads, buried header and above ground header (which will be buried In the future) were all included in the cost of piping and vents. Horizontal wells, 10 inch manifold and laterals were not included since they will not be replaced when they are no longer useable.
7.1	Maintenance of the blower and meters is included in the cost of the flaring unit.
7.2	The cost of valves and knock-outs were included in the cost of meter and valve maintenance.
7.3	The following items were assumed to have the following average life:: flare station - 15 years, piping - 20 years, well heads - 10 years, valves - 10 years, knock-outs - 20 years.
7.4	The 1998 unit prices and assumed life times for equipment are based on data provided by an equipment vendor.
8.0	Mowing price was originally estimated from Means and third party quote from HDR records. The current price obtained by inflating 1996 estimates to present levels.
8.1	No fertilization will be required as vegetation has done quite well on existing landfill side slopes without fertilizer and irrigation.
8.2	Acreage to be mowed includes storm water berms around the site, leachate and storm water ponds, administration area and entrance roadside.
8.3	Mowing frequency is expected to be three times per year based on HDR experience.
9.0	This estimate is based on HDR experience with a third party providing maintenance services. Estimator assumed that one benchmark will need to be replaced once every year.
10.0	P.E. Supervisor and technician rates are based on experience in the area.
10.1	Hours allocated are based on HDR experience and includes time to inspect the fill area, leachate management facilities, and all monitoring facilities.
10.2	Sufficient hours are allocated for the PE supervisor and on-site engineer to develop any reports.
10.3	This cost is based on an estimated 1.2 million gallons of leachate and a 1996 pumping cost of $23/million gallons, properly inflated to present levels.
11.0	Cover repair costs for soil, regrading, and sodding/seeding, based on HDR experience, were estimated in 1996 and inflated to present levels.
11.1	With the cover system installed, the possibility of damage to the synthetic liner is small. Estimator has, however, included some cost for synthetic liner repair.
11.2	The final cover system at Lena Road Landfill does not include any clay.
11.3	Estimator assumes ten percent of the total acreage will need to be resodded during the long-term care period.

Manatee County, Florida
Lena Road Landfill
Financial Responsibility

Notes to Accompany Long-Term Care Cost Estimate

Note Number	Notes
11.4	Sodding repairs estimated using unit costs from the Lena Road Landfill Partial Closure Contract and HDR experience. Soil preparation and fertilizing, if required, are included in the unit price for the sodding repairs.
11.5	The following prices and assumptions were used to prepare the liner repair cost estimate in 1996. This 1996 price estimate was inflated to present levels for this estimate. Liner repair cost estimated to be $3,090 per incident, includes a two man liner crew, equipment, material, and expenses for two days. Liner repair cost estimate was obtained from a liner manufacturer/installer. Assume Laboratory and third party QC/QA costs = $2,060 per incident. Administrative costs (obtaining contract with liner repair company, directing local clean-up crew in preparation of damaged area for liner crew, cleaning of liner, reinstalling soil cover, seeding or sodding, and other activity to be completed = $5,150. ($3,090 + $2,060 + $5,150)/incident/(100 SY/incident) = $103/SY Assume one incident every 4 years. (7.5 incidents/30 YR)(100 SY/incident) = 17 SY/YR
12.0	The following prices and assumptions were used to prepare the surface water drainage maintenance cost estimates in 1996. The 1996 ditch cleaning and stormwater conveyance maintenance cost estimates calculated in 1996 were inflated to present levels. Ditch cleaning costs are estimated from Means. Culvert cleaning costs are based on a crew of two laborers and one superintendent cleaning all nine culverts in eight hours. Equipment and mobilization included in the unit cost. Estimated based on HDR experience. The estimator assumed that the ditches and culverts would be cleaned twice annually Estimator assumed 5% of the storm water liquid boot requires maintenance annually. Cost for liquid boot repair estimated from Means and HDR experience.
13.0	The following prices and assumptions were used to prepare the security system maintenance cost estimates in 1996. The cost estimates calculated in 1996 were inflated to present levels. Estimator assumes 50% of fence will be replaced during the long-term care period. Estimator assumes $20.60 per year will be spent on each of two gates and one sign for repair and maintenance during the long-term care period.
14.0	Manatee employs a strict waste screening procedure on all incoming waste. No remedial actions are therefore anticipated.
15.0	The cost of the bi-annual water quality report is based upon present Manatee County experience.
16.0	The following prices and assumptions were used to prepare the site specific cost estimates in 1996. The cost estimates calculated in 1996 were inflated to present levels. Permit renewal costs are based on one event every 5 years at a cost of $100,000 per renewal. This cost is based on recent HDR experience. The cost of bi-annual water quality reports required by the FDEP was estimated based on HDR experience.

Manatee County, Florida
Lena Road Landfill
Financial Responsibility

Notes to Accompany Long-Term Care Cost Estimate

Note Number	Notes
17.0	Means Site Work & Landscape Cost Data, 14th Annual Edition, Copyright 1995, was used to estimate those costs where Means is indicated as the source for the 1996 estimates.
18.0	Means Site Work & Landscape Cost Data, 15th Annual Edition, Copyright 1996, was used to estimate those costs where Means is indicated as the source for 1998 estimates.
19.0	All costs shown are for work performed by a third party.
20.0	An inflation rate of 2% (as advised by Fred Wick with FDEP) was used for both the 1996 to 1997 and 1997 to 1998 time periods for a combined inflation rate of 4% for the 1996 to 1998 time period. This inflation rate was applied to individual items where the estimator believed this approach would yield proper results.

September 18, 1998

Ms. Susan J. Pelz, P.E.
Solid Waste Section
Division of Waste Management
Southwest District
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RECEIVED
SEP 18 1998
Department of Environmental Protection
SOUTHWEST DISTRICT
BY

HDR

RE: Manatee County
Lena Road Landfill, Permit Number: SO41-21176
Financial Assurance
HDR Project Number: 07982-024-096

Dear Ms. Pelz::

We are pleased to submit, on behalf of Manatee County, two copies of a revised Financial Assurance Cost Estimates and Remaining Landfill Life Projection for the Lena Road Landfill. In response to your September 3, 1998 letter we have revised the following items:

Waste Tire Closing Costs:	Increased to $47,320 from $11,726. The revised amount is the (728 tons maximum permitted storage requested in the permit application multiplied by the County's current contract price of $65/ton for loading, transportation, processing and disposal)
Maintenance of Cover, Sodding Costs:	Inflated the 1996 cost to $56.94 from $54.75/AC. This is an increase of 4%.
Contingency Cost for Long-Term Care Estimate:	Added a 10% contingency

In addition, in again checking the estimates, we found that we inflated Top Soil Cover on the Closure Cost Estimate by 7% instead of 4% as intended. Thus we made that adjustment, decreasing the unit cost from $6.42 to $6.24.

We are enclosing a table showing the amount of each change and the net total change.

We are providing a copy of our telephone memorandum documenting the verbal quote received from Ground Safe for synthetic liner and geonet composite as well as a copy of the relevant page of Manatee County Resolution 97-135 addressing off-site leachate disposal.

Please call me if you have further questions regarding these estimates.

Sincerely,

HDR ENGINEERING, INC.

Fred W. Sebesta

Fred W. Sebesta, P.E.
Senior Project Manager

Enclosures

cc: Dave Brangaccio
Ben Alex
Kim Ford

MANATEE COUNTY GOVERNMENT

Public Works Department

September 28, 1998

Kim Ford, P.E.
Division of Waste Management
Department of Environmental Protection, South West District
3804 Coconut Palm Drive
Tampa, FL 33619

Re: Manatee County, Lena Road Landfill
Operation Permit Application

Dear Mr. Ford:

Enclosed is a copy of the publication of the notice of application for the above referenced subject. If you need additional information please call me at 941-748-5543.

Sincerely,

Ben Alex,
Solid Waste Technical Coordinator

cc: Len Bramble, P.E., Public Works Director
Dan Gray, Utilities Operations Manager
Gus DiFonzo, Solid Waste Manager
Bob Butera, P.E., FDEP

D.E.P.
SEP 30 1998
SOUTHWEST DISTRICT
TAMPA

ADMINISTRATION • 4410 - 66th Street West, Bradenton, Florida 34210 • (941) 792-8811 • FAX (941) 795-3490

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Bradenton, FL 34205-8894

Bradenton Herald
Published Daily
Bradenton, Manatee, Florida

STATE OF FLORIDA
COUNTY OF MANATEE;

Before the undersigned authority personally appeared Jill Headings, who on oath says that she is a Legal Advertising Representative of the Bradenton Herald, a daily newspaper published at Bradenton in Manatee County, Florida; that the attached copy of the advertisement, being a Legal Advertisement in the matter of

Notice of Application

_____ in the _____ Court,

was published in said newspaper in the issues of

9/17/98

Affiant further says that the said publication is a newspaper published at Bradenton, in said Manatee County, Florida, and that the said newspaper has heretofore been continuously published in said Manatee County, Florida, each day and has been entered as second-class mail matter at the post office in Bradenton, in said Manatee County, Florida, for a period of 1 year next preceding the first publication of the attached copy of advertisement; and affiant further says that she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Jill Headings
(Signature of Affiant)

Sworn to and subscribed before me this
21st day of September, 1998

Deon K. Buhr
SEAL & Notary Public

Official Seal
DEON K. BUHR
Notary Public, State of Florida
My comm. expires July 24, 1999
Comm. No. CC477695

State of Florida Department of Environmental Protection
Notice of Application

The Department announces receipt of applications for permits from Manatee County Public Works for operation of a solid waste landfill and related facilities and operation of a waste tire facility, both subject to Department Rules, located at the existing Lena Road Landfill, 3333 Lena Road, Bradenton, one mile east of I-75 and south of S.R. 64, Manatee County, Florida.

This application is being processed and is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m. Monday through Friday, except legal holidays, at the Department of Environmental Protection, Southwest District Office, 3804 Coconut Palm Drive, Tampa, Florida 33619-8318.

9-17-98

RECEIVED
SEP 30 1998
D E P

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION	3804 Coconut Palm Drive Tampa, FL 33619-8318

FAX

Date: FAXED 9/25/98

Number of pages including cover sheet: 2

To: BEN ALEX

Phone:

Fax phone: 941-795-3490

CC:

From: BOB BUTERA

Phone: (813) 744-6100 x45/

Fax phone: (813) 744-6125

REMARKS: ☐ Urgent ☒ For your review ☐ Reply ASAP ☐ Please comment

GENERIC INFO FOR YOU.

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State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee
To: Location
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From: Date

Interoffice Memorandum

D. E. R.

MAR 23 1993

SOUTHWEST DISTRICT
TAMPA

TO: Waste Program Adminstrators

FROM: Mary Jean Yon, Administrator
Solid Waste Section

DATE: March 16, 1993

SUBJECT: Storm Debris Disposal

The Department has already received a number of calls from counties regarding disposal of disaster debris from the "storm of the century." Many of the counties hardest hit by this storm would like permission to dispose of this debris into lined landfills, to use it as fill material, or to burn it. We agree that flexibility is required, but have decided that an emergency order is not yet warranted.

Therefore, the Districts are authorized and encouraged to use their enforcement discretion to allow counties which have been declared disaster areas to dispose of disaster debris in the most expedient way, as long as no substantial environmental threat is created. This will typically mean that yard trash may be disposed of in lined landfills, although there will no doubt be other proposals from the counties. Burning of yard trash is addressed in Rules 17-256 and 17-701.520(2) F.A.C., but be advised the Division of Air Resources Management has expressed some reservations about approving burning on a wide spread basis. We recommend that you consult with Headquarters before approving any requests which could have long-term impacts.

The Department does not intend by this memorandum to authorize any person to construct or operate any solid waste management facility without an appropriate permit. At this point we anticipate that most of the debris will be cleaned up within a couple of weeks, and there is no need to allow unpermitted transfer stations or staging areas to be sited. If the situation is more serious in specific locations, however, the Department may have to reconsider this position. If you have any questions concerning this procedure, please do not hesitate to call me at Suncom 292-6104.

MJY:cmv

cc: Chris McGuire
Bill Hinkley
John Ruddell

Transmit Confirmation Report

No.	:	012
Receiver	:	819417953490
Transmitter	:	WASTE MGT TAMPA SWDIST
Date	:	Sep 24 98 15:39
Time	:	01'07
Mode	:	Norm
Pages	:	02
Result	:	OK

MANATEE COUNTY GOVERNMENT
Public Works Department

RECEIVED
SEP 08 1998
D E P

August 31, 1998

Kim Ford, P.E.
Division of Waste Management
Department of Environmental Protection, South West District
3804 Coconut Palm Drive
Tampa, FL 33619

Re: Manatee County, Lena Road Landfill
Storm Water Ditch Improvements, Construction Schedule

Dear Mr. Ford:

Per your August 13, 1998 approval letter staff is required to submit a construction schedule for improvements to the Lena Road Landfill storm water management system. As discussed with you on August 28, 1998 the project will be constructed by county personnel and by an outside contractor.

County staff will construct the filter facility, improvements to the storm water pond, the weir in the Stage III storm water ditch and all ancillary work associated with the project. This work is shown on sheets 2, 3, 4, 9, 10, 17, 18, 19, 21, 22 and 23 of the approved construction plan. An outside contractor will be contracted to do all the improvements to the Stage I Storm water ditch from station 41+30 to station 14+20, as shown on pages 4, 5, 6, 7, 8, 11, 12, 13, 14 and 15 of the approved construction plan.

County staff will begin construction of the weir in the Stage III storm water ditch the week of September 7, 1998. The estimated time for construction of the weir and associated work is three weeks. Construction associated with the filter bed, storm water pond and ancillary work will begin November 1, 1998 and will be completed by March 1, 1999. Construction of the Stage I storm water ditch is based on the following schedule:

- Week of August 28, 1998 begin preparation of bid documents
- Week of September 25, 1998 Complete bid documents
- Week of November 23, 1998 bid package complete and bid letting
- Week of December 31, 1998 bid opening

- Week January 6, 1998 bid award and notice to proceed
- Week of February 8, 1999 begin construction
- Week of July 9, 1999 end construction

Should any deviation from the above schedule occur your office will be notified and a revised schedule will be submitted for your review. If you need additional information please call me at 941-748-5543. Thank you for your assistance in this matter.

Sincerely,

Ben Alex
Solid Waste Technical Coordinator

cc: Len Bramble, P.E., Public Works Director
Dan Gray, Utilities Operations Manager
Bob Butera, P.E., FDEP
Dan Roiser, Maintenance Superintendent
Robert Hall, P.E., Engineering Manager
Clay Barth, P.E., Engineer II

FDEP	3804 Coconut Palm Drive, Tampa, FL 33619-8318

FAX

Date: FAXED 4/4/05

Number of pages including cover sheet: 2

To: FRED SESSUM

HDR

Phone: 2822402

Fax phone: 2822449

CC:

From: Jim Ford

Phone: (813) 744-6100 x382

Fax phone: (813) 744-6125

REMARKS: ☑ Urgent ☑ For your review ☑ Reply ASAP ☐ Please comment

VERIFIED CLOSURE DOCUMENTATION REQUIRED ASAP AND FINANCIAL ASSURANCE

Jim

Department of Environmental Protection

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

September 3, 1998

Mr. Dave Brangaccio
Manatee County Public Works Dept.
4615 66th Street West
Bradenton, FL 34210

RE: Lena Road Landfill, Permit No. : SO41-211176, Manatee County
Financial Assurance Cost Estimates

Dear Mr. Brangaccio:

This letter is to acknowledge receipt of the cost estimates, dated August 31, 1998 (received August 31, 1998), prepared by HDR Engineering, Inc., for closure and long-term care of the Manatee County Lena Road Landfill. The cost estimates submitted are not approved. Additional information is needed to fully evaluate the estimates submitted. Please respond to the following:

CLOSING COSTS:

1. Cover Material. The costs listed are lower than the costs approved for 1996. Please provide a copy of the current third-party estimate which supports these costs, or provide revised costs.

2. Waste Tire $11,726.00. Please provide a detailed estimate for closing the waste tire facility which supports this cost. The calculations should include the costs of loading, transportation, processing and disposal of all whole and processed waste tires and residuals.

LONG-TERM CARE COSTS:

3. Maintenance of LCS, Off-Site Disposal -$2.53/1000 gallons. Please provide copies of the County's Resolution 95-219 which supports this cost.

4. Maintenance of Cover, Sodding - $54.75/AC. It appears that this cost appears has not changed from the 1996-approved cost. Please provide a copy of the current third-party estimate supporting this cost, or provide a revised cost.

5. Please provide a contingency cost for the long-term care estimate.

The Department requests that all information be provided to the Solid Waste Section, FDEP, Tampa office within thirty (30) days of this notice. If you have any questions, you may contact me at (813) 744-6100 ext. 386.

Sincerely,

Susan J. Pelz, P.E.
Solid Waste Section
Southwest District

sjp
cc: Fred W. Sebesta, P.E., HDR Engineering, 5100 W. Kennedy Blvd., Ste 300, Tampa ,Fl. 33609
Fred Wick, FDEP, Tallahassee, w/attachment
Robert Butera, P.E., FDEP Tampa
Kim Ford, P.E., FDEP Tampa

Transmit Confirmation Report

No.	:	003
Receiver	:	9-282-2449
Transmitter	:	WASTE MGT TAMPA SWDIST
Date	:	Sep 04 98 10:58
Time	:	01'10
Mode	:	Norm
Pages	:	02
Result	:	OK

August 31, 1998

Ms. Susan J. Pelz, P.E.
Solid Waste Section
Division of Waste Management
Southwest District
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

RECEIVED
AUG 3 1 1998
...rotection
SOUTHWEST DISTRICT
BY _____

RE: Manatee County
Lena Road Landfill, Permit Number: S041-21176
Financial Assurance
HDR Project Number: 07982-024-096

Dear Ms. Pelz:

We are pleased to submit, on behalf of Manatee County, two copies of the Financial Assurance Cost Estimates and Remaining Landfill Life Projection for the Lena Road Landfill for 1998.

We have made several adjustments in individual items from the 1996 estimates when we last considered each item individually. We have explained these changes in the accompanying explanatory notes.

We evaluated the leachate generation data available since our 1996 estimate and found that the generation experienced since that time is within the range predicted by our 1996 HELP Modeling.

We are also enclosing a current remaining landfill life projection. This is the same projection we have used in the Operation Permit Renewal Application presently undergoing review by your office.

Sincerely,

HDR ENGINEERING, INC.

Fred W. Sebesta

Fred W. Sebesta, P.E.
Senior Project Manager

Enclosures

cc: Dave Brangaccio
Ben Alex
Kim Ford

W:\MANATEE\OPERMIT\FINAS98\S106G074.WPD

HDR Engineering, Inc.
Employee-owned
Suite 300
5100 W. Kennedy Boulevard
Tampa, Florida
33609-1840
Telephone
813 282-2300
Fax
813 282-2449

Department of Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

August 13, 1998

Mr. Ben Alex
Solid Waste Management
Manatee County
3333 Lena Road
Bradenton, FL 34202

Re Lena Road Landfill Corrective Actions,
Gradient and Stormwater Management Systems
Permit No.: SO41-211176, Manatee County
Pending Permit #39884-001-SO

Dear Mr. Alex:

The Department has no objection to the corrective actions concerning improvements to the gradient and stormwater management systems as proposed in your May 11, 1998 letter, Mr. Clayton Barth's July 20, 1998 letter and attachments, and plans entitled Stormwater Ditch Improvements received August 3, 1998 subject to the following conditions:

1. No later than September 1, 1998, the County shall submit a construction schedule which includes estimated dates for each component of the construction to the Department. The Engineer of Record or another qualified professional engineer shall make periodic inspections during construction to ensure that design integrity is maintained. An updated construction schedule and progress chart shall be submitted to the Department monthly.

2. Within thirty (30) days after the specified construction has been completed, the following activities shall be completed:

   a. The County shall submit a Certification of Construction Completion, Form 62-701.900(2) (attached), signed and sealed by the professional engineer in charge of construction to the Department for approval, and shall arrange for Department representatives to inspect the construction in the company of the engineer and the facility operator.

b. The County shall submit Record Drawings showing all changes (i.e. additions, deletions, revisions to the plans previously approved by the Department including site grades and elevations). The Record Drawings shall include, but not be limited to, details such as the as-built invert elevations of the piping, stormwater structures, wiers and overflow windows, and ditch bottoms.

c. The County shall submit a narrative indicating all changes in plans and the cause of the deviations and certification by the design engineer to the Department.

3. In the event of damage to any portion of the site facilities or failure of any portion of the associated systems, the County shall **immediately (within 24 hours)** notify the Department explaining such occurrence and remedial measures to be taken and time needed for repairs. Written detailed notification shall be submitted to the Department **within seven (7) days** following the occurrence.

Completion of these corrective actions and subsequent demonstration of compliance are required prior to issuance of the pending operation permit renewal. Delays in completion of corrective actions and compliance may result in enforcement action.

The Department appreciates all efforts being made to resolve this matter. On all future correspondence, please include Robert Butera on distribution. 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/ab
Attachment

cc: Clayton Barth, P.E., Manatee County
Gus DiFonso, Manatee County
Timothy Hochuli, Manatee County
Randy Cooper, P.E., FDEP Tampa, ERP Section
Robert Butera, P.E., FDEP Tampa, Solid Waste Section

Florida Department of Environmental Protection
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, FL 32399-2400

DEP Form # 62-701.900(2)
Form Title Certification of Construction Completion
Effective Date May 19, 1994

DEP Application No. _____
(Filled by DEP)

Certification of Construction Completion of a Solid Waste Management Facility

DEP Construction Permit No:_____County:_____

Name of Project:_____

Name of Owner:_____

Name of Engineer:_____

Type of Project:_____

_____

Cost: Estimate $_____ Actual $_____

Site Design: Quantity:_____ ton/day Site Acreage:_____ Acres

Deviations from Plans and Application Approved by DEP:_____

_____

_____

_____

_____

Address and Telephone No. of Site:_____

_____

Name(s) of Site Supervisor:_____

Date Site inspection is requested:_____

This is to certify that, with the exception of any deviation noted above, the construction of the project has been completed in substantial accordance with the plans authorized by Construction

Permit No.:_____ Dated:_____

Date:_____ _____
Signature of Professional Engineer

Northwest District
160 Governmental Center
Pensacola, FL 32501-5794
904-444-8360

Northeast District
7825 Baymeadows Way, Ste. B200
Jacksonville, FL 32256-7590
904-448-4300

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

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

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
941-332-6975

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

July 31, 1998

HDR

Mr. Kim Ford, P.E.
Solid Waste Engineer
Florida Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, FL 33619-8318

RECEIVED
AUG 03 1998
FDEP

RE: Lena Road Landfill
Renewal of Operation Permit
HDR Project Number: 07982-024-096
Pending Permit No.: 39884-001-SO, Manatee County

Dear Mr. Ford:

We are responding to your May 26, 1998 comment letter regarding the Lena Road Landfill Operation Permit Renewal Application. Please find the following enclosed items:

1. Revised Part K, Landfill Operation Requirements
(Including: Revised Figure K-2 which has been renumbered and is now figure K-3, Table K-3A, Leachate & Rainfall Comparison for 1997 and Table K-4A, Landfill Gas Monitoring Data for 1997)

2. Revised Part L, Water Quality and Leachate Monitoring Plan

3. Appendix A-1: Storm Water/Leachate Management Plan

4.. Appendix A-2: Household Hazardous Waste Collection Plan

5. Appendix A-3: Leachate Treatment Agreement Letter

6. Revised Drawing 2, Plot Plan South

7. Revised Drawing 2A, Plot Plan North

8. The February 26, 1998 response (signed and sealed) from Professional Service Industries, Inc.

Note that Appendices A-1 through A-3 replace Appendix A in the original operation permit renewal application package.

We are providing the following responses keyed to your comment letter regarding the Lena Road

HDR Engineering, Inc.
Employee-owned
Suite 300
5100 W. Kennedy Boulevard
Tampa, Florida
33609-1840
Telephone
813 282-2300
Fax
813 282-2449

Landfill Operation Permit Renewal Application.

1. **Item D.13. Proof of publication of notice of application, see attachment.**

Manatee County will publish the notice upon notification the remainder of the application is complete and acceptable.

2. **Item G.8. Design details and supporting information for all permanent changes to the storm water control system including the weir for the Stage I outfall ditch are required for review prior to construction.**

Manatee County submitted plans for changes to the storm water control system including the weir for the Stage I outfall ditch on June 18, 1998. Any future design details and supporting information will be provided for FDEP approval prior to construction. No additional permanent changes are planned at this time.

3. **Part K. Cover sheet with title and date, and table of contents requested for the Operations Plan - Part K. This Operations Plan should include all clarification provided in response to items #5 through #17 in this letter. Has Appendix A including the HHW Collection Plan been deleted or replaced? The entire Appendix A including a description of all related on-site activities and facilities is requested.**

The requested cover sheet and table of contents is included with the revised Part K. The following items are enclosed for inclusion in Appendix A:

Appendix A-1:	Storm Water/Leachate Management Plan
Appendix A-2:	Household Hazardous Waste Collection Plan
Appendix A-3:	Leachate Treatment Agreement Letter

The original items included in Appendix A are to be deleted.

4. **62-701.500(1). Verification of training for each trained spotter.**

The spotters are trained to identify unauthorized wastes or potential sources of regulated hazardous wastes. This training emphasizes familiarity with containers and labels typically used for hazardous wastes and hazardous materials.

5. **62-701.500(2)(b). Alternative Sites for disposal, and use of water wagon to extinguish fires.**

Section 62-701.500(2)(b), F.A.C. requires that the Operation Plan to address:

> "Contingency operations, alternate waste handling and disposal methods in case of emergency such as a fire, natural disaster or equipment failure." (Underlining added for emphasis.)

Alternative waste handling and disposal methods as required by this rule are addressed in the Operation Plan submitted on April 27, 1998 and is again included in the revised operation plan provided in this submittal. The Wet Weather Area indicated on the Plot Plan and Topographic Map South (Drawing 2) is used as as an as an alternative disposal area when needed.

6. **62-701.500(2)(c). Number and location of spotters for each working face; procedures for removal, storage, and disposal of all types of unauthorized or hazardous wastes, and design details of each storage area for all types of unauthorized or hazardous wastes.**

Section 62-701.500(2)(c), F.A.C. requires that the Operation Plan to address:

> "Controlling the type of waste received at the site. The plan shall specify ... number and location of spotters for each working face, and procedures to be followed if prohibited wastes are discovered."

At least one spotter will be located at the working face when is receiving waste. No location is designated for spotters at the working face as they are expected to move about the face to direct traffic and observe the waste as it is being unloaded. Section 2e of the Operation Plan has been so amended. A reference to this Section and to Section 6 giving load checking procedures has been added to Section 2c.

Unauthorized or hazardous waste removal and disposal procedures are described in Section 6. Section 6 has been amended to include procedures for storing and disposing of unauthorized waste if the hauler cannot be identified and a reference to Section 6 has been added to Section 2c.

7. **62-701.500(5) Description of access controls around entire site and related signs.**

Section 5 has been amended to enhance the earlier discussion of fencing and to add discussion of directional signs.

8. **62-701.500(6) Description of compliance with each of these requirements.**

Part K, Section 6 has been revised to address all requirements from Section 62-701.500(6)(a), F.A.C.

9. 62-701,500(7)(b) Description of first waste layer necessary to protect pump stations and the LCRS.

This requirement is not applicable to any activities planned during the period of the requested permit. The area to be filled is completely covered by waste already. However, language has been added to Part K, Section 7b describing restrictions on the waste to be placed in the first layer in future fill areas.

10. 62-701,500(7)(f) Procedures for applying intermediate cover of 12" in addition to 6" initial soil cover within seven days.

The operational plan submitted included provisions for applying 12" of intermediate cover in addition to the 6" initial cover. Part K, Section 7g has been amended to provide for this addition of intermediate cover within seven days of cell completion.

11. 62-701,500(7)(h) Confirmation that scavenging is not allowed.

Part K, Section 7k has been added stating that scavenging is not allowed at Lena Road Landfill.

12. 62-701.500(7)(j). Procedures for containment and control of all storm water within the working face area, initially covered area, and intermediately covered areas.

Section 62-701.500(7)(j), F.A.C., states:

> "Erosion control measures shall be employed to correct any erosion which exposes waste or causes malfunction of the storm water management system."

Section II of the Storm Water/ Leachate Management Plan referenced in Part K, Section 10 and included with our April 27, 1998 submittal has been amended to include the following procedures:

> Temporary earthen storm water diversion berms and temporary leachate separation berms (illustrated on Drawing C-1 of the Lena Road Landfill Sequential Filling Plan recently approved by FDEP) are constructed to divert storm water away from and around the active face and to contain storm water which has come in contact with exposed waste. This contaminated storm water which has come into contact with waste is contained for evaporation or

percolation into the leachate collection system. Storm water flowing from areas which have received intermediate cover will be held behind temporary berms in a similar fashion or, at the discretion of the operator, allowed to enter the storm water collection system.

13. **62-701.500(8)(c) and (e). Agreements with each WWTP that may accept leachate for treatment. The LCRS description in the S/LMP should describe the system after completion of improvements and installation of all new monitoring devices.**

We are enclosing as an agreement letter from Len Bramble, P.E., Manatee County Public Works Director, to treat all leachate received from the Lena Road Landfill at the Southeast Wastewater Treatment Plant. In the event of extended plant shutdown, he agrees to treat the leachate at the Southwest Wastewater Treatment Plant or the North Wastewater Treatment Plant.

14. **62-701.500(8)(g) Table K-3 for 1997 only, and confirmation that this table will be provided annually for each subsequent year.**

Comparison of leachate and rainfall for 1997 only is enclosed in Table K-3A. Part K, Section 8g has been modified to reflect this submittal and that this information will be submitted annually.

15. **62-701.500(9). Revised Figure K-2 to include all changes, Table K-4 for 1997 only, and confirmation that this table will be provided annually for each subsequent year.**

A revised Figure K-2 with landfill gas monitoring point GMP-7 relocated is enclosed. Table K-4A, showing gas monitoring data for 1997 only is enclosed and Part K, Section 9 has been appropriately modified to reflect this submittal and that this information will be submitted annually.

16. **62-701.500(10). Approval is required by FDEP of all storm water system improvements. The storm water system description in the S/LMP should describe the system after completion of improvements.**

The Storm Water/Leachate Management Plan in Appendix A-1 has been modified as requested.

17. **62-701.500(11)(e), (f),(g) and (h). A response to each of these items is required.**

Each of these items has been addressed in an added corresponding section in Part K, Section 11 of the Permit Application

18. A response to each of Ms. Allison Amram's comments and concerns expressed in her May 19, 1998 memorandum, attached...

1. Section H. This comment has been adequately addressed.

2. Section K. Gas monitoring point MGW-18 will be included in the gas monitoring plan, and GMP-7 will be deleted.

No response required.

3. Section K. This comment has been adequately addressed.

4. Section K. This comment has been adequately addressed..

5. Section M. This comment has been adequately addressed..

6. Drawing 2 and 2A. This comment has been adequately addressed..

The following comments are from Section L of the permit application:

7. Ground water parameters: Parameters listed in the revised Section L are acceptable.

8. Ground Water Reporting: The semi-annual reporting requirements listed in the revised Section L are acceptable. The biannual ground water evaluation needs to also include a comparison of water quality between shallow and deeper aquifer zones.

Part L has been modified to include this comparison.

9. Surface water monitoring: One monitoring point, SW-1 in Cypress Strand, is proposed for compliance with F.A.C. Rule 62-701.510(4). This location could not be found on Drawing 2. As this monitoring point is downstream from the landfill, any impacts to Class III freshwater quality could be attributed to the landfill; it is advisable that an upstream location be sampled as well to establish offsite impacts to the water body.

A second surface water monitoring point, SW-2 is being proposed as a background

monitoring point. The locations of SW-1 and SW-2 have been added to Drawing 2. Part L has been appropriately modified.

10. **Leachate monitoring: As the objective of the leachate monitoring is to characterize the leachate prior to any pumping or treatment, it appears from the leachate operation that samples should be collected at the pump stations receiving water from waste-filled areas, instead of after pumping to the leachate pond. These samples could either be analyzed separately to provide the landfill with characterization of leachate from different waste areas, or combined for one sample to characterize the leachate from the site. The proposed sampling parameters and frequency are acceptable.**

    The leachate samples will be collected at the pump stations receiving water from the waste filled areas prior to pumping. The samples will be combined to create one sample from the site. Part L has been modified to reflect this sampling procedure.

11. **Gradient monitoring: A monthly gradient monitoring frequency is adequate. The list of gradient monitoring pairs presented in Table 2 of the Storm Water/Leachate Management Plan (dated April 1998) will be listed in the permit for easy reference.**

    No response is required.

The following comments are from the 1996/1997 Groundwater Monitoring Plan Biannual Evaluation dated December 31, 1997 and prepared by Professional Service Industries, Inc. Please submit a copy of the February 26, 1998 response that is signed and sealed by the professional who conducted/oversaw the work.

12. **This comment has been adequately addressed.**

13. **Please provide the date(s) of the survey shown in the last column of the table in the February 26, 1998 response. If well construction and boring logs are not available for the following wells: MW-1, MW-2, MW-3, SA-2 AND SA-3, then the open interval must be determined in order to evaluate if the are appropriately located for use as monitoring wells.**

    Well construction details for wells MW-1, MW-2 and MW-3 are provided in the enclosed "Table 2, Piezometers/Observation Wells Near Gun Club Landfill at Lena Road Landfill" from Ardaman & Associates. Details for wells SA-2 and SA-3 are shown on the monitor well installation logs and accompanying information from Ardaman & Associates.

14. **The proposed resampling for arsenic in wells GC-2, GC-3 and SMR-1 is acceptable. Documentation that samples were collected in accordance with DEP's January 1994 technical document Determining Representative Ground Water Samples, Filtered or Unfiltered must be submitted with the sample results. Samples should be collected, analyzed and reported with the response to this incompleteness letter. If the County wishes to pursue collection of field filtered samples from the site monitoring wells, the demonstration required by this document must be submitted for the wells included in the request. At this time, filtered samples are not approved for demonstrating compliance with ground water standards. If these samples still show arsenic impacts to well GC-2, then assessment monitoring as described in F.A.C. Rule 62-701.510(7) should begin.**

These samples have not been filtered in the past and will not be filtered in the future.

Please call me at (813) 282-2402 with any comments or questions.

Sincerely,

HDR ENGINEERING, INC.

Fred W. Sebesta, P.E.
Senior Project Manager

Enclosures

cc: Len Bramble
Gus DiFonzo
Dan Gray
Ben Alex
Robert Butera
Greg Goodwin
Neal Poteet
Dave Pelham

FDEP	3804 Coconut Palm Drive, Tampa, FL 33619-8318

FAX

Date: FAXED 8/13/98

Number of pages including cover sheet: 4

To: Ben Alex

Manatee County

Phone: 941 7485543

Fax phone: 941 7953451

CC:

From: Jim Ford

Phone: (813) 744-6100 x 382

Fax phone: (813) 744-6125

REMARKS: ☑ Urgent ☑ For your review ☑ Reply ASAP ☐ Please comment

Ben—
Approval letter for improvements
Please start ASAP and send schedule by Sept 1st
Also please correct & maintain gradient at PZ 19
PZ 16 and tell us your plan to correct at PZ 14
Thx
Jim—

Department of Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

August 13, 1998

Mr. Ben Alex
Solid Waste Management
Manatee County
3333 Lena Road
Bradenton, FL 34202

Re Lena Road Landfill Corrective Actions,
Gradient and Stormwater Management Systems
Permit No.: SO41-211176, Manatee County
Pending Permit #39884-001-SO

Dear Mr. Alex:

The Department has no objection to the corrective actions concerning improvements to the gradient and stormwater management systems as proposed in your May 11, 1998 letter, Mr. Clayton Barth's July 20, 1998 letter and attachments, and plans entitled Stormwater Ditch Improvements received August 3, 1998 subject to the following conditions:

1. No later than September 1, 1998, the County shall submit a construction schedule which includes estimated dates for each component of the construction to the Department. The Engineer of Record or another qualified professional engineer shall make periodic inspections during construction to ensure that design integrity is maintained. An updated construction schedule and progress chart shall be submitted to the Department monthly.

2. Within thirty (30) days after the specified construction has been completed, the following activities shall be completed:

   a. The County shall submit a Certification of Construction Completion, Form 62-701.900(2) (attached), signed and sealed by the professional engineer in charge of construction to the Department for approval, and shall arrange for Department representatives to inspect the construction in the company of the engineer and the facility operator.

b. The County shall submit Record Drawings showing all changes (i.e. additions, deletions, revisions to the plans previously approved by the Department including site grades and elevations). The Record Drawings shall include, but not be limited to, details such as the as-built invert elevations of the piping, stormwater structures, wiers and overflow windows, and ditch bottoms.

c. The County shall submit a narrative indicating all changes in plans and the cause of the deviations and certification by the design engineer to the Department.

3. In the event of damage to any portion of the site facilities or failure of any portion of the associated systems, the County shall **immediately (within 24 hours)** notify the Department explaining such occurrence and remedial measures to be taken and time needed for repairs. Written detailed notification shall be submitted to the Department **within seven (7) days** following the occurrence.

Completion of these corrective actions and subsequent demonstration of compliance are required prior to issuance of the pending operation permit renewal. Delays in completion of corrective actions and compliance may result in enforcement action.

The Department appreciates all efforts being made to resolve this matter. On all future correspondence, please include Robert Butera on distribution. 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/ab
Attachment

cc: Clayton Barth, P.E., Manatee County
Gus DiFonso, Manatee County
Timothy Hochuli, Manatee County
Randy Cooper, P.E., FDEP Tampa, ERP Section
Robert Butera, P.E., FDEP Tampa, Solid Waste Section

Florida Department of Environmental Protection
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, FL 32399-2400

DEP Form # 62-701.900(2)
Form Title Certification of Construction Completion
Effective Date May 19, 1994

DEP Application No. _____
(Filled by DEP)

Certification of Construction Completion of a Solid Waste Management Facility

DEP Construction Permit No:_____County:_____

Name of Project:_____

Name of Owner:_____

Name of Engineer:_____

Type of Project:_____

_____

Cost: Estimate $_____ Actual $_____

Site Design: Quantity:_____ ton/day Site Acreage:_____ Acres

Deviations from Plans and Application Approved by DEP:_____

_____

_____

_____

_____

Address and Telephone No. of Site:_____

_____

Name(s) of Site Supervisor:_____

Date Site inspection is requested:_____

This is to certify that, with the exception of any deviation noted above, the construction of the project has been completed in substantial accordance with the plans authorized by Construction

Permit No.:_____ Dated:_____

Date:_____ _____
Signature of Professional Engineer

Northwest District
160 Governmental Center
Pensacola, FL 32501-5794
904-444-8360

Northeast District
7825 Baymeadows Way, Ste. B200
Jacksonville, FL 32256-7590
904-448-4300

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

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

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
941-332-6975

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

Transmit Confirmation Report

No.	:	001
Receiver	:	819417953451
Transmitter	:	WASTE MGT TAMPA SWDIST
Date	:	Aug 14 98 8:19
Time	:	03'48
Mode	:	Norm
Pages	:	04
Result	:	OK

FDEP	3804 Coconut Palm Drive, Tampa, FL 33619-8318

FAX

Date: FAXED 8/12/96

Number of pages including cover sheet: 3

To: Ben Alex

Manatee County

Phone: 941 748 5543

Fax phone: 941 795 3421

CC:

From: Kim Ford

Phone: (813) 744-6100 x382

Fax phone: (813) 744-6125

REMARKS: ☐ Urgent ☑ For your review ☑ Reply ASAP ☐ Please comment

Please send revised format with August data with new staff gauges and location sketch

Thx
Kim

Exhibit C
Manatee County, Lena Road Landfill
Groundwater Gradient
July 1998

Piezometer	Riser Elevation	Groundwater Elevation	Monitoring Well	Riser Elevation	Groundwater Elevation
		STAGE I			
PZ-1	42.53	28.86	MW-5	39.96	31.07
PZ-2	42.53	29.88	MW-2	37.87	32.02
PZ-3	44.93	28.72	MW-1	38.71	33.51
PZ-4A	47.73	29.85	CW-4	37.54	32.29
PZ-5	43.96	30.05	CW-5A	41.23	36.34
PZ-6	45.04	31.29			
PZ-7	47.97	29.55	MW-6	39.29	32.99
PZ-19	45.86	~~28.55~~	PZ-11	37.94	~~28.11~~
		STAGE II			
PZ-8	37.63	28.56	LRII-5	36.74	30.39
PZ-9	36.56	~~28.38~~	LRII-3	33.46	~~27.95~~
PZ-10	37.05	27.58	LRII-2	36.53	29.56
PZ-11	37.94	28.11	LRII1-1	37.97	32.84
		STAGE III			
PZ-12	38.39	28.58	GC-2	38.19	29.72
PZ-13	35.09	26.99	GC-3	35.02	27.01
PZ-14	33.47	~~26.08~~	GC-4	33.91	~~25.53~~
~~PZ-15~~	~~33.20~~	~~26.66~~			
PZ-15B	37.37	26.58	PZ-15A	39.77	28.81
PZ-16	34.63	~~27.62~~	PZ-16A	39.07	~~26.82~~
			~~GC-5~~	~~36.50~~	~~28.28~~
PZ-17	40.82	28.75	~~GC-6~~	~~39.06~~	~~30.01~~
PZ-18	40.15	32.13			

Notes:

PZ-15A and PZ-16A are piezometers not monitoring wells. Their location however is outside the slurry wall. PZ-15A is used to compare data to ~~PZ-15~~ and PZ-15B. PZ-15 replaces GC-1A for this purpose. PZ-16A is used to compare data against PZ-16. PZ-16A replaces GC-5 for this purpose. PZ-18 is used to compare data recorded in th Stage I west perimeter ditch.

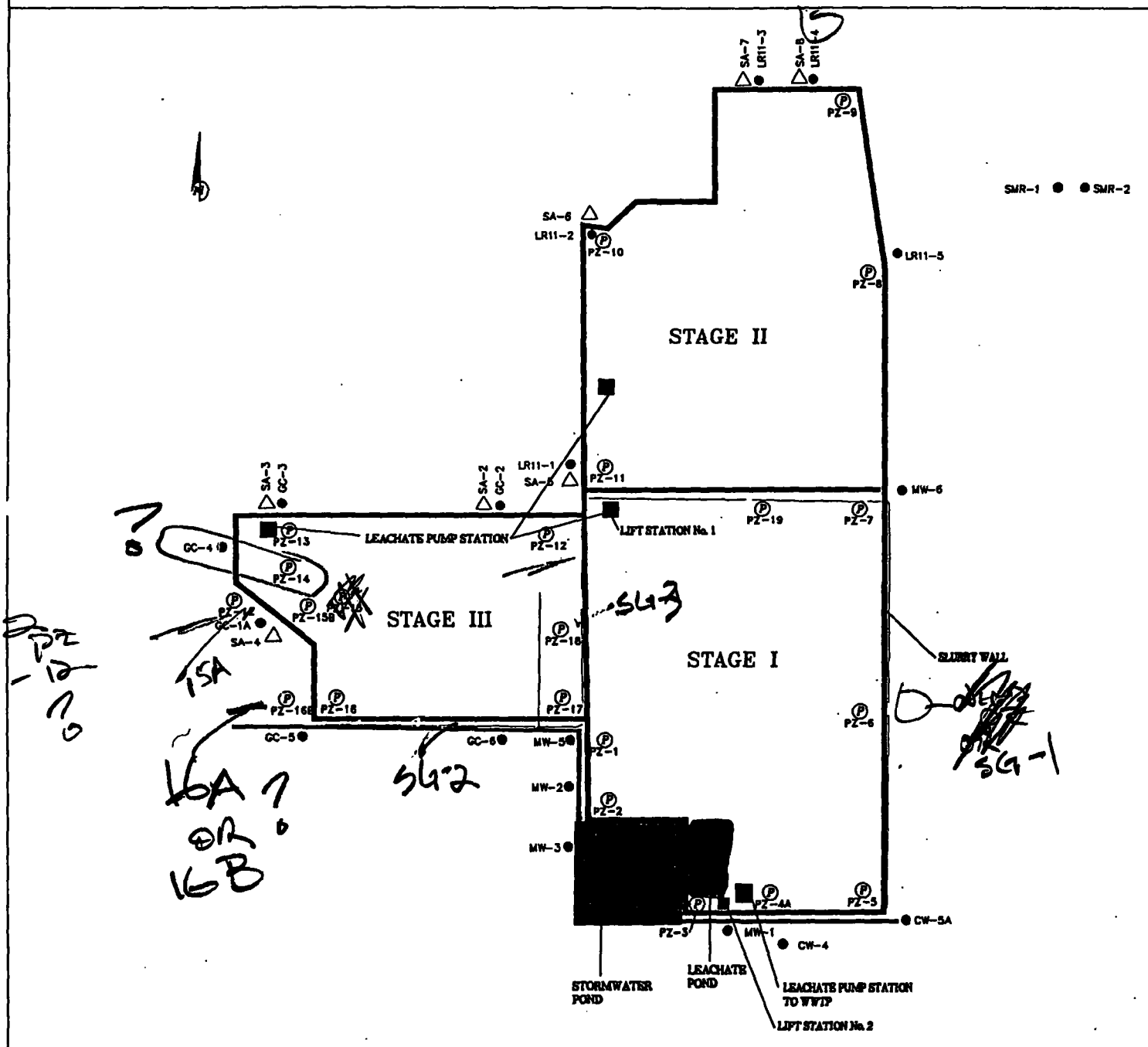
The table is arrange so any piezometer can be compared to its corresponding monitoring well. For example, PZ-1 is located on the opposite side of the slurry wall from MW-5. Thus data from PZ-1 are compared to data from MW-5.

Depth to groundwater data were collected on July 24, 1998.

STORMWATER LEACHATE MANAGEMENT PLAN

LENA ROAD LANDFILL

MANATEE COUNTY



MANATEE COUNTY PUBLIC WORKS DEPARTMENT

OPERATIONS PERMIT APPLICATION: APRIL, 1998

FIGURE 2

Prepared by: MCPWD – Mapping LEACHATE.DWG

Transmit Confirmation Report

No.	:	005
Receiver	:	819417953451
Transmitter	:	WASTE MGT TAMPA SWDIST
Date	:	Aug 13 98 9:10
Time	:	02'17
Mode	:	Norm
Pages	:	03
Result	:	OK

MANATEE COUNTY GOVERNMENT

Public Works Department

August 6, 1998

Allison Amram, P.G.
Division of Waste Management
Department of Environmental Protection, South West District
3804 Coconut Palm Drive
Tampa, FL 33619

D.E.P.
AUG 10 1998
SOUTHWEST DISTRICT
TAMPA

Re: Manatee County, Lena Road Landfill
Water Balance Report

Dear Ms. Amram:

Enclosed is the July 1998 water balance report. Per conversations with Kim Ford, an improved correlation between pond elevations, pumping rates and rain fall data is presented in the report. Staff will make every effort to ensure that the data is better reflective of these changing conditions. If you need additional information please call me at 941-748-5543.

Sincerely,

Ben Alex,
Solid Waste Technical Coordinator

cc: Len Bramble, P.E., Public Works Director
Dan Gray, Utilities Operations Manager
Gus DiFonzo, Solid Waste Manager
Bob Butera, P.E., FDEP
Kim Ford, P.E., FDEP

ADMINISTRATION • 4410 - 66th Street West, Bradenton, Florida 34210 • (941) 792-8811 • FAX (941) 795-3490

P.O. Box 25010, Bradenton, Florida 34206

RECEIVED
AUG 1 0 1998
Department of Environmental Protection
BY SOUTHWEST DISTRICT

PSI Environmental Geotechnical Construction
Consulting • Engineering • Testing

February 26, 1998

Department of Environmental Protection
Southwest District
Division of Waste Management
3804 Coconut Palm Drive
Tampa, Florida 33619

Attention: Mr. Kim B. Ford, P.E.
Solid Waste Section

RECEIVED
AUG 03 1998
DEP

Re: Response to FDEP Comments - 1996/1997
Groundwater Monitoring Plan Biannual Evaluation
Lena Road Landfill, Permit No. SO41-211176
Manatee County, Florida
PSI Project No. 552-4L015-138

Dear Mr. Ford:

Professional Service Industries, Inc. (PSI) has prepared responses to the Department comments dated August 7, 1996. The Department comments pertain to the Groundwater Monitoring Plan Biannual Evaluation prepared by PSI and dated December 31, 1997. PSI has the following responses to the Department's comments:

FDEP Comment No. 1: *Groundwater elevations in figures 6 and 7 are identical. Please provide corrected ground water maps (for the August and November 1996 sampling events.)*

Consultants Response to No. 1: The groundwater elevations shown on Figure 6, August 1996, were correct as shown. Figure 7 has been revised to include the groundwater elevations from November 18-20, 1996. The revised figure is included in Attachment A.

FDEP Comment No. 2: *Please provide a table with the most current top of casing elevation for all site monitoring wells and peizometers, and the well construction and boring logs for the following wells: MW-1, MW-2, MW-3, MW-4, SA-2 and SA-3. This information is incomplete in the FDEP's files.*

Consultants Response to No. 2: A table with the most current top of casing elevations is included in Attachment 2. There are currently no monitor wells at the Lena Road Landfill facility with the designation, MW-4. Well construction and boring logs for MW-1, MW-2, MW-3, MW-4, SA-2, and SA-3 could not be located.

FDEP Comment No. 3: *Arsenic has been found in the ground water at well GC-2 at concentrations above the ground water standards for 3 of the past 5 monitoring events. In each of these past 3 events, the concentrations have increased. Is there any reason for this increase? In accordance with Specific Condition No. 36, the contaminant has been confirmed and assessment monitoring as described in F.A.C. Rule 62-701.510 (7) should begin. Please initiate the requirement. It also appears that iron concentrations are highest in this well and the adjacent LRII-1.*

Consultants Response to No. 3: Our review of the field data sheets completed at the time of the last three sampling events indicates the initial turbidity of the purge water at GC-2 was relatively high (91.3 to 45.0 NTU). Generally the final turbidity, after low flow purging, was below the recommended 5 NTU, however, during the June 26, 1997 sampling event the final turbidity was 12.2 NTU. In accordance with the landfill's original Groundwater Monitoring Plan and FDEP technical documents for determining representative ground water samples, we recommend resampling GC-2, GC-3 and the background well SMR-1 in order to confirm that the concentration of arsenic detected is representative of actual ground water quality. The sampling procedures will be in accordance with FDEP technical guidelines and will be used to justify the use of field filtered samples for GC-2 for future compliance monitoring. The general procedure will be to purge the wells at <0.2 gallons per minute, collect split samples (one for field filtration and the other unfiltered) and analyze the split samples for arsenic in accordance with EPA Method 7060.

The conclusions included in the 1996/1997 Groundwater Monitoring Plan Biannual Evaluation remain essentially unchanged by the preceding corrections and recommendations.

PSI appreciates the opportunity to be of service on this important project. If you have any questions, please do not hesitate to contact us.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

David A. Steele, P.G.
Project Hydrogeologist

Donald R. Polanis, Jr.
Environmental Services Manager

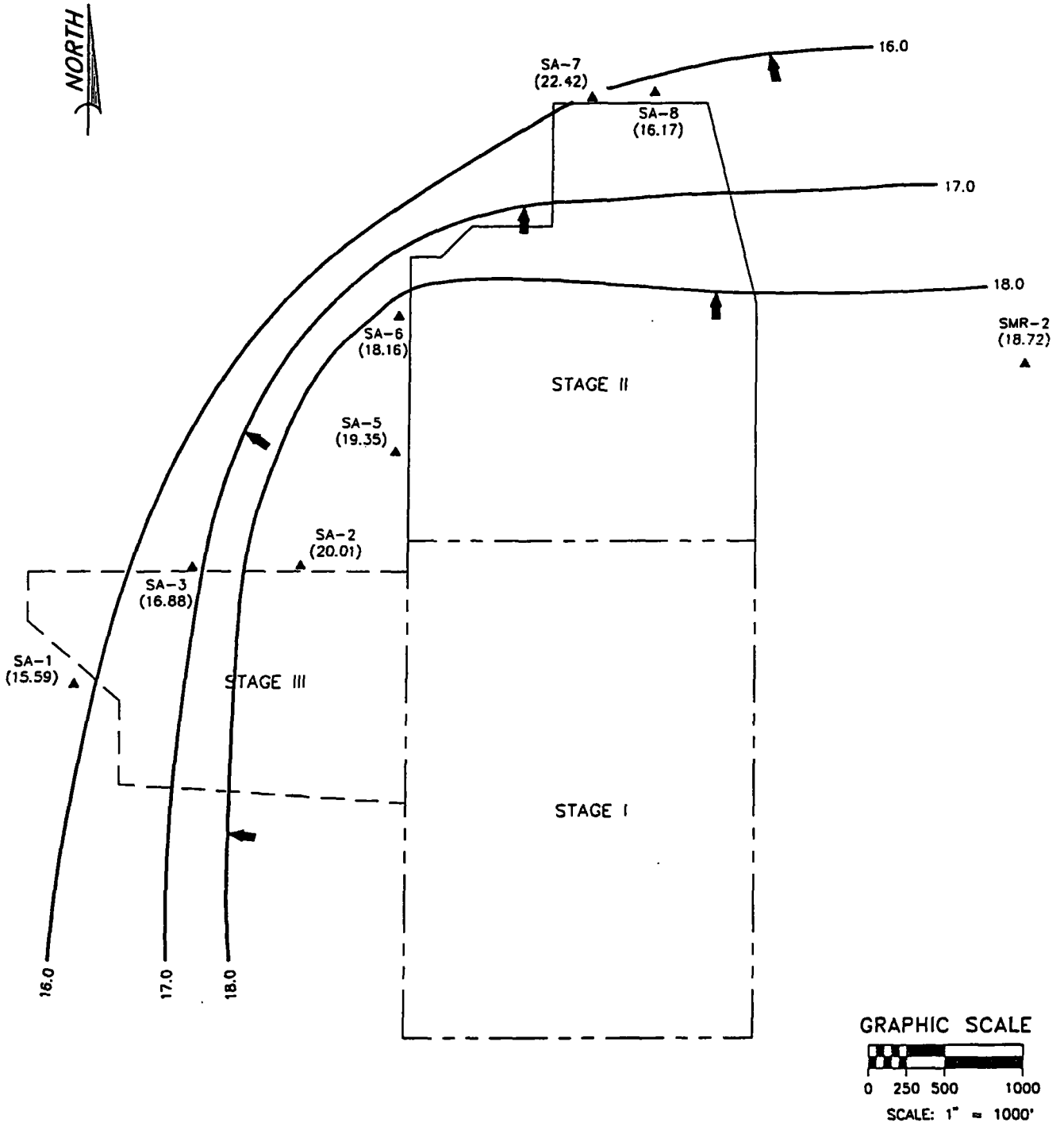
Attachments

Copy to: Ben Alex, Manatee County Public Works

98letters1\4L015-138-ltr-2-9-98.doc

ATTACHMENT 1

Revised Groundwater Elevation Contour Map



LEGEND

- EXISTING STAGE I SLURRY WALL
- EXISTING STAGE II SLURRY WALL
- EXISTING STAGE III SLURRY WALL
- ▲ APPROXIMATE DEEP AQUIFER WELL LOCATION
- ➡ INFERRED DIRECTION OF GROUNDWATER FLOW

NOTE: DATA FROM SA-7 OMITTED FROM CONTOUR MAP

NOVEMBER 18-20, 1996

DEEP AQUIFER GROUNDWATER ELEVATION CONTOUR MAP

LENA ROAD LANDFILL

3333 LENA ROAD

BRADENTON, FLORIDA

psi *Information To Build On*

Engineering • Consulting • Testing

DRAWN BY: NMR	SCALE: 1" = 1000	PROJ. NO.: 552-4L015-138
CHKD. BY: OAS	DATE: 2/4/98	DWG.: 7

D:\2015\2D\98.DWG

ATTACHMENT 2

Casing Elevation Table and Well Construction Logs

Table of Current Casing Elevations
Lena Road Landfill

Monitor Well #	Total Depth (ft)	Casing Height (ft)	NGVD [1] Elevation (ft)	Piezometer Well #	NGVD [2] Elevation (ft
Stage 1					
MW-1	14.53	1.83	38.71	PZ-3	44.93
MW-2	13.97	1.18	37.87	PZ-2	42.53
MW-3	13.37	3.08	40.07		
MW-5	21.42	3.00	39.96	PZ-1	42.53
MW-6	20.72	3.22	39.29	PZ-7	47.97
CW-4	17.94	2.94	37.54	PZ-4A	47.73
CW-5A	17.92	-	41.23	PZ-5	43.96
				PZ-6	45.04
Stage 2					
SA-5	153.02	3.02	37.87		
LR2-1	21.12	3.12	37.97	PZ-11	37.94
SA-6	153.04	3.04	36.20		
LR2-2	22.83	3.33	36.53	PZ-10	37.05
SA-7	152.97	2.97	39.83		
LR2-3	22.61	3.11	33.46	PZ-9	36.56
SA-8	153.38	3.38	34.44		
LR2-4	22.50	3.00	33,86		
LR2-5	22.78	3.26	36.74	PZ-8	37.63
Stage 3					
SA-2	154.93	2.97	37.97		
GC-2	18.03	3.03	38.19	PZ-12	38.39
SA-3	163.02	3.02	35.12		
GC-3	22.58	3.08	35.02	PZ-13	35.09
GC-4	21.80	3.88	33.91	PZ-14	33.47
SA-4	143.78	3.78	31.21		
GC-1A	23.76	4.26	31.74	PZ-15A	33.20
GC-5	22.02	4.02	36.50	PZ-16	34.63
GC-6	22.40	3.90	39.06	PZ-17	40.82
Background					
SMR-1	22.88	3.04	36.60		
SMR-2	150.00	2.70	36.22		

1 - Elevation from 11-2-94

2 - Elevations for PZ-1, PZ-4A, PZ-5, PZ-6, PZ-7 and PZ-15A from 4-15-96

PART L. WATER QUALITY AND LEACHATE MONITORING PLAN

The water quality and leachate monitoring program for the Lena Road Landfill complies with the requirements of 62-701.510 FAC regulations for solid waste facilities. The plan described in this section will be implemented at the landfill during the next permit period. All field testing, sample collection, preservation and laboratory testing, including quality control procedures, will adhere to the applicable methods approved by the Department.

Collected groundwater samples will be analyzed by P.E. LaMoreaux & Associates, Inc. (PELA), a geochemistry laboratory located in Lakeland, Florida. The DEP approved the CompQAP for PELA on June 17, 1997. Copies of the Annotated QAP pages and the DEP approval letter are presented in Appendix C. The Methods used by PELA are from *"Standards Methods for the Analysis of Water and Wastewater"*, latest edition APHA, AWWA, and WPCF, and/or other EPA approved methods which meet FDEP protocol.

GROUNDWATER MONITORING PROGRAM

Groundwater Sampling and Analysis.

The objective of the monitoring program will be to determine groundwater quality outside of the slurry wall in the vicinity of the Lena Road Landfill, and to evaluate the gradient. The groundwater monitoring well and piezometer locations are shown on Drawings 2 and 2A, Appendix B. The plan shows 27 monitoring wells and 19 piezometers along the perimeter of the slurry wall system which will be included in the monitoring program. The 27 monitoring wells are located outside the slurry wall and are divided into 19 wells which monitor the surficial aquifer and eight wells which monitor the deep artesian aquifer. The 19 piezometers are all located inside the slurry wall system. The groundwater monitoring wells are listed below.

WELL NUMBER	AQUIFER	WELL TYPE
LR11-1	Surficial	Detection/Compliance
LR11-2	Surficial	Detection/Compliance
LR11-3	Surficial	Detection/Compliance
LR11-4	Surficial	Detection/Compliance
LR11-5	Surficial	Detection/Compliance
MW-1	Surficial	Background
MW-2	Surficial	Detection/Compliance
MW-3	Surficial	Detection/Compliance
MW-5	Surficial	Detection/Compliance
MW-6	Surficial	Detection/Compliance
CW-4	Surficial	Compliance
CW-5A	Surficial	Detection/Compliance

WELL NUMBER	AQUIFER	WELL TYPE
GC-1A	Surficial	Detection/Compliance
GC-2	Surficial	Detection/Compliance
GC-3	Surficial	Detection/Compliance
GC-4	Surficial	Detection/Compliance
GC-5	Surficial	Detection/Compliance
GC-6	Surficial	Background
SMR-1	Surficial	Background
SA-2	Artesian (Deep)	Detection/Compliance
SA-3	Artesian (Deep)	Detection/Compliance
SA-4	Artesian (Deep)	Detection/Compliance
SA-5	Artesian (Deep)	Detection/Compliance
SA-6	Artesian (Deep)	Detection/Compliance
SA-7	Artesian (Deep)	Detection/Compliance
SA-8	Artesian (Deep)	Detection/Compliance
SMR-2	Artesian (Deep)	Background

Note: Wells located adjacent to the slurry wall function as both detection and compliance wells.

The surficial aquifer wells adjacent to the slurry wall are considered both "down gradient" and "upgradient" wells depending upon the parameters monitored. If water quality parameters are being monitored these wells are considered "down gradient" because they monitor the water quality outside the slurry wall system. (Meaning if groundwater standards are exceeded in these wells the groundwater flow is originating from the landfill and flowing through the slurry wall towards the wells.) If the inward gradient across the slurry wall is being monitored, then these wells are considered "upgradient" wells. (Meaning the surficial aquifer monitoring wells will have a higher water levels then their corresponding piezometers.)

Each groundwater monitoring well at the landfill will undergo semi-annual analysis for the parameters specified in 62-701.510 F.A.C., for Solid Waste Management Facilities. All analyses will be performed by a certified laboratory with an FDEP approved ComQAP. All detection wells and background wells will be sampled and analyzed semi-annually for the groundwater indicator parameters listed below.

Groundwater Indicator Parameters:

Field Parameters

Static water level in wells before purging.
Specific conductivity
pH
Dissolved Oxygen
Turbidity
Temperature
Colors, Sheens

Laboratory Parameters

Total Ammonia - N
Iron
Mercury

Nitrate - N
Chlorides

Sodium
Total Dissolved Solids (TDS)
Parameters listed in 40 CFR, Part 258, Appendix I

In accordance with 62-701.510(7), F.A.C., if monitoring parameters are detected in concentrations which exceed background water quality, or at levels above the DEP water quality standards or criteria specified in 62-520 F.A.C., the wells will be resampled within fifteen days after the sampling data is received to confirm the data. If the data is confirmed, the DEP will be notified in writing within fourteen days of the finding. Upon notification by the FDEP, the County will initiate assessment monitoring as specified by 62-701.510 (7)(a), 1 through 5.

Gradient Monitoring Program

A slurry wall containment system is in place at the Lena Road Landfill to isolate the surficial aquifer along the perimeter of the landfill. Drawings 2 and 2A show the approximate slurry wall location. Inside of the slurry wall, groundwater levels are controlled by a leachate collection system and leachate pond. The objective of the system is to maintain the water elevation inside of the slurry wall at a lower elevation than the groundwater outside of the slurry wall, inducing an inward gradient. A series of piezometers and monitoring well pairs located inside and outside of the slurry wall, as shown on Drawings 2 and 2A, will be utilized to monitor the gradient.

The piezometers (PZ-1 through PZ-17, PZ-15A, PZ-15B, PZ-16A, PZ-18, PZ-19) are located between the slurry wall system and the leachate collection system, and are located adjacent to a surficial monitoring well outside of the slurry wall. When the leachate collection system is operating as designed the groundwater gradient will be inward - resulting in the piezometers having lower water levels than their corresponding surficial monitoring well. The piezometers are shallow wells containing a screened interval of approximately five feet which is located below the seasonal high water table elevation.

The nineteen piezometers and all surficial aquifer monitoring wells listed previously will be monitored monthly for water levels to an accuracy of 0.01 feet. This data will be submitted monthly to the Department, and used to evaluate the presence/absence of an inward gradient at the landfills' perimeter slurry wall.

Groundwater Quality Reporting .

The County will continue to submit to the DEP all water quality monitoring analyses by July 15th and January 15th for the semi-annual periods January - July and July - December, respectively. The

Departments' Quarterly Report on Groundwater Monitoring Form 62-1.216(2) will continue to be used and will 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 groundwater 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);
9. An updated groundwater table contour map, with contours at no greater than one foot intervals, which indicates groundwater levels and flow direction;
10. A summary of any water quality standards or criteria that are exceeded.

A technical report as per 62-701.510(9),F.A.C., shall be submitted to the Department every two years and shall be updated at the time of permit renewal. The report shall be prepared, signed and sealed by a professional geologist or engineer with experience in hydrogeologic investigations, and submitted to the FDEP. The biannual evaluation shall include an assessment of the effectiveness of the existing landfill design and operation as related to the prevention of groundwater contamination, and shall summarize and interpret the water quality data and water level measurements collected during the permit period. The report shall contain the following:

1. Tabular and graphical displays of any data which shows that a parameter has been detected;
2. Trend analysis of any monitoring parameters detected;
3. Comparison of water quality between shallow and deeper acquifer zones;
4. Comparisons between upgradient and downgradient wells;
5. Correlation between related parameters such as total dissolved solids and specific conductance;
6. Discussions of erratic and/or poorly correlated data;
7. An interpretation of the groundwater contour maps, including an evaluation of the groundwater flow rates;
8. An evaluation of the adequacy of the water quality monitoring frequency and sampling locations based on site conditions.

The latest Groundwater Monitoring Plan Biannual Evaluation was performed by Professional Service Industries, Inc. (PSI). This report included data compiled monthly, quarterly, and semi-annually over the time period of January 1, 1994 to December 31, 1995. The following are PSI's

findings:

- "Based on a comparison of the average water table elevations in the monitor wells around the landfill stages, regional groundwater flow appears to be towards the northwest. The construction of the slurry wall system around the landfill stages and the leachate collection systems within the stages has created localized cells with opposing gradients around each stage. Due to the confining layer beneath the landfill, it is assumed that these localized cells are restricted to the shallow or surficial aquifer."
- "For the shallow monitor wells, the analytical parameters that vary from FDEP Groundwater Guidance Concentrations include pH, total dissolved solids, and iron. Low concentrations of several EPA 8260 compounds were detected in twelve of the shallow monitor wells over the two year monitoring period."
- "For deep monitor wells, the analytical parameters that vary from FDEP Groundwater Guidance Concentrations include pH, total dissolved solids, and iron. Low concentrations of EPA 8260 compounds were detected in five of the deep monitor wells over the two year monitoring period."
- "The upgradient/downgradient monitor well analysis revealed negligible increases in the levels of various parameters in monitor wells to the south and west of the landfill. These increases represent minor fluctuations above the background levels measured in monitor well SMR-1."

All piezometers and wells not a part of the approved groundwater monitoring plan will be plugged and abandoned in accordance with Rule 62-532.500 (4), F.A.C., and the Southwest Florida Water Management District. Within ninety days of the abandonment, the County will submit a written report to the Department providing documentation.

The County will notify the DEP should any monitoring well become damaged or inoperable.

SURFACE WATER MONITORING

Surface water monitoring is proposed for Lena Road Landfill to comply with F.A.C. rule 62-701.510(4). Two surface water monitoring points are proposed. SW-1 is located at Cypress Strand at the location shown on Drawing 2. Cypress Strand runs along the west side of the landfill site. SW-1 is located downstream of the landfill, and would intercept waters potentially affected by the landfill. Proposed sampling point, SW-2 is located approximately 4,000 feet south of the point where the landfill maintenance road and Cypress Strand intersect near Monitoring Well, MW-2. See Drawing 2. Proposed sampling point SW-2 is upstream from the landfill and will provide background data for comparison with the data from SW-1.The surface water points will be sampled semi-annually for the following parameters as specified by 62-701.510 F.A.C.:

Field Parameters:

Dissolved Oxygen	Temperature
Turbidity	pH
Specific conductivity	Colors, Sheens (by observation)

Laboratory Parameters:

Unionized Ammonia	Total Organic Carbon
Total Hardness	Fecal Coliform
Biochemical Oxygen Demand (BOD5)	Total Phosphates
Copper	Chlorophyll A
Iron	Total Nitrogen
Mercury	Chemical Oxygen Demand
Nitrate	Total Suspended Solids
Zinc	Those parameters listed in 40 CFR
Total Dissolved Solids	Part 258, Appendix I

NPDES Sampling

According to the National Pollutant Discharge Elimination System (NPDES) Permit No. FL0038881, the site has six permitted outfall locations which the County is authorized to discharge stormwater. The outfall structures are:

- Outfall 001, Stage I landfill detention pond west weir outlet.
- Outfall 002, southern weir of the Stage I landfill perimeter ditch.
- Outfall 003, northern weir of the Stage I landfill perimeter ditch.
- Outfall 004, perimeter ditch of the Stage III landfill area.
- Outfall 005, perimeter ditch of the Stage II landfill area.
- Outfall 006, perimeter ditch of the Stage II landfill area.

Since the time that the NPDES was approved (Feb. 1993), outfall 003 has been removed by the County. A copy of the NPDES Permit is located in Appendix F which contains a map which depicts the locations of the authorized outfalls and the parameters for which the surface water is tested.

The stormwater management system will continue to be managed as required by 62-701.500 (10), F.A.C., to meet applicable standards of 62-302 and 62-330, F.A.C. The system is operated and maintained to minimize stormwater from entering waste filled areas and avoid the mixing of stormwater with leachate. Interceptor berms are maintained at the working area to prevent leachate runoff from the working face from entering the stormwater management system. Modifications of the approved stormwater design will be submitted to the Department for approval prior to implementation.

The County will continue to:

- Inspect all stormwater conveyances weekly to verify adequate performance,
- Remove restrictive sedimentation and vegetation within three working days,
- Regrade stormwater conveyances to prevent ponding, and
- Document all inspections and repairs to the stormwater system.

LEACHATE MONITORING

The County will continue to be responsible for leachate level monitoring, sampling, analysis of the landfill leachate, and for providing to the Department copies of the leachate analysis and monthly leachate generation reports.

The Lena Road Landfill leachate is sampled (grab sample) from the pump stations receiving water from waste-filled areas prior to pumping. The samples will be combined to create one sample from the site. Leachate will be sampled and analyzed semi-annually for the leachate indicator parameters listed below.

Leachate Monitoring Parameters:

Field Parameters	
Specific conductivity	Dissolved Oxygen
pH	Colors, Sheens
Laboratory Parameters	
Total Ammonia - N	Nitrate
Bicarbonates	Sodium
Chlorides	Total Dissolved Solids (TDS)
Iron	Those parameters listed in
Mercury	40 CFR Part 258 Appendix I

The County will also sample and analyze annually for the parameters listed in 40 CFR Part 258, Appendix II.

MANATEE COUNTY GOVERNMENT

RECEIVED
AUG 03 1998
FDEP

LETTER OF TRANSMITTAL

DATE: July 30, 1998

TO: Kim Ford, Solid Waste Section
FDEP

SUBJECT: Revised Landfill Plans

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_____ SIGN AND RETURN

_____

REMARKS: Plans have been revised per your request of our meeting 7/24/98.

Clayton Bentley

PUBLIC WORKS DEPT. - ENGINEERING

MANATEE COUNTY GOVERNMENT

Public Works Department

RECEIVED
JUL 22 1998
Department of Environmental Protection
SOUTHWEST DISTRICT
BY

July 20, 1998

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

Re: Stormwater System and Gradient Improvements
Lena Road Landfill, Permit #SO41-211176

Dear Mr. Ford:

I recently received a copy of your comments on the revised ditch liner plan from Ben Alex. Ben has asked me to respond to your comments that referred to features on Sheets 3 and 4 of 23 of the plan:

Comment: "Flap gates on 36" RCP unclear?"
Reply: The flap gate will be bolted to the Type U discharge structure located at the south end of the 36" R.C. pipe. The purpose of this flap gate is to allow storage in the stormwater pond up to the window elevation of 37.0 of the new control structure.

Comment: "Very close to slurry wall -- can this be moved 10' west?"
Reply: This comment refers to the position of the new 36" R.C. Pipe. A note on the plan instructs the builder to provide clearance from the slurry wall. The clearance indicated by the drawing is about 9 feet and the depth of the pipe is about 9 feet also, making the slope of the trench embankment 45 degrees without disturbing the slurry wall. Ground water behind the slurry wall is maintained at a low level by the leachate pumping system so there would be no tendency for instability due to hydrostatic pressure. If necessary the builder may provide additional clearance at his own discretion or as required by field conditions.

Comment: "Raise 24" RCP to 34 -- 35 -- why so low?"
Reply: The 24" connecter pipe provides a pathway to the weir for flow coming through the overflow windows of the pond control structure. The flap gate installed inside the Type J box at the east end of the 24" R.C. pipe prevents the flow of water directly from the 36" RCP to the filter facility. Since the flap gate prevents this direct connection, the elevation of the 24" pipe could be anywhere below about 35 and still function properly. I placed the invert of the 24" pipe at the level of the top of the filter medium to provide a way to drain the ditch for maintenance while holding water in the stormwater pond.

ADMINISTRATION • 4410 - 66th Street West, Bradenton, Florida 34210 • (941) 792-8811 • FAX (941) 795-3490

P.O. Box 25010, Bradenton, Florida 34206

Comment: "Is this where the Flare goes? Was the bridge deleted? If not deleted then why not?"
Reply: An exact location for the flare facility has not been set. We expect it will go somewhere northwest of the new filtration facility and south of the east-west ditch. At a recent meeting I attended with Ben Alex and Tim Hochuli (Manatee County Project Management) this issue was discussed and it was decided that Tim would direct his consultant to delete the bridge. We will modify the ditch liner plans to show the 36" pipe extended about 25 feet north, which will provide access to the site by driving over the pipe.

Comment: "How to keep grout out of remaining underdrain?"
Reply: This comment refers to the length of existing C.S. pipe between the existing filter outlet pipe and the slurry wall. The operational details of how to prevent intrusion will be left to the builder's discretion. The recommended method for grouting a pipe that will be abandoned is presented in Manatee County Standard Specification Section 02064, Modifications to Existing Structures, Piping and Equipment. A copy of this specification is attached. In this method, the ends of the pipe are blocked or capped. A means of visual verification is provided to determine if the pipe has been grouted full. Pressure grouting from one end of the pipe would then continue until grout begins to emerge from the other end.

BENTONITE GROUT 4/24/98 MEETING

We have received a Clay Ditch Lining Material specification from our soils engineering consultant and are forwarding a copy for your perusal.

We are sending you a revised version of Sheets 3 and 4 included in a new plan set. Please let Ben or me know if you require any further clarification of the plans.

Signed,

Clayton L. Barth, P.E.
Engineering Division

cc: Robert Hall, P.E., Utilities Division Engineering Manager
David Branning, Utility Projects Coordinator
Timothy Hochuli, P.E., Project Manager
Gus DiFonzo, Solid Waste Division Manager
Benjamin Alex, Solid Waste Technical Coordinator
Robert Butera, P.E., FDEP Tampa, Solid Waste Section

D.E.P.
JUL 22 1998
SOUTHWEST DISTRICT
TAMPA

3/05/97

SECTION 02064

MODIFICATIONS TO EXISTING STRUCTURES, PIPING AND EQUIPMENT

PART 1 GENERAL

1.01 SCOPE OF WORK

Furnish all labor, materials, equipment and incidentals required to modify, alter and/or convert existing structures as shown or specified and as required for the installation of piping, mechanical equipment and appurtenances. Existing piping and equipment shall be removed and dismantled as necessary for the performance of facility alterations in accordance with the requirements herein specified.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 GENERAL

A. The Contractor shall cut, repair, reuse, excavate, demolish or otherwise remove parts of the existing structures or appurtenances, as indicated on the Contract Drawings, herein specified, or necessary to permit completion of the work under this Contract. He shall dispose of surplus materials resulting from the above work in an approved manner. The work shall include all necessary cutting and bending of reinforcing steel, structural steel, or miscellaneous metal work found embedded in the existing structures.

B. The Contractor shall dismantle and remove all existing equipment, piping, and other appurtenances required for the completion of the work. Where called for or required, the contractor shall cut existing pipelines for the purpose of making connections thereto. Anchor bolts for equipment and structural steel removed shall be cut off one inch below the concrete surface. Surface shall be finished as specified in the Contract Documents.

C. At the time that a new connection is made to an existing pipeline, additional new piping, extending to and including a new valve, shall be installed. Pipe anchorage, if required, shall also be installed as directed by the Engineer.

D. No existing structure, equipment, or appurtenance shall be shifted, cut, removed, or otherwise altered except with the express approval of and to the extent approved by the Engineer.

E. When removing materials or portions of existing utility pipelines and/or structures or when making openings in walls and partitions, the Contractor shall take all precautions and use all necessary barriers and other protective devices so as not to damage the structures beyond the limits necessary for the new work, and not to damage the structures or contents by falling or flying debris. Unless otherwise permitted, line drilling will be required in cutting existing concrete.

F. Materials and equipment removed in the course of making alterations and additions shall remain the property of the Owner, except that items not salvageable, as determined by the Engineer and the Owner, shall become the property of the Contractor to be disposed of by him off the work site at his own place of disposal. Operating equipment shall be thoroughly cleaned, lubricated, and greased for protection during prolonged storage.

G. All alterations to existing utility pipes and structures shall be done at such time and in such manner as to comply with the approved time schedule. So far as possible before any part of the work is started, all tools, equipment, and materials shall be assembled and made ready so that the work can be completed without delay.

H. All workmanship and new materials involved in constructing the alterations shall conform to the General Specifications for the classes of work insofar as such specifications are applicable.

I. All cutting of existing concrete or other material to provide suitable bonding to new work shall be done in a manner to meet the requirements of the respective section of these Specifications covering the new work. When not covered, the work shall be carried on in the manner and to the extent directed by the Resident Project Representative.

J. Surfaces of seals visible in the completed work shall be made to match as nearly as possible the adjacent surfaces.

K. Non-shrink grout shall be used for setting wall castings, sleeves, leveling pump bases, doweling anchors into existing concrete and elsewhere as shown.

L. Where necessary or required for the purpose of making connections, the Contractor shall cut existing pipelines in a manner to provide an approved joint. Where required, he shall weld beads, flanges, or provide Dresser Couplings, all as required.

M. The Contractor shall provide flumes, hoses, piping and other related items to divert or provide suitable plugs, bulkheads, or other means to hold back the flow of water or other liquids, all as required in the performance of the work under this Contract.

N. Blasting will not be permitted to complete any work under this Contract. Care shall be taken not to damage any part of existing buildings or foundations or outside structures.

3.02 CONNECTING TO EXISTING PIPING AND EQUIPMENT

The Contractor shall verify exact location, material, alignment, joint, etc. of existing piping and equipment prior to making the connections called out in the Drawings. The verifications shall be performed with adequate time to correct any potential alignment or other problems prior to the actual time of connection.

3.03 REMOVAL AND ABANDONMENT OF ASBESTOS CEMENT PIPE AND APPURTENANCES

A. All work associated with the removal or abandonment of existing asbestos cement pipe and appurtenances shall be performed by a licensed asbestos abatement contractor or subcontractor registered in the State of Florida.

B. The asbestos abatement contractor or subcontractor shall contact the appropriate regulatory agencies prior to removal or abandonment of any asbestos material and shall obtain all required permits and licenses and issue all required notices. The Contractor shall be responsible for all fees associated with permits, licenses and notices to the governing regulatory agencies.

C. All work associated with removal or abandonment of asbestos cement pipe and appurtenances shall be performed in accordance with the standards listed below and all other applicable local, State, or Federal standards.

1. Florida Administrative Code, Chapter 17-251, "Asbestos".
2. National Emission Standards Hazardous Air Pollution (NESHAP), 40 CFR, Part 61, Subpart M, latest revision.
3. Occupational Safety and Health Act, 29 CFR

4. The Environmental Protection Agency (EPA) Asbestos Abatement Worker Protection Rule.
5. Florida Statute 455.300.

3.04 ASBESTOS CEMENT PIPE REMOVAL

A. All asbestos cement pipe sections shown on the Drawings to be removed, and all related valves, fittings and appurtenances shall be removed in their entirety and disposed of by the Contractor in accordance with this Section. After removal of the facilities, all trenches shall be backfilled in accordance with the Contract Documents. The cost of disposing of the removed materials shall be borne by the Contractor.

B. The Contractor shall make necessary provisions for the Engineer's representative to monitor all removal operations.

C. The cutting of existing asbestos-cement (A/C, aka "Transite") pipe shall be by hand saw only. No machine cutting shall be allowed. Removal of all portions of pipe shall be double bagged prior to shipment. Longer sections of pipe removed may be shipped without double bagging. An asbestos manifest form (see sheet #02064-4) must accompany each and every shipment of such pipe or pipe material waste to the Manatee County Lena Road Landfill. Prior to each shipment, a minimum of 24 hours notice to the Landfill field office (Phone #748-5543) is required.

3.05 IN-PLACE GROUTING OF EXISTING PIPE

A. Where water and wastewater utility pipes are to be abandoned in place, they shall be filled with a sand/cement grout as specified herein. When such pipes are constructed with asbestos cement materials, the abandonment activities shall be performed by a licensed asbestos abatement contractor as specified in these Specifications.

WITH BENTONITE 7/24/98 MEETING

B. Grout shall be injected within the pipe sections indicated on the Drawings. The ends of these sections shall be capped and/or plugged. The grouting program shall consist of pumping sand-cement grout with suitable chemical additives at pressures necessary to fill the pipe sections shown on the Drawings to prevent the potential for future collapse.

REVISED PLANS SHOW BENTONITE GROUT

C. The pump used for grouting should be a continuous flow, positive displacement model with a pugmill type mixing vat having a minimum shaft speed of 60 rpm and incorporated as an integral part of the equipment. Alternate equipment may be used subject to the approval of the Engineer. The rate of pumping shall not exceed

six (6) cubic feet per minute. The pumping pressures shall be in the range of 100 to 150 psi.

D. The Contractor shall provide standpipes and/or additional means of visual inspection as required by the Engineer to determine if adequate grout material has filled the entire pipe section(s). The Contractor shall make necessary provisions for the Engineer's representative to monitor all grouting operations.

E. All pipe to be abandoned shall be capped or plugged with a fitting or material that will prevent soil or other material from entering the pipe. All caps and plugs shall be subject to approval by the Engineer.

3.06 **MONITORING**

A. The Engineer's representative may stop the removal and/or grouting operations at any time, if in his judgement, the operation does not comply with these Specifications or if the work is not to his satisfaction.

B. The Engineer's representative shall make all measurements of pipe length removed and grout quantity pumped, and maintain records of each day's operations for the benefit of the Owner and the Contractor. The quantities recorded by the Engineer's representative shall be considered final.

END OF SECTION

D.E.P.
JUL 22 1998
SOUTHWEST DISTRICT
TAMPA

SECTION ____
CLAY DITCH LINING MATERIAL

GENERAL

The Contractor is to furnish all labor, equipment and materials required to complete all work associated with excavating and developing of borrow areas, dewatering, discing, drying, undercutting, placement and compaction of clay material, disposing of unsuitable materials, grading and other related and incidental work that might be required to complete the work shown on the Contract Drawings and in this specification. All work shall comply with the lines, grades and cross sections shown on the Contract Drawings or established by the Engineer.

TESTING REFERENCES

The most current edition of the following referenced publications, including any addenda are to be incorporated into these specifications as applicable by their specific reference. All testing performed shall conform to the following standards as applicable:

ASTM D 422	Standard Test Method for Particle-Size Analysis of Soils
ASTM D 698	Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600kN-m/m^3))
ASTM D2216	Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock
ASTM D2922	Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
ASTM D4318	Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D5084	Standard Test Method for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

SUBMITTALS

The contractor shall submit location and source of any off-site borrow material to be used on the construction of the ditch liner. The contractor shall also submit samples of the material to the owner for testing at least 30 days in advance of its placement.

CLAY LINER MATERIALS

Clay liner soil be shall excavated from on-site borrow areas or imported from off-site borrow areas as long as the soil is sufficiently uniform. The material must be adequate in quality and composition to achieve a coefficient of permeability equal to or less than $1x10^{-7}$ cm/sec when in a saturated condition. The clay liner material shall be a naturally occurring clay material with a liquid limit greater than 40 percent, a plastic index no less than 20 percent and no particle size greater than ¼ inch. The soil must be compacted to a minimum density of 95 percent of the maximum dry density as determined by the standard Proctor test (ASTM D 698). Permeability testing shall be conducted in accordance with ASTM D5084.

PRE-CONSTRUCTION TESTING

Prior to placement of the liner material, a test strip of the proposed liner section shall be constructed to insure that the liner materials will meet the required specifications once they are in-place. A minimum of five random samples of the clay liner material shall be tested for moisture content, grain-size and Atterberg limits prior to the material being placed. After the placement of the clay material a minimum of five field density tests and moisture content tests shall be performed on the lift before the next lift is placed. In addition to the field density testing, laboratory hydraulic conductivity testing shall be performed on five random samples of the in-place clay material. These random samples are to be collected using a Shelby tube or a drive cylinder. Once the above mentioned testing has been completed for each lift, and the results of the testing have satisfied the Engineer that the material proposed will meet the project specifications and intent, the contractor will be released to place the clay liner material in the areas designated on the construction drawings, following proper subgrade preparation as specified in the earthwork portion of these specifications.

COMPACTION

The Contractor shall compact the clay soils to a minimum of 95 percent of the maximum dry density as determined by the standard Proctor test (ASTM D 698). The clay soils shall be placed in maximum 6 inch lifts, except as otherwise indicated by the Contract Drawings. Where multiple lifts are used, the surface of the previous lift shall be scarified prior to placement of an overlying lift. The contractor is responsible for maintaining the surface of the clay liner material, including removal of accumulated surface water, until the cover soil above the clay liner is placed. Surfaces not properly maintained shall be repaired by the Contractor at no cost to the Owner.

Field density tests will be performed by an independent testing laboratory provided by the owner to determine if the specified density is achieved. These tests shall be the basis for accepting or rejecting the compaction. In-place density tests will be performed in accordance with ASTM D2922. If the Contractor fails to achieve the required level of compaction, the material must be re-compacted or removed. The Contractor is responsible for all retests. The Contractor shall if necessary, increase the compactive effort by increasing the number of passes, using heavier or more suitable compaction equipment, or by reducing the thickness of the layers. The Contractor shall adjust the moisture contents of the soils to bring them within the optimum range by drying them or adding water as required.

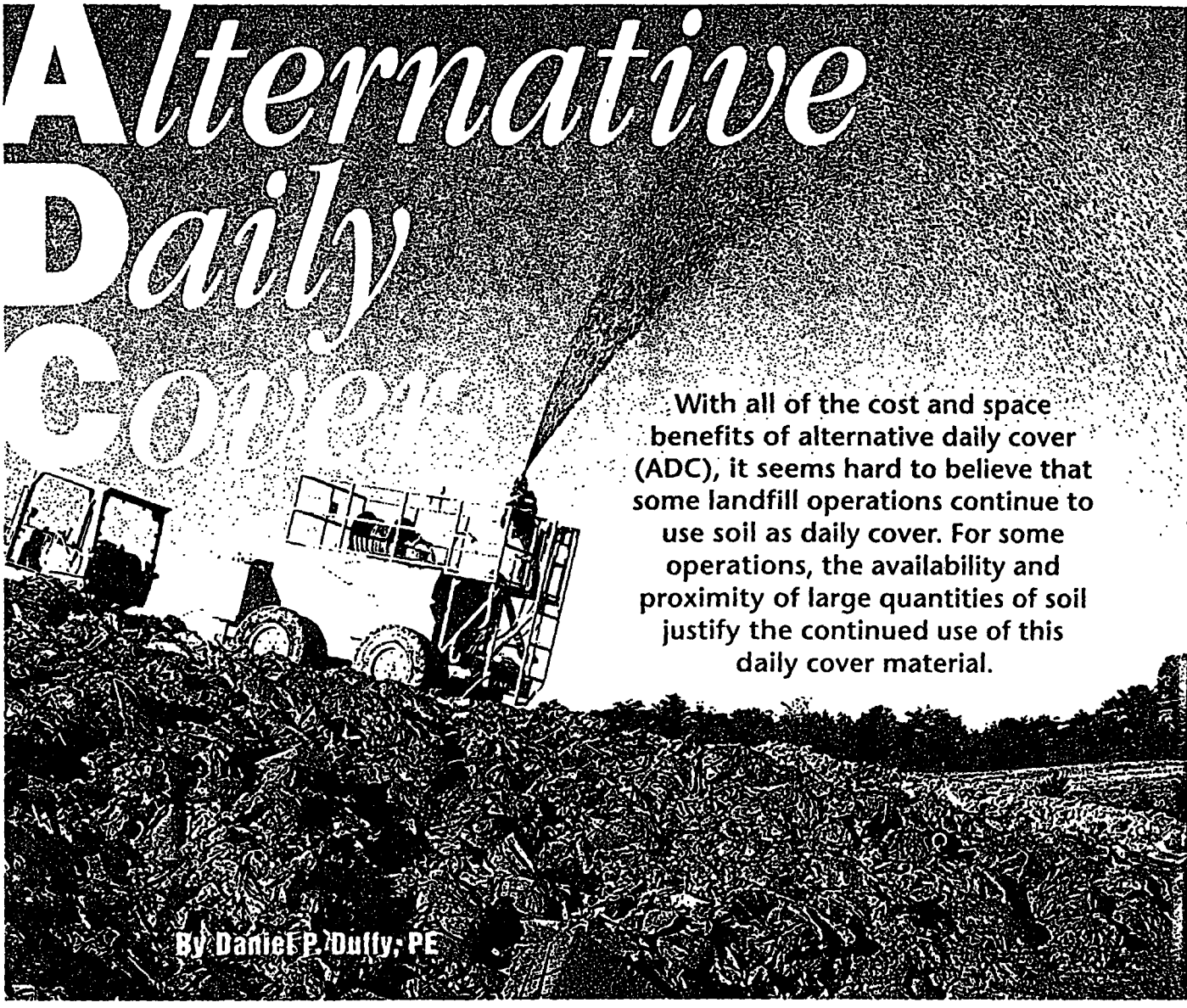
FIELD QUALITY CONTROL

During the placement of the clay liner material, field and laboratory testing will be performed to insure that the material supplied and placed meets the project specifications. The testing will be performed by an independent testing laboratory provided by the Owner.

Prior to placement of the clay material one field density test shall be performed on the subgrade material every 500 linear feet of ditch to verify that the subgrade is dense and stable and properly prepared for the placement of the clay liner material. The density of the subgrade must meet a minimum dry density of 98 percent of the maximum dry density achieved using the standard Proctor method (ASTM D 698).

A minimum of one field density test, moisture content test, lift thickness verification, grain-size analysis and Atterberg limits test shall be performed every 500 linear feet of ditch, per lift. In addition, laboratory hydraulic conductivity testing, in accordance with ASTM D5084, shall be performed every 1,000 linear feet of ditch, per lift. The hydraulic conductivity samples shall be collected using a Shelby tube or a drive cylinder. A minimum of one standard Proctor test shall be performed on every lift to insure that the maximum dry density achievable remains consistent.

Saving Time and Money with Alternative Daily Cover



With all of the cost and space benefits of alternative daily cover (ADC), it seems hard to believe that some landfill operations continue to use soil as daily cover. For some operations, the availability and proximity of large quantities of soil justify the continued use of this daily cover material.

By Daniel P. Duffy, PE

Getting the Dirt on Dirt

"We operate in a rural area so we have an abundance of available dirt nearby, and we don't need to haul the dirt more than a quarter mile," explains Greg Hannah, landfill supervisor for the Botetourt County Landfill near Roanoke, VA. "For us, dirt has been a relatively cheap and effective cover material." Handling 80 to 90 tons of mostly residential waste per day and plagued by common landfill nuisances like seagulls and wind, Hannah's operation seems to be maximizing available resources. However, cost savings and airspace concerns have recently led to an increased interest in ADCs.

While labor and equipment costs associated with three hours of daily cover tasks, and the difficulties that dirt can present to operators, especially in poor weather conditions, are significant concerns for Hannah, the real benefits of ADCs are seen in airspace savings. "Once that clay is spread out and compacted down, it provides a great cover," he explains. "But the ADCs seem to perform just as well, and allow us to put more material into the landfill." Over the course of a normal five-and-a-half-day work week, Hannah estimates a loss of over 30 in. of airspace and untold equipment and labor resources. Recently, during the excavation of a new cell, a large rock within the cell site required a cell design change that resulted in the loss of over 100 ft. of valuable cell space. "I estimate about a year and a half of landfill life was lost from this cell, and I am now looking for ways to get that time back," Hannah explains. Over the 10 to 12 years this site will be active, he believes that the airspace savings of alternative covers could make up the difference, and then some.

The bounty of dirt currently available to this operation may prove to be the deciding factor in the choice of daily cover materials. But, the ease of application, effectiveness, and proven airspace savings will be considerations that this landfill and many others like it will need to address in the near future. "We have been approved to begin looking at ADCs for this site," adds Hannah. "We will probably spend the next month or two looking at the market and seeing if these materials will work for us."

The Dirt Convert

Located in agricultural lands over 4 miles from the nearest town, and lacking many of the weather and pest problems of other landfills, the Tuls County Resource Management Agency So

Waste Division in Visalia, CA has made the switch to ADCs primarily for cost and airspace savings benefits. According to Roger Hunt, solid waste manager for Tulare County, "We were using dirt because it was readily available from a site adjacent to the landfill, but daily cover was about a 2 or 3 hour process using a 23-yard scraper. In my opinion, we were using an inordinate amount of soil to cover up some of the obstacles on a daily basis." Since mid-December 1997, the operation began to use ADCs instead of dirt for daily cover and found tangible benefits in both cost-effectiveness and ease of handling.

In the county's largest landfill, averaging about 400 tons of waste per day, 15,000 yd.^{3} of dirt was being used every month for daily cover. However, in just the last 2 months of using ADCs, that amount of dirt has fallen to about 4,300 yd.^{3} per month, almost 75% savings. "I estimate that we are saving about 5,000 tons of available landfill space using ADCs instead of dirt. With dirt you have to fill the voids before you actually begin to cover the waste," explains Hunt. "Now we spend a lot less time in daily cover activities; I don't have to run the scraper as often; and I can assign labor to other areas of the operation."

Although dirt is still used for intermediate cover, Tulare County now uses ADCs, both film plastics and tarps, for all daily cover needs. "The cost and airspace savings with ADCs have been really dramatic," says Hunt. "We have invested in some equipment and still found this process to be an extremely cost-effective strategy for our operation."

The Rules of the Game

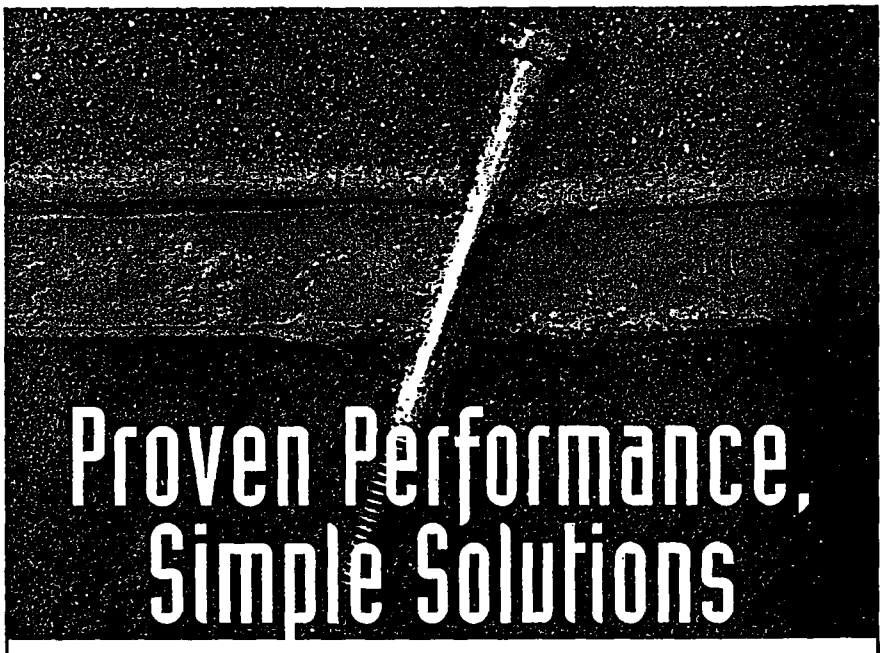
Nearly every state requires that cover be placed over a landfill's exposed work face at the end of each workday. Typically, a landfill needs to place and spread a minimum 6-in.-thick layer of daily soil cover to properly close its current working face. Most locally available soil is suitable for daily cover applications as long as it does not contain large objects, which make it too difficult to place consistently.

"The cost and airspace savings with ADCs have been really dramatic"

Some states allow the use of non-soil waste materials as long as the materials are inert and nonhazardous. Stabilized fly ash or foundry sand can be used as daily cover. Though they can provide a cost benefit to a landfill (in effect being paid to use these construction materials), they are usually not available in sufficient quantities for most sites.

No states allow the use for daily cover applications of waste that can decompose—such as other municipal solid waste, sludges, or compost. Only nonputrescible materials can be utilized. However, it is almost impossible to prevent the commingling of existing waste from the work face with even clean soil cover. The mechanical effort of placing a layer of soil cover with standard medium- and low-ground pressure bulldozers or bladed trash compactors inevitably catches and kicks up waste objects into the cover. Mostly, this waste consists of shreds of paper or other lightweight objects. Their appearance at the surface of the cover—"flagging"—is impossible to completely eliminate, but a careful operator will minimize it as much as possible.

At the start of the next workday, the cover is



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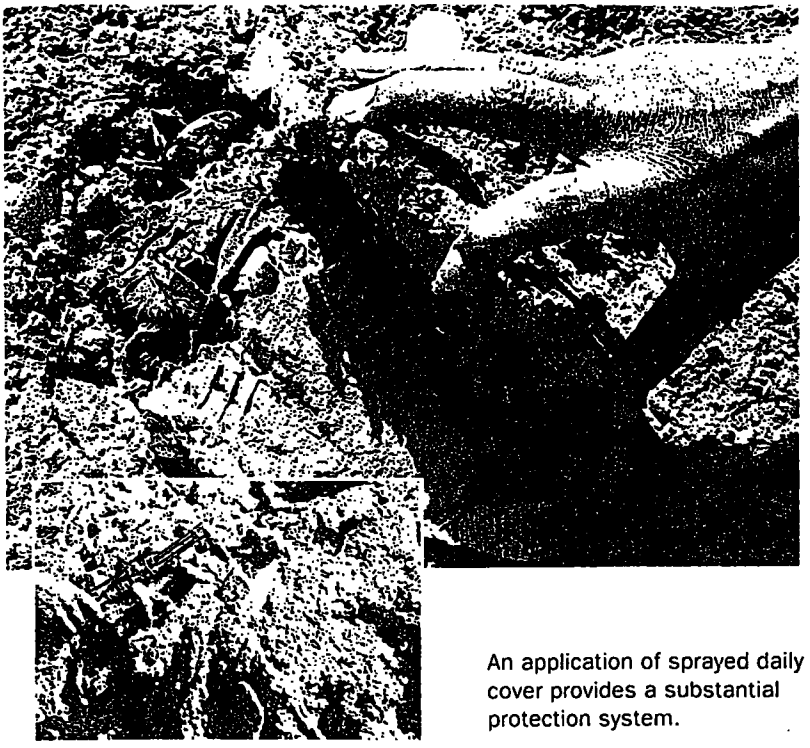

An application of sprayed daily cover provides a substantial protection system.

stripped to expose the previous day's working face. The removed soil cover is either disposed of as waste within the current disposal cell or temporarily stockpiled adjacent to the working face for reuse. Depending upon the amount of flagging, stockpiled cover soil can be reused several times. Whether used only once or reused several times, the placement of soil cover costs a landfill time and money both in labor and equipment.

Purpose of Daily Cover

Why use daily cover? Daily cover provides several important environmental safeguards. Soils, especially clay soils, tend to have much lower hydraulic conductivities than waste. Waste typically has a saturated hydraulic conductivity of 1×10^{-3} cm/sec while even loosely placed clay soils can have hydraulic conductivities ranging from 1×10^{-4} cm/sec to 1×10^{-5} cm/sec. Therefore, daily cover soil can greatly reduce the potential for infiltration of precipitation and subsequent leachate formation. Daily cover soil promotes runoff instead of infiltration, but can cause problems if left in place. These same layers of relatively low-permeability soil can lead to the formation of perched leachate zones, which could later cause horizontal leachate outbreaks through the final waste grades.

In addition to keeping precipitation out, daily cover minimizes odors leaving the landfill. Furthermore, it does a great deal to prevent litter and blown debris. Since public perception of a landfill can be as important as its engineering reality, minimizing odor nuisance and unsightly litter are two of the best public relations strategies that a landfill can follow. Lastly, adequate daily cover

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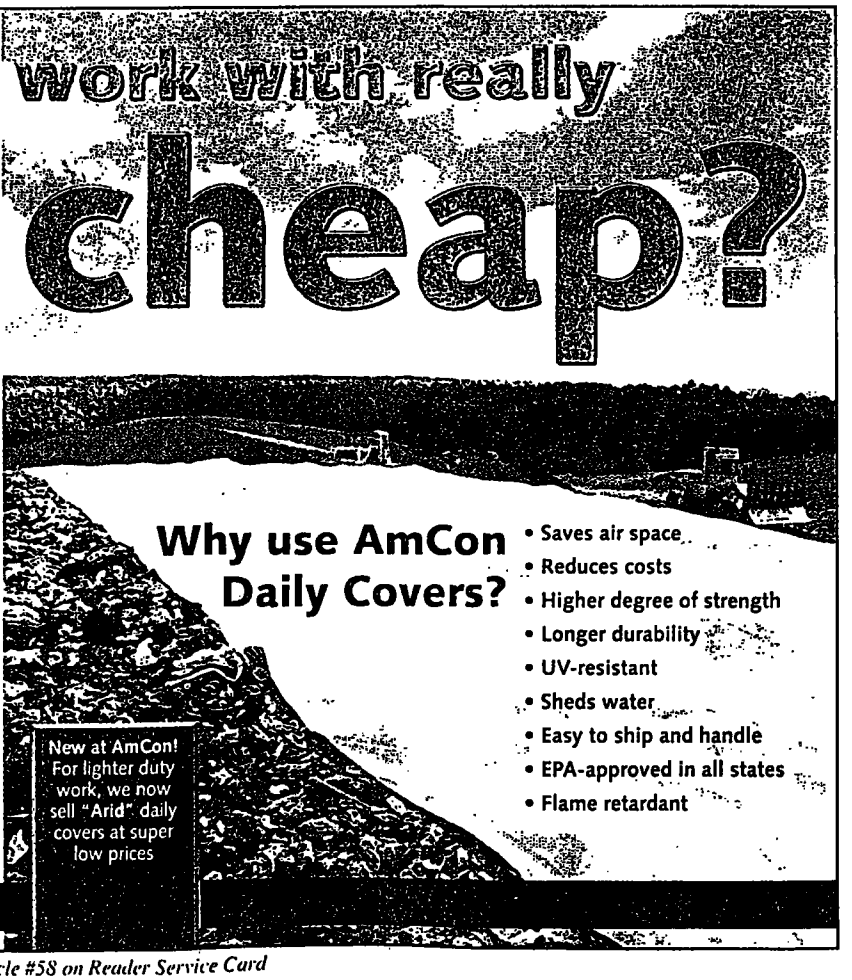

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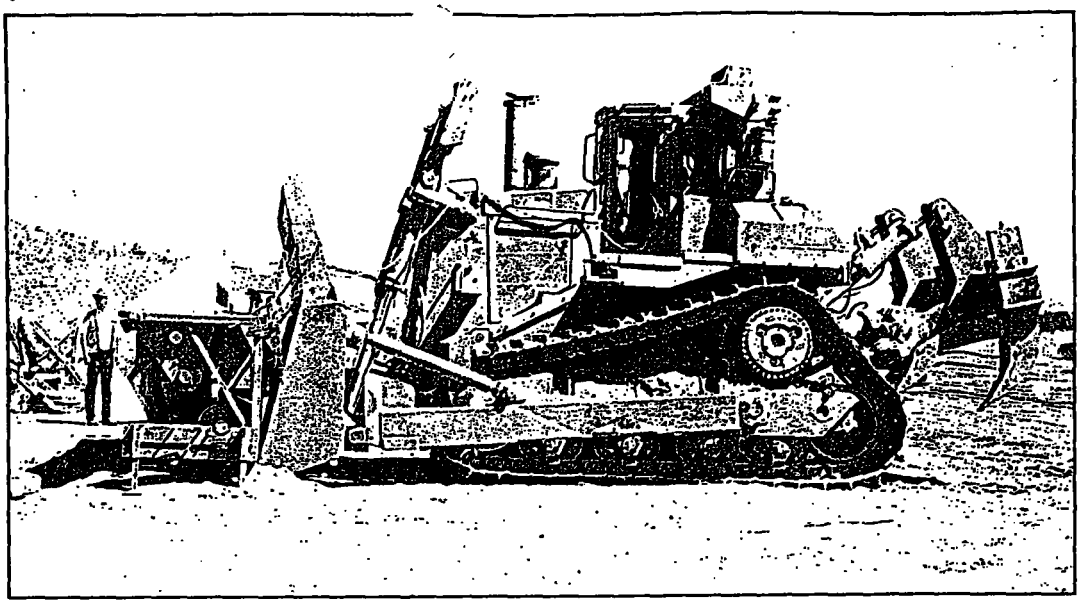

ADCs provide containment of refuse, suppression of odors, and a barrier to water.

working face. Light to medium dozers, CAT D5 or D6 being typical, are used to spread the cover soil in place. It can take up to two hours at the end of each working day to place daily cover over an area of one to two acres. Another half-hour is usually required to strip the cover each morning at the start of the workday. Assuming an equipment operational cost, with operator, of $60/hour for a medium-size dozer to place, spread, and strip the daily cover, the operational expenses would be $150/day. This is equivalent to $47,000/year. Factoring in the cost of excavating, stockpiling, and transporting the daily cover soil should triple the amount to nearly $150,000/year. These costs will vary from site to site depending upon local conditions, operator skills, and equipment condition, but still represent a significant cost item even if they do not appear as distinct line items in the landfill's budget.

can minimize the congregation and breeding of potential disease vectors. These are primarily flying insects and scavenger birds looking for a meal or a breeding ground. All in all, the use of adequate daily cover is the single most important housekeeping chore for a landfill.

Direct and Indirect Costs of Soil Daily Cover

Equipment and labor costs vary from landfill to landfill. Medium-sized scrapers such as a CAT 627 are usually used to deposit soil cover near the

In addition to these direct operating costs, the addition of daily cover soil inevitably reduces the amount of available disposal airspace. For most landfills using soil as daily cover, the percentage of available disposal airspace taken up by remnant daily cover soil can vary between 10% and 20%. Typically, a landfill will achieve average compacted, in-place waste densities equivalent to 0.67 tons/yd.[3] Therefore, each ton of incoming waste

Turning Landfill Mountains into Molehills (without the moles)

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Strapping System (Pat. Pend) makes this cover the longest lasting* cover on the market!

- Standard Size 2400 Sq. Ft. (48' x 50')
- Also, Custom-made sizes made to customers specifications

*Exact usable life expectancy can vary. One major landfill used an Airspace Saver™ daily for over...
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Circle #56 on Reader Service Card

would require 1.5 yd.^{3} of disposal airspace. A landfill receiving 1,000 tpd of waste would require 1,500 yd.^{3} of disposal airspace each workday. At an assumed daily cover soil volume utilization rate of 15%, actual airspace utilized would be 1,725 yd.^{3}/day. The additional 225 yd.^{3} would be equivalent to 150 tons of waste. If the gate receipts are based on $30/ton, the airspace lost to daily cover soil represents a $4,500 loss in daily gross revenues. This would be equivalent to $234,000 annual loss in potential gross revenues. Assuming a landfill with a potential airspace disposal capacity of 1,000,000 yd.^{3}, 150,000 yd.^{3} would be lost to remnant daily cover soils. This would be equivalent to 100,000 tons of waste or $3,000,000 of lost gross revenues in the example above.

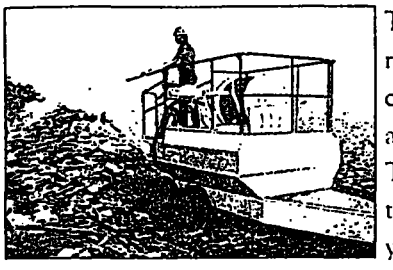
Certain practices can mitigate the effects of lost revenue due to daily cover soils. A common method is the stripping and reuse of daily cover soils. The stripped daily cover is temporarily stockpiled adjacent to the current work face. This minimizes, but does not eliminate, the need to haul into the cell more daily cover soil. However, the stripped daily cover soil inevitably accumulates significant amounts of loose trash and debris, leading to flagging. Most state inspectors would disallow the multiple reuse of stripped daily cover soil under these conditions.

Types of Alternative Daily Cover

If not soil, what materials can be used as alternative daily cover? Most states allow for the use of manmade materials as daily cover. The primary criteria for approval are effectiveness and safety. ADC materials need to meet the performance standards of soil daily cover, while not posing any safety problems such as flammability or slope instability. Some states even go so far as to keep a list of specific products and manufacturers approved for use as ADC. These lists can be readily obtained from the state agencies.

Synthetic ADC materials fall into five broad categories: degradable

Lower operating costs and extend your landfill space with Topcoat™



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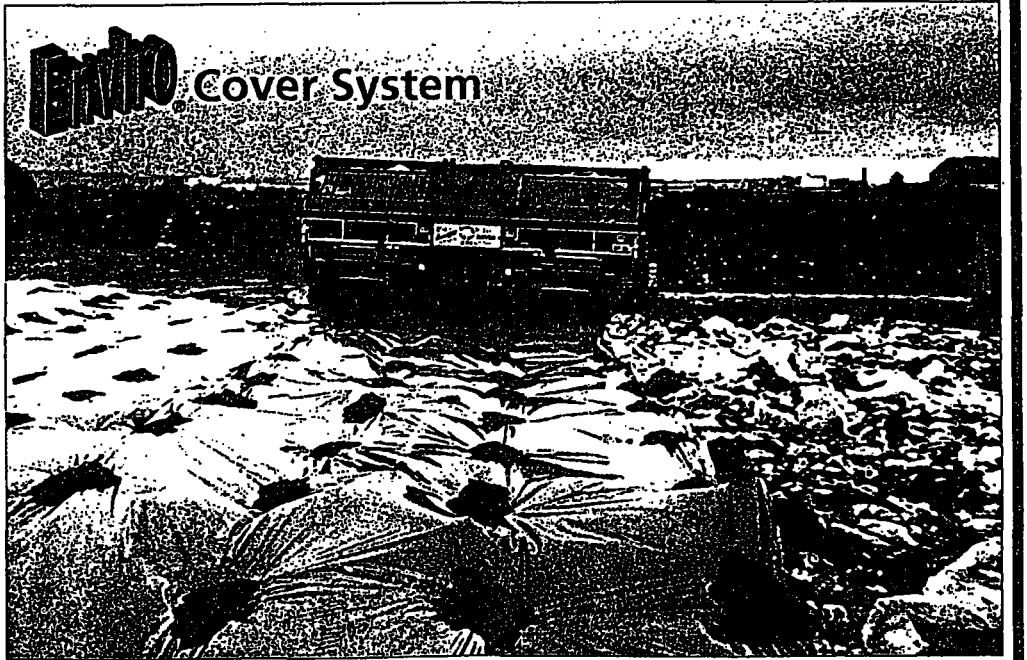
When looking for an environmental friendly, safe and cost effective Alternative Daily Cover systems that your operator will like working with–give us a call!

Technology in tune with Nature™



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Rolled ADCs protect, as well as improve the visual appearance, of this landfill site.

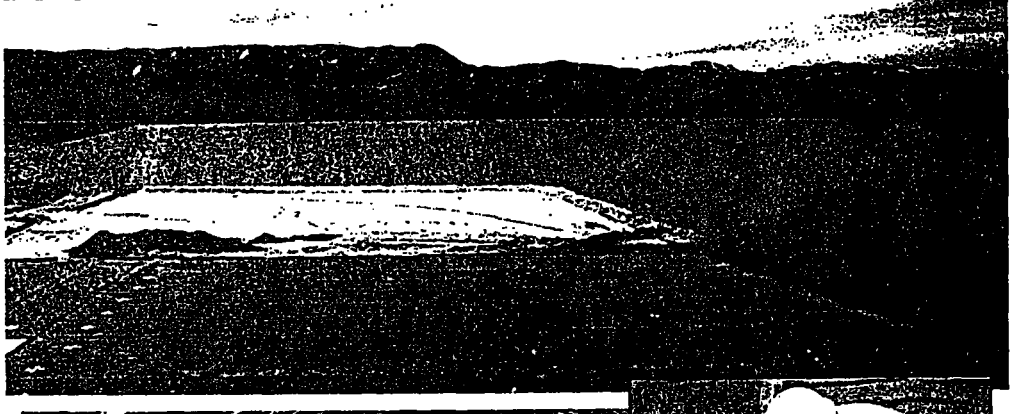
and disposable thin films, high density polyethylene (HDPE) reusable sheets, reusable nonwoven geotextiles, spray foam applications, and pulped paper spray applications. The following sections address each in more detail:

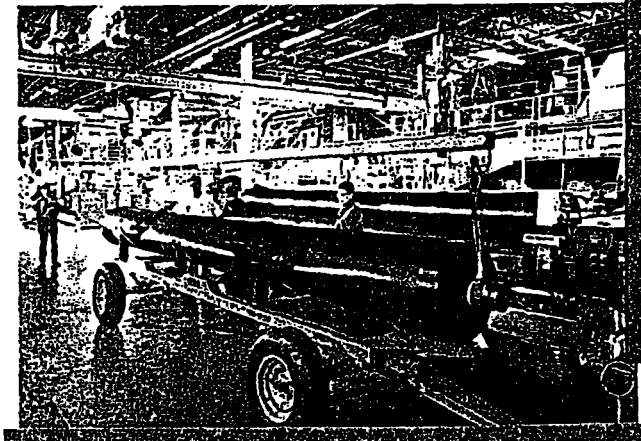
Degradable and Disposable Thin Films. Thin plastic tarps can be manufactured from woven reinforced polyethylene, polyvinyl chloride (PVC), and polypropylene. Weighing between 4 and 6 oz./ yd.^{2} and with thicknesses ranging from 6 to 12 mil, these lightweight film tarps are designed to be used only a few times and then disposed of in place. By contrast, the heavier geomembranes utilized for composite liner and composite cap construction have thickness ranging from 30 to 80 mil.

Application is simple, with the lightweight tarps rolled or unfolded onto the working face at the end of a workday. This can be done either manually by a minimal crew or unrolled from a spreader bar attached to a piece of equipment. The tarps tend to cling to the underlying waste or are anchored with sandbags if conditions are windy. Removal at the start of the workday is performed manually and the lightweight tarps set aside for possible reuse. If visual inspection reveals significant wear and tear on the tarps, they will be trackwalked by either a dozer or compactor to shred them in place. This is done to ensure that the tarps do not form an impermeable layer after being abandoned in place. The old tarp is then replaced with a new one. Sometimes, the tarps are manufactured from either biodegradable plastics or natural materials such as coconut fibers. These can be abandoned in place to eventually decompose as part of the overall waste mass.

The primary advantage of using disposable

Service is our trademark...





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tarps is their ease of use. Except on the windiest days, placement of lightweight tarps over a 1-ac working face can be done in a matter of minutes. Lightweight tarps perform well as daily cover, being impermeable to both infiltrating precipitation and escaping odors. The placement effort results in little or no dust or blowing litter. Applied over a broad area with adequate overlapping, lightweight tarps can effectively discourage most disease vectors. However, these covers can be used only a few times before they are too worn to be effective. Though cheaper than heavier alternate cover sheets and requiring less effort in placement, lightweight tarps will have to be ordered more frequently. An example of a typical lightweight tarp would include the 7BW and 12BW woven-coated polyethylene sheets manufactured by Integra Plastics, Inc. These tarps range from 7 to 12 mil in thickness.

A thorough sprayed application of this ADC creates a protective shell over the landfill site.

High Density Polyethylene (HDPE) Reusable Sheets. The same HDPE sheets used in the construction of composite liner and cap systems can be utilized as effective ADCs. These consist of individual 60-mil or 40-mil-thick HDPE sheets with reinforced grommets drilled along the edges approximately 12 in. from the edge of the sheets. Ropes are drawn through the grommets and securely fastened to allow them to be dragged into place. Individual sheets of HDPE are not welded together, because the resulting large cover would be too unwieldy to place.

The HDPE sheets experience very little wear and tear as they are pulled across the waste surface, unless a large sharp object is protruding from the waste. Visual inspections done prior to the placement of the HDPE sheets usually eliminate this problem. Placement can be performed either manually or by hooking the ropes onto site equipment. Placement and removal times for each sheet are measured in minutes. The folded sheets are left adjacent to the current working face for reuse. Unless significant damage occurs to the HDPE sheets, they can be reused an indefinite number of times.

Aside from using essentially zero disposal airspace volume, the chief cost advantage of HDPE sheets is that they can usually be acquired from residual stockpiles left over from liner or cap construction efforts. It is common for several complete or partial rolls of HDPE geomembrane to be available after completion of a cell's liner construction. To cover a roughly square working face of 1 ac (approximately 200 ft. x 200 ft.) would require 10 sheets of 22-ft.-wide HDPE geomembrane to allow for an overlapping and complete cover.

Other than the obvious advantages of direct and indirect cost savings in equipment, labor, and lost airspace, HDPE geomembrane sheets perform very well as daily cover. Being essentially impermeable sheets, infiltration of precipitation into the waste and subsequent leachate formation can be greatly reduced or nearly eliminated. For this same reason, odors are also greatly minimized when the sheets are in place. The dragging of the sheets over the waste may kick up some litter, especially on dry windy days. Cheap, downwind fencing or netting normally kept in place during waste disposal operations will prevent blown litter from leaving the current cell. HDPE sheets would be more effective against bird flocks than against swarms of flying insects. However, HDPE sheets, unless carefully placed, may not form a complete cover over the working face. Furthermore, windy conditions make it difficult to place the sheets and require anchoring of the sheets with sandbags or old tires.

The Rumpke Waste, Inc. Brown County Landfill located in Georgetown, OH, has had permission to use HDPE sheets as ADC. The sheets were taken from rolls delivered to the site for a liner construction effort that were unfortunately partially damaged during transportation. Unable to utilize these rolls in a liner construction effort, the site modified them for use as ADC. Evaluation of their effectiveness continues under a state-approved trial period.

Reusable Non-Woven Geotextiles. Non-woven geotextiles have a wide range of applications in the construction and engineering of landfills. They also have operational uses as ADC. The geotextiles designed for use as daily cover tend to be manufactured in sections three times wider than the standard roll width for a geotextile or geomembrane. Sizes as large as 50 x 100 ft. are available. Manufactured from the same polypropylene fabric as standard geotextiles, geotextile covers tend to come in small weights, 6 to 9 oz./yd.^{2} being typical. The manufactured panels usually come with reinforced webbing A-rings to attach pull ropes.

Application and removal is similar to that of disposable tarps or HDPE sheets requiring the same effort. However, geotextile daily covers can be reused more often than disposable tarps and cover a wider area than HDPE sheets. The same advantages and disadvantages apply to geotextile covers as to disposable tarps and HDPE sheets. Though more expensive than disposable tarps, this cost is offset by the ability to reuse these covers over and over again. Good examples of this material are the Coverone, Covertwo, Coverthree, and Coverfour geotextiles produced by Engineered Textile Products, Inc.

Spray Foam Applications. Unlike daily cover sheets, tarps, and fabrics, spray foam applications "paint" the working face with an inert chemical foam layer. Though the chemical constituents of the spray foam are usually proprietary, the foam consists of a concentrate material diluted with water immediately prior to app

cation. White is the most common color, but greens and browns are also available. The concentrate material is stored adjacent to the current operating cell in an insulated silo.

Application is performed with a mobile pneumatic foam unit. Varying in size from 400 to 2,500 gal., the foam unit is connected to the storage silo and a source of water. The foam is generated in the unit and applied under pressure with a spray hose. The application rate varies from 300 to 800 ft.^{2}/min. The size of area that can be covered with a single load varies from 2,000 to 28,000 ft.^{2}

Unlike alternate cover tarps, spray foam application typically requires only one operator. Coverage is consistent, using the foam's color against the disposed waste to guide the application. Most foams last for up to three days and effectively meet the performance standards for daily cover. Foam is especially effective against blown litter and disease vectors. The foam takes up no volume within the landfill, decomposing over time. However, this system requires a capital investment in the application unit, storage facility, and auxiliary equipment unless a leasing arrangement is available. Excessively windy or cold days will also effect the system's performance. An example of this type of system is the 400/25 Pneumatic Foam Unit manufactured by Rusmar Foam Technology.

Pulped Paper Spray Applications. Similar to spray foam applications, pulped paper spray applications use materials made from environmentally friendly polymers and recycled post-consumer fibers and pulps. The polymer acts as a binding agent to the bulking fibers. Use of recycled materials represents a positive environmental use for what would otherwise be waste material. However, like spray foams, this system requires extensive application equipment and storage facilities. The wet, pulp-like layer hardens into an impermeable shell in a matter of hours after application. Quick application and high performance as a daily cover are this material's chief advantages. Like the spray foam, the pulped paper layers will decompose and become part of the waste mass. If necessary, equipment tracking can break up the shell to pen up a new work face quickly. A wide variety of systems are available on the market, including Aquashed-ADC and Posi-Shell.

Use of ADC materials makes sense for all landfills, but especially those with unfavorable soil balances

Conclusions and Recommendations

Use of ADC materials makes sense for all landfills, but especially those with unfavorable soil balances. Small- to medium-sized landfills, less than 1,000 tpd in gate receipts, should first consider tarps, sheets, or alternate cover fabrics, as they require no additional equipment acquisition or leasing. Larger landfills, with greater cash flows, should consider spray application units as they effectively cover a larger work face in a shorter period of time. **MSW**

Daniel P. Duffy, P. E., is a professional environmental engineer with the Engineering and Environmental Affairs Dept. at Rumpke Waste Inc. in Cincinnati, OH.

Don't risk using "look-alike" or "copycat" products. Imitations have limitations!

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There Is No Substitute!

There are many daily covers on the market today but none delivers consistent quality like ConCover® Alternate Daily Cover from New Waste Concepts.

Compliance
ConCover® meets governmental regulatory requirements, a claim many other daily covers can't make. ConCover® quality has pioneered EPA compliance for our customers in many states!

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Count on ConCover® for reliable daily coverage in the most adverse climate conditions.

Other advantages include:

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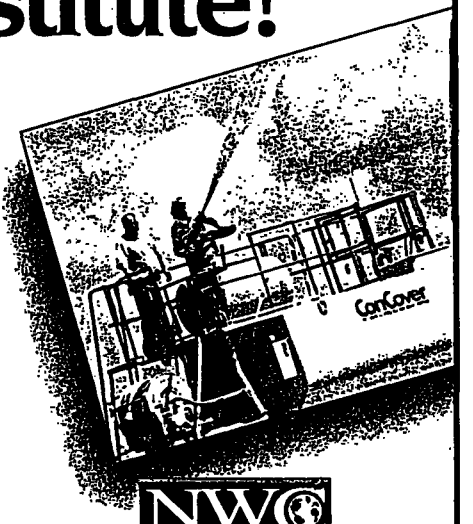
• Biodegradable and non-flammable • Controls birds



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Department of Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

BOB RB

SITE INSPECTION REPORT

NAME OF SITE: LENA ROAD LANDFILL DATE: 7/13/98

SITE ADDRESS/LOCATION: LENA ROAD

CITY: BRADENTON PERMIT #:

REASON FOR VISIT:

- COMPLIANCE INSPECTION ✓
- PERMITTING INSPECTION ✓
- COMPLAINT INVESTIGATION

PERSONS PRESENT: BEN ALEX, KIM FORD

SUMMARY REPORT:

DROVE AROUND LANDFILL AND
OBSERVED DISTRESSED VEGETATIVE COVER
THROUGHOUT APPARENTLY
DUE TO GAS FROM INTERMEDIATELY
COVERED AREAS — ABOUT
50% OF ALL SODDED AREAS HAS
DEAD SOD.
TARPS USED TO COVER AT END OF DAY
BEN SAID TARPS SAVE 30% ON
COST OF SOIL USED FOR SITE

VIOLATIONS NOTED:

DEP REPRESENTATIVE: [signature]

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VIA FAX

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JUL 06 1998
D E P

HDR

June 25, 1998

Mr. Kim Ford, P.E.
Solid Waste Engineer
Florida Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, FL 33619-8318

RE: Lena Road Landfill
Operation Permit Renewal Application
Pending Permit No.: 39884-001-SO, Manatee County
Waste Tire Facility
Pending Permit Number: 126654-001-WT
HDR Project Number: 07982-024-096

Dear Mr. Ford:

We are addressing the comments in your May 26, 1998 review letters regarding the Lena Road Landfill Operation Permit Renewal Application and the Lena Road Landfill Waste Tire Facility. We plan to complete our responses and submit them by July 31, 1998.

Please call me if you have any questions or concerns.

Sincerely,

HDR ENGINEERING, INC.

Fred W. Sebesta

Fred W. Sebesta, P.E.
Senior Project Manager

cc: Len Bramble
Dan Gray
Gus DiFonzo
Ben Alex
Kim Ford, P.E.
Bob Butera, P.E.
Greg Goodwin
Neal Poteet

W:\MANATEE\OPERMIT\S106G066.WPD

HDR Engineering, Inc.
Employee-owned
Suite 300
5100 W. Kennedy Boulevard
Tampa, Florida
33609-1840
Telephone
813 282-2300
Fax
813 282-2449

Department of Environmental Protection

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619-8318

)UM

24-Jun-1998 03:55pm
Jan Kleman TPA
KLEMAN_J
Southwest District

813/744-6100 ext.

INFORMATION REQUEST

TO: BEN ALEX
SOLID WASTE MANAGEMENT
3333 LENA ROAD
BRADENTON FL
34202

We are pleased to send the enclosed information you requested.

If we can be of further service, please contact:

Kim B. Ford, P.E.
Solid Waste Section
Waste Management Division
3804 Coconut Palm Drive
Tampa, FL 33619-8318
(813) 744-6100, ext. 382

COMMENTS: DRAFT HHWCC GUIDANCE
FYI & USE
7/2/98

INTEROFFICE MEMORANDUM

Sensitivity: COMPANY CONFIDENTIAL

Date: 24-Jun-1998 03:55pm
From: Jan Kleman TPA
KLEMAN_J
Dept: Southwest District
Tel No: 813/744-6100 ext.

Office

480

Subject: Collection Ctr Standards

rec: from Steve Waterman 6/98

HHW FACILITY STANDARDS (Draft)

Permanent HHW programs should use the following recommended [illegible]

I. Applicability

These standards are proposed primarily for facilities which collect HHW with [illegible] staff and:

1. also bulk, neutralize or otherwise treat waste, or:

2. also collect CESQG waste with in-house staff, or:

3. both 1 and 2 above

Subsets of these standards may be appropriate for other types of facilities.

II. Physical Facility Minimum Standards

A. Containment

1. All waste should be stored either in buildings or in drums or in some other location which is sheltered and contained and will not pollute stormwater if a container leaks.

2. All liquid waste should be stored within secondary containment structures capable of containing the entire contents of the largest two (2) containers in storage or 10% of the total volume of liquid in storage, whichever is greater.

3. Containers holding liquids should be placed so that material escaping from a small leak in a non-pressurized container will not fall outside the containment structure.

4. All non-liquid waste should be stored within secondary containment structures capable of containing all stormwater reasonably expected to fall or run onto the structure in a 25 year flood or on a paved and sheltered surface which would be substantially unaffected by a 25 year flood.

5. Stormwater should be prevented from accumulating within in-service containment structures in amounts in excess of 10% of their volume.

6. Containers should be protected from deterioration due to excessive exposure to stormwater or condensation.

(Note: Some of the standards in this section are more restrictive than requirements applicable to RCRA facilities. We believe that they are appropriate because wastes received by HHW facilities are often received in containers in poor

FDEP	3804 Coconut Palm Drive, Tampa, FL 33619-8318

FAX

FAXED

Date: 6/19/98

Number of pages including cover sheet: 3

To: Ben Alex

Manatee County

Phone: (941) 7485543

Fax phone: (941) 7953451

CC:

From: Kim Ford

Phone: (813) 744-6100 x382

Fax phone: (813) 744-6125

REMARKS: ☐ Urgent ☑ For your review ☑ Reply ASAP ☐ Please comment

Ben

CLARIFICATION REQUESTED.

ALSO PLS SEND

MAY 1998 GRADIENT SHEET

AND

CHECK PROCEDURE ON STORMWATER POND

ELEVATION MEASUREMENTS

TY

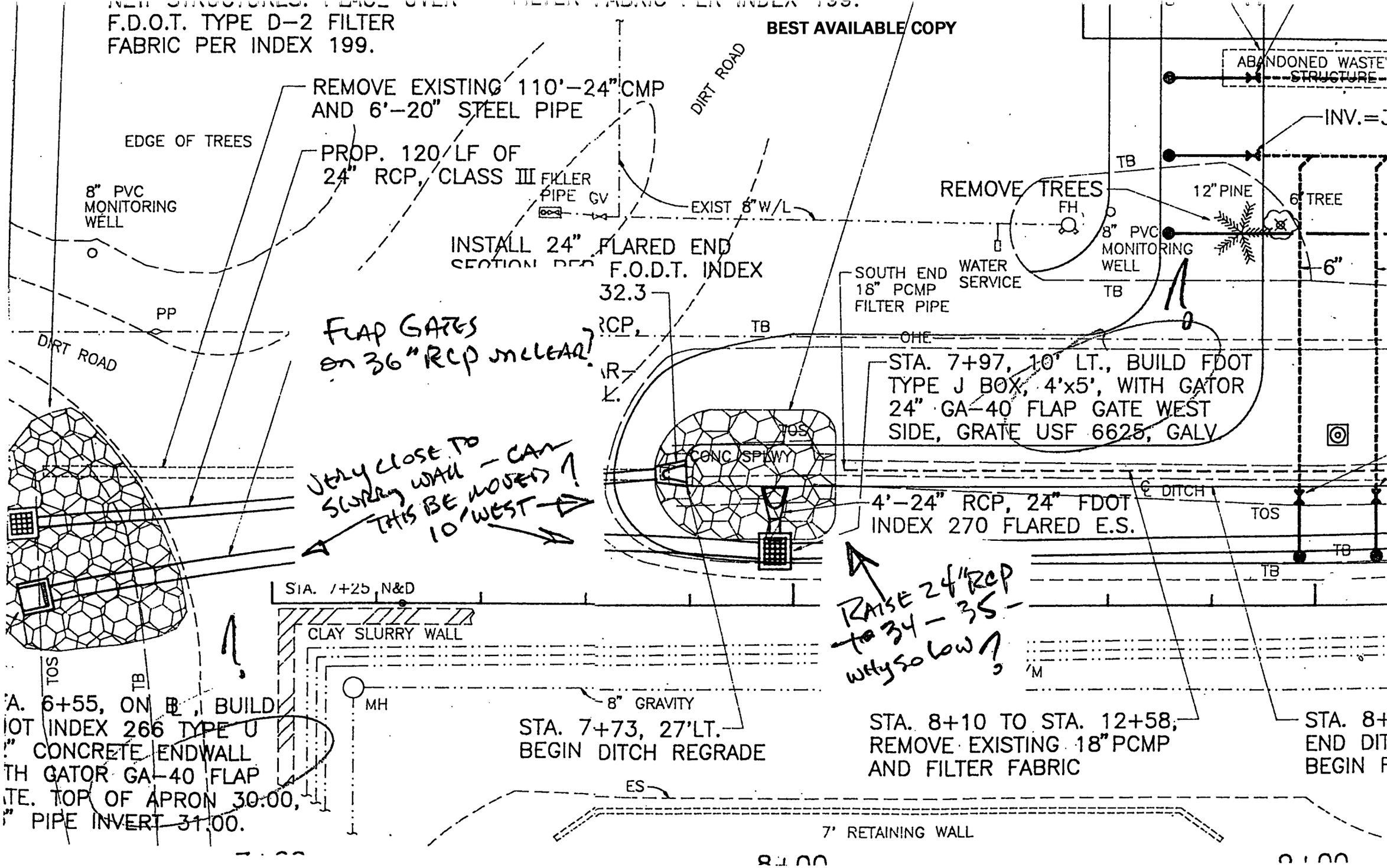
KM

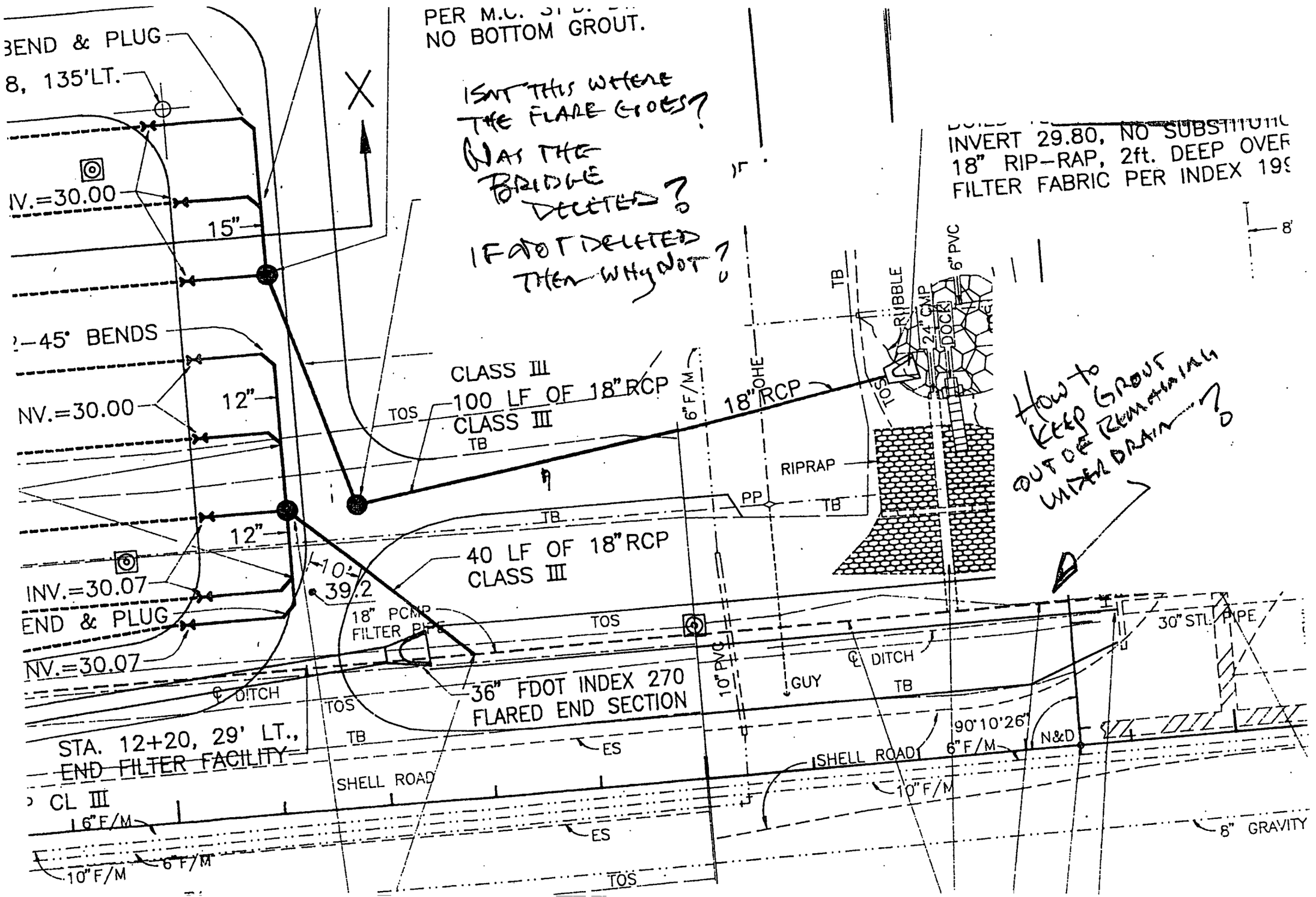
ALSO PLS SEND YOUR REVISIONS TO

OPS & S/L MP PLANS.

RB

BEST AVAILABLE COPY





PER M.C. STD. DR.
NO BOTTOM GROUT.
BEND & PLUG
8, 135'LT.
X
ISN'T THIS WHERE THE FLARE GOES?
WAS THE BRIDGE DELETED?
IF NOT DELETED THEN WHY NOT?
INVERT 29.80, NO SUBSTITUTIO
18" RIP-RAP, 2ft. DEEP OVER
FILTER FABRIC PER INDEX 199
IV.=30.00
15"
-45° BENDS
NV.=30.00
12"
CLASS III
100 LF OF 18" RCP
CLASS III
TOS
TB
6" F/M
18" RCP
OHE
RIPRAP
PP
RUBBLE
24" CMP
DOCK
6" PVC
How to KEEP GROUT OUT OF REMAINING UNDERDRAIN?
12"
40 LF OF 18" RCP
CLASS III
INV.=30.07
END & PLUG
NV.=30.07
10'
39.2
18" PCMP FILTER PIPE
TOS
30" STL. PIPE
℄ DITCH
GUY
36" FDOT INDEX 270
FLARED END SECTION
10" PVC
STA. 12+20, 29' LT.,
END FILTER FACILITY
CL III
ES
SHELL ROAD
90°10'26"
N&D
6" F/M
10" F/M
8" GRAVITY

Transmit Confirmation Report

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Receiver	:	819417953451
Transmitter	:	WASTE MGT TAMPA SWDIST
Date	:	Jun 19 98 15:15
Time	:	02'51
Mode	:	Norm
Pages	:	03
Result	:	OK

MANATEE COUNTY GOVERNMENT

Public Works Department

June 18, 1998

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JUN 18 1998
DEP

Kim Ford, P.E.
Division of Waste Management
Department of Environmental Protection, South West District
3804 Coconut Palm Drive
Tampa, FL 33619

Re: Manatee County, Lena Road Landfill
Revised Storm Water Ditch Improvements Plan
Operating Permit Renewal

Dear Mr. Ford:

Per our June 2, 1998 meeting attached please find one (1) set of revised plans for the above referenced subject. If you need additional information please call me at 941-748-5543.

Sincerely,

Ben Alex
Solid Waste Technical Coordinator

cc: Len Bramble, P.E., Public Works Director
Dan Gray, Utilities Operations Manager
Gus DiFonzo, Solid Waste Manager BLA for
Bob Butera, P.E., FDEP
Randy Cooper, P.E., FDEP

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P.O. Box 25010, Bradenton, Florida 34206

MANATEE COUNTY GOVERNMENT

Public Works Department

June 15, 1998

Kim Ford, P.E.
Division of Waste Management
Department of Environmental Protection, South West District
3804 Coconut Palm Drive
Tampa, FL 33619

Re: Manatee County, Lena Road Landfill
Piezometer Installation

Dear Mr. Ford:

Per my May 19, 1998 letter, attached please find survey data for the installation of four (4) piezometers. This submittal completes the requirements of specific condition 33. Your assistance in this matter is appreciated. If you need additional information please call me at 941-748-5543.

Sincerely,

Ben Alex

Ben Alex,
Solid Waste Technical Coordinator

RECEIVED
JUN 15 1998
D E P

cc: Len Bramble, P.E., Public Works Director
Dan Gray, Utilities Operations Manager
Gus DiFonzo, Solid Waste Manager
Bob Butera, P.E., FDEP
Allison Amram, P.G., FDEP

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P.O. Box 25010, Bradenton, Florida 34206

SURVEYOR'S REPORT

The Manatee County Public Works Survey Section has completed a SPECIFIC PURPOSE SURVEY to determine the latitude, longitude, and the elevations of the piezometers listed below:

piezometer	latitude	longitude	top of pipe elevation	ground elevation
PZ 15B	27°28'17.0"	82°27'10.9"	37.37'	35.3'
PZ 16A	27°28'09.9"	82°27'07.0"	39.07'	37.0'
PZ 18	27°28'15.5"	82°26'47.2"	40.15'	38.0'
PZ 19	27°28'23.9"	82°26'33.3"	45.86'	42.9'

NOTES:

Elevations are referenced to National Geodetic Vertical Datum of 1929 (NGVD).
Bench mark reference: Manatee County disk at main building elevation = 38.92'

Latitude and Longitude are referenced to North American Datum of 1983 (NAD83).
Horizontal control point reference: Manatee County BASE.

DATE OF FIELD WORK: 5/26/98 TO 5/27/98

BY: Michael R. Lilly DATE: 6/5/98

MICHAEL R. LILLY, P.S.M., PROFESSIONAL SURVEYOR AND MAPPER NO. LS 4918
4422C 66TH STREET WEST, BRADENTON FLORIDA 34210

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT

RANDY

PLS REVIEW AND CALL CLAY TO DISCUSS

1. IS UNDERDRAIN DESIGN OK?
2. WHAT IS HOLE TYPE? A, B OR C
3. ARE REDUCERS AVAILABLE TO GO FROM 6" TO 8" TO 10"?

TAX FAX 6/8/98

/ GOVERNMENT

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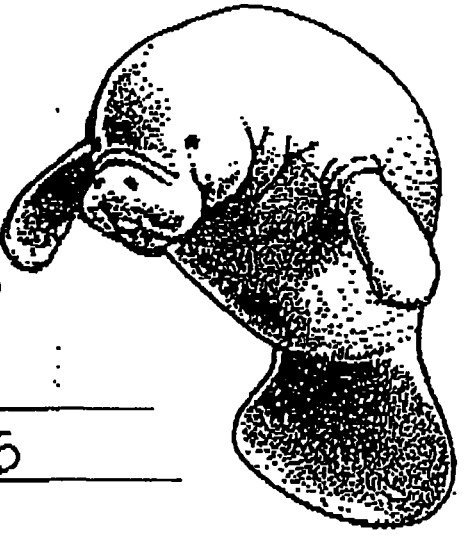

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COMMENTS: Revised detail and manufacturers information sent per your request.

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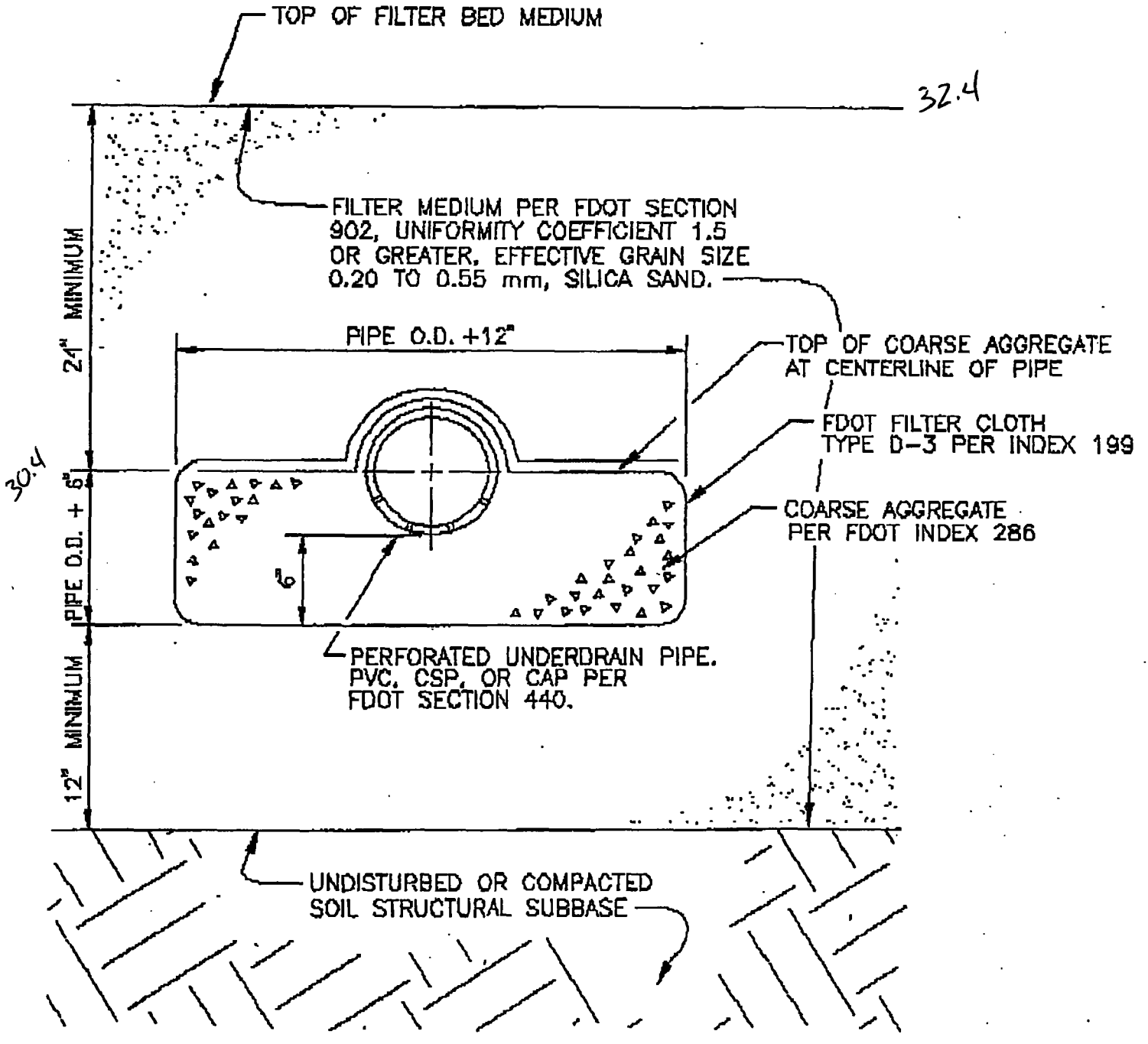

UNDERDRAIN AND FILTER BED DETAIL

SCALE: 1'-0" = 1 1/2"

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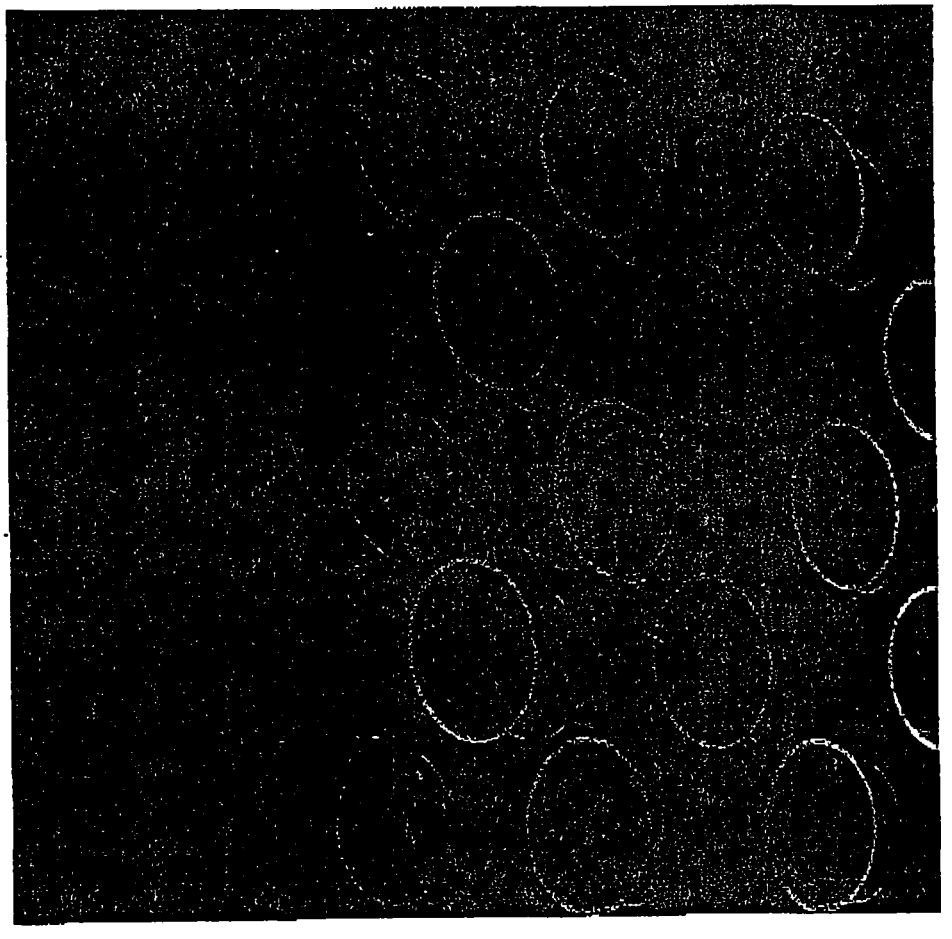
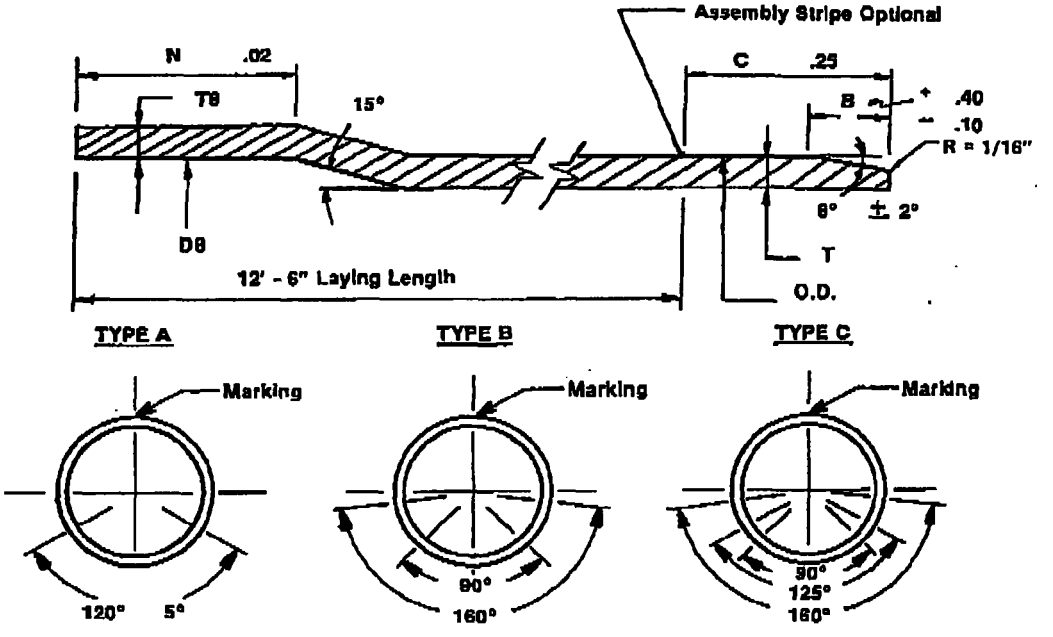
J-M PIPE

PVC SDR35 Perforated Underdrain Pipe



PVC Perforated Underdrain Pipe
Swedge Ends Or Ring-Tite Joints



Type	Dia.	No. of Rows	Hole Size	Hole Spacing
A	4" - 12"	2	1/2 ± 1/16	6 ±1/4, -0
B	4", 6", 8"	4	1/4 ± 1/16	3¼ ± 1/4
C	10", 12"	6	1/4 ± 1/16	3¼ ±1/4

SIZE	4"	6"	8"	10"	12"	15"
O.D.	4.215 ± .007	6.275 ± .009	8.400 ± .010	10.500 ± .013	12.500 ± .016	15.300 ± .021
Max. Ind.	4.278	6.370	8.526	10.658	12.688	15.530
D8	4.240 ± .010	6.306 ± .013	8.440 ± .020	10.548 ± .024	12.554 ± .024	15.362 ± .028
T8 Min.	.103	.162	.216	.272	.321	.392
B	.50	.65	.85	1.00	1.00	1.10
C	1.12	2.25	3.10	3.10	3.38	3.38
N	1.00	2.00	2.75	2.75	3.00	3.00
T min. max.	.120 .140	.180 .208	2.40 .271	.300 .339	.360 .403	.437 .485

*** Pipe with Ring-Tite Joints will conform to AASHTO - M 278 and ASTM F 758.**

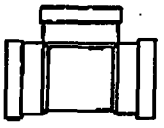
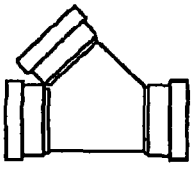
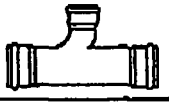
For subsurface drainage systems designed to serve:

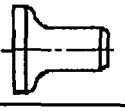
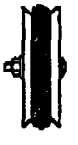
ABUTMENTS
AIRPORTS
BASEBALL FIELDS
BUILDING FOUNDATIONS
CEMETERIES
EMBANKMENTS
FARM LANDS
FLOOD CONTROL PROJECTS
GOLF COURSES
HIGHWAYS
PARKING AREAS
PARKS
PLAYGROUNDS
POWER STATIONS
RACE TRACKS
ROADWAYS & STREETS
RETAINING WALLS
DAMS
DIKES
RIDGES
RAILROADS, ETC
SHOPPING AREAS
STADIUMS

ADVANTAGES:

PVC UNDERDRAIN Is Impervious to the chemical reactions of acids, alkalies, detergents, salts and sewer gases. In addition, PVC pipe is easy and quick to install allowing you advantages plus cost savings.

PVC Underdrain Pipe Fittings

Description	Size	Carton Quantity
Tee (All Bell) 	4" x 4"	24
	6" x 4"	12
	6" x 6"	10
	8" x 4"	8
	8" x 6"	6
	8" x 8"	6
	10" x 4"	1*
	10" x 6"	1*
	10" x 10"	1*
	12" x 4"	1*
	12" x 6"	1*
	12" x 12"	1*
	15" x 4"	1*
	15" x 6"	1*
	15" x 15"	1*
Wye (All Bell) 	4" x 4"	20
	6" x 4"	12
	6" x 6"	9
	8" x 4"	8
	8" x 6"	6
	8" x 8"	2
	10" x 4"	1*
	10" x 6"	1*
	10" x 10"	1*
	12" x 4"	1*
	12" x 6"	1*
	12" x 12"	1*
	15" x 4"	1*
	15" x 6"	1*
	15" x 15"	1*
Tee/Wye (All Bell) 	4" x 4"	10
	6" x 4"	5
	8" x 4"	6
	8" x 6"	6
Double Bell Coupling (Sleeve)	4"	32
	6"	15
	8"	8
Double Bell Coupling (Sleeve)	10"	1*
	12"	1*
	15"	1*
Manhole Adaptor Ring	4"	50
	6"	40
	8"	25
	10"	25
	12"	25
	15"	10

Description	Size	Carton Quantity
90° Elbows (Short) (Bell x Spigot)	4"	18
	6"	8
	8"	2
90° Elbows (Short) (Bell x Bell)	4"	18
	6"	8
	8"	5
	10"	1*
	12"	1*
	15"	1*
45° Elbows (Short) (Bell x Spigot)	4"	24
	6"	14
	8"	5
45° Elbows (Short) (Bell x Bell)	4"	20
	6"	14
	8"	6
	10"	1*
	12"	1*
	15"	1*
22½° Elbows (Short) (Bell x Spigot)	4"	28
	6"	14
22½° Elbows (Short) (Bell x Bell)	4"	28
	6"	14
	8"	4
Plugs (For Bells)	4"	66
	6"	36
	8"	20
Plugs (For Bells) 	10"	1*
	12"	1*
	15"	1*
Caps (For Spigots)	4"	64
	6"	30
	8"	10
Spigot Plug (with rubber sealing ring and tightening bolt) 	4"	25
	6"	30

Not all items above are manufactured or inventoried at all plants. Check with your Customer Service Center for availability.

* 10" through 15" fitting are not shipped in cartons.

J-M PIPE
Customer Service Centers

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J-M PIPE
J-M Manufacturing Company, Inc.
1051 Sperry Road
Stockton, California 95206

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Designation: F 758 – 95

Standard Specification for Smooth-Wall Poly(Vinyl Chloride) (PVC) Plastic Underdrain Systems for Highway, Airport, and Similar Drainage[1]

This standard is issued under the fixed designation F 758; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers the requirements for smooth-wall perforated and nonperforated poly(vinyl chloride) (PVC) plastic pipe and couplings for use in subsurface drainage systems of highways, airports, and similar applications in nominal sizes of 4, 6, and 8 in. and in pipe stiffnesses (PS) that are designated as Type PS 28 and Type PS 46 in accordance with its minimum pipe stiffness.

1.2 Molded fittings for use with highway underdrain pipe are in accordance with Specification D 3034. For convenience, some of these fittings are reproduced in Annex A1.

1.3 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

NOTE 1—Type PS 28 and Type PS 46 indicate "pipe stiffness" of 28 and 46, respectively, as outlined in 10.1.

NOTE 2—Pipe and fittings should be installed in accordance with Practice D 2321, or applicable state or local specifications.

1.4 The following safety hazards caveat pertains only to the test methods portion, Section 10, of this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*

D 618 Practice for Conditioning Plastics and Electrical Insulating Materials for Testing[2]

D 1600 Terminology for Abbreviated Terms Relating to Plastics[2]

D 1784 Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds[3]

D 2122 Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings[4]

D 2152 Test Method for Degree of Fusion of Extruded Poly(Vinyl Chloride) (PVC) Pipe and Molded Fittings by Acetone Immersion[4]

D 2321 Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe[4]

D 2412 Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading[4]

D 2444 Test Method for Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight)[4]

D 2564 Specification for Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems[4]

D 2855 Practice for Making Solvent-Cemented Joints with Poly(Vinyl Chloride) (PVC) Pipe and Fittings[4]

D 3034 Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings[4]

D 3212 Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals[4]

D 4396 Specification for Rigid Poly(Vinyl Chloride) (PVC) and Related Plastic Compounds for Non-Pressure Piping Products[5]

F 402 Practice for Safe Handling of Solvent Cements, Primers, and Cleaners Used for Joining Thermoplastic Pipe and Fittings[4]

F 412 Terminology Relating to Plastic Piping Systems[4]

2.2 *Federal Standard:*

Fed. Std. No. 123 Marking for Shipments (Civil Agencies)[6]

2.3 *Military Standard:*

MIL-STD-129 Marking for Shipment and Storage[6]

3. Terminology

3.1 *Definitions*—Definitions are in accordance with Terminology F 412, and abbreviations are in accordance with Terminology D 1600, unless otherwise specified. The abbreviation for poly(vinyl chloride) plastic is PVC.

4. Classification

4.1 Two classes (or pipe stiffness) are included and designated as PS 28 and PS 46 as determined in accordance with 10.1.

5. Materials

5.1 The pipe shall be made of PVC plastic having a minimum cell classification of 12454-C or 12364-C as defined in Specification D 1784 or a minimum cell classification of 11432 or 11332 as defined in specification D 4396.

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[1] This specification is under the jurisdiction of ASTM Committee F-17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F17.65 on Land Drainage.

Current edition approved Sept. 10, 1995. Published November 1995. Originally published as F 758 – 82. Last previous edition F 758 – 93.

[2] *Annual Book of ASTM Standards*, Vol 08.01.

[3] *Annual Book of ASTM Standards*, Vol 08.02.

[4] *Annual Book of ASTM Standards*, Vol 08.04.

[5] *Annual Book of ASTM Standards*, Vol 08.03.

[6] Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

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Homopolymer PVC compounds must equal or exceed the requirements of the listed cell classification numbers.

5.2 *Rework Material*—Rework material from the manufacturer's own pipe or fittings production may be used by the same manufacturer, provided that the pipe or fabricated fittings produced meet all the requirements of this specification.

6. Joint Systems

6.1 *Gasket-Type Joints*, meeting the applicable requirements of Specification D 3212, may be utilized.

6.2 *Solvent-Cement-Type Joints*, made with bell ends meeting the requirements of Table 1; stop-type couplings in conformance with Table 2; or sleeve-type couplings in conformance with Table 3, may be utilized.

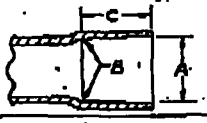
6.2.1 Belled ends shall be formed so as to provide a uniform shoulder around the entire circumference of the pipe.

6.2.2 Solvent-cemented joints shall be made using PVC cement meeting the requirements of Specification D 2564, and shall be made in accordance with Practice D 2855 and Practice F 402.

7. Requirements

7.1 *Workmanship*—The pipe shall be homogeneous throughout and essentially uniform in color, opacity, density, and other properties. The inside and outside surfaces shall be semimatte or glossy in appearance (depending on the type of plastic) and free of chalking, sticky, or tacky material. The surfaces shall be free of excessive bloom, that is, slight bloom is acceptable. The pipe walls shall be free of cracks, holes, blisters, voids, foreign inclusion, or other defects that are visible to the naked eye and that may affect the wall integrity. Holes deliberately placed in perforated pipe are acceptable. Bloom or chalking may develop in pipe exposed to direct rays of the sun (ultraviolet radiant energy) for extended periods and consequently these requirements do not apply to pipe after extended exposure to direct rays of the sun.

TABLE 1 Socket-Type Bell Dimensions
(Belled Ends for Solvent-Cement-Type Pipe and Bends)



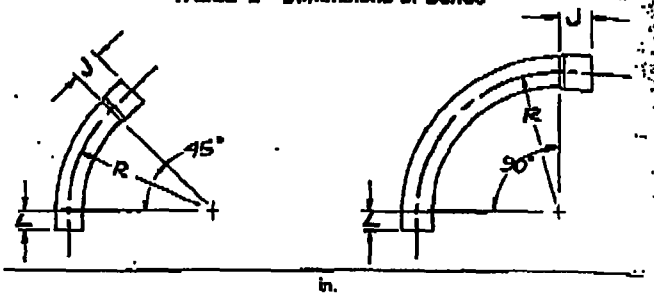
in.

Nominal Size, In.	A Entrance	B Socket Bottom	C Bell Depth, min
4	4.235 ± 0.009	4.210 ± 0.009	1.750
6	6.305 ± 0.011	6.270 ± 0.011	3.000
8	8.424 ± 0.012	8.388 ± 0.012	4.000

mm

Nominal Size, In.	A Entrance	B Socket Bottom	C Bell Depth, min
4	107.57 ± 0.22	106.93 ± 0.22	44.44
6	160.15 ± 0.28	159.26 ± 0.28	76.20
8	213.97 ± 0.30	213.06 ± 0.30	101.60

TABLE 2 Dimensions of Bends



in.

Nominal Size, in.	Angle	Radius	Socket Depth[A] Dimension J, min	Length of Tangent Dimension L, min
4	45°	16, 24, 36	1.750	2.00
	90°	16, 24, 36		
6	45°	24, 36	3.000	3.50
	90°	24, 36		
8	45°	24, 36	4.000	5.00
	90°	24, 36		

mm

Nominal Size, In.	Angle	Radius			Socket Depth[A] Dimension J, min	Length of Tangent Dimension L, min
4	45°	406.4	609.6	914.4	44.44	50.80
	90°	406.4	609.6	914.4		
6	45°	609.6	914.4		76.20	88.90
	90°	609.6	914.4			
8	45°	609.6	914.4		101.60	127.00
	90°	609.6	914.4			

[A] Socket dimensions shall be as shown in Table 1.

7.2 *Dimensions and Tolerance*:

7.2.1 *Outside Diameter*—The outside diameter and tolerances shall meet the requirements of Table 4 when measured in accordance with Test Method D 2122. The tolerances for out-of-roundness shall apply to pipe prior to shipment.

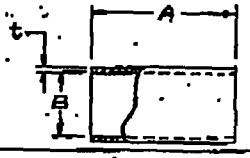
7.2.2 *Wall Thickness*—The actual wall thickness of pipe shall be the wall required to meet the physical requirements of this specification but not less than that shown in Table 4 when measured in accordance with Test Method D 2122.

7.2.3 *Length*—Laying length shall be 20 ft (6.1 m) (or as mutually agreed upon between the purchaser and the manufacturer). A tolerance of ±1 in. (±25 mm) shall be permitted.

7.2.4 *Perforations*—Perforated pipe shall be perforated in accordance with Table 5. The perforations shall be approximately circular and cleanly cut. The spigot end, and bell, of belled-end pipe may be unperforated for a length equal to the depth of the socket or shoulder, or both.

7.2.5 *Integral Bell Dimensions*—Integral bell dimensions of pipe, bends, and sweeps shall comply with Table 1. Elastomeric seal joints shall meet dimensions recommended by the manufacturer. The thickness of the wall shall be considered satisfactory if the bell was formed from pipe

TABLE 3 Sleeve Coupling Dimensions



in.

Nominal Pipe Size, in.	Dimension A	Dimension B	Dimension t, min
4	3.5 ± 0.250	4.230 ± 0.005	0.120
6	6.0 ± 0.250	6.291 ± 0.005	0.180
8	8.0 ± 0.250	8.418 ± 0.006	0.240

mm

Nominal Pipe Size, in.	Dimension A	Dimension B	Dimension t, min
4	88.8 ± 6.34	107.44 ± 0.13	3.05
6	152.4 ± 6.34	159.77 ± 0.13	4.57
8	203.2 ± 6.34	213.74 ± 0.15	6.10

TABLE 4 Pipe Dimensions

in.

Nominal Size, in.	Outside Diameter			Minimum Wall Thickness	
	Average Tolerance	Out-of-Roundness[A] min	Out-of-Roundness[A] max	Type PS 28	Type PS 46
4	4.215 ±0.009	4.185	4.265	0.103	0.120
6	6.275 ± 0.011	6.225	6.325	0.153	0.180
8	8.400 ± 0.012	8.325	8.475	0.205	0.240

mm

Nominal Size, in.	Outside Diameter			Minimum Wall Thickness	
	Average Tolerance	Out-of-Roundness[A] min	Out-of-Roundness[A] max	Type PS 28	Type PS 46
4	107.06 ± 0.22	105.80	108.34	2.62	3.05
6	159.38 ± 0.28	158.12	160.66	3.88	4.57
8	213.36 ± 0.30	212.08	214.62	5.20	6.10

[A] The tolerance for out-of-roundness applies only at the time of production.

meeting the requirements of this specification.

7.2.6 *Sleeve-Type Coupling Dimensions*—Dimensions shall be in accordance with Table 3. Sleeve-type couplings shall have a wall thickness not less than that required for pipe and shall meet the requirements of Section 8.

7.2.7 *Fitting Dimensions*:

7.2.7.1 *Molded Fittings*—See Annex A1.

7.2.7.2 Fabricated fittings are acceptable provided they are made from pipe that meets or exceeds all of the applicable requirements of this specification.

7.2.8 *Bend Dimensions*:

7.2.8.1 The dimensions for bends shall be as shown in Table 6.

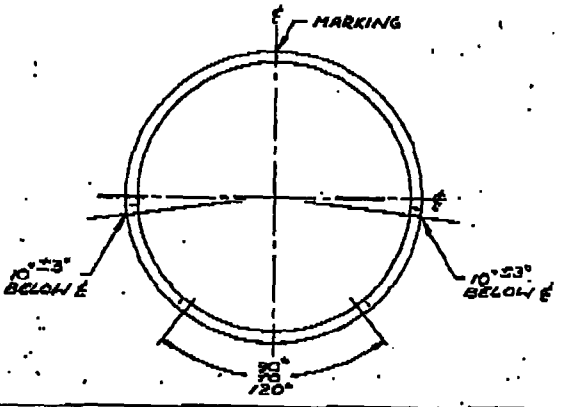
7.2.8.2 The thickness of the wall shall be considered satisfactory if the bend was formed from Type PS 46 pipe that meets the requirements of this specification.

8. Performance Requirements

8.1 *General*:

8.1.1 *Pipe Stiffness*—The pipe stiffness ($F/\Delta Y$) values

TABLE 5 Perforations[A]



Nominal Diameter, in.	Minimum Rows of Perforations	Hole Size[A] mm	Hole Size[A] in.	Hole Spacing[A] mm	Hole Spacing[A] in.
4	2	4.8 to 9.7	3/16 to 3/8	82.55 ± 6.35	3 1/4 ± 1/4
6	4	4.8 to 9.7	3/16 to 3/8	82.55 ± 6.35	3 1/4 ± 1/4
8	4	4.8 to 9.7	3/16 to 3/8	82.55 ± 6.35	3 1/4 ± 1/4

[A] Combination of hole size and spacing of holes shall provide a minimum inlet area greater than 0.2200 in.²/ft of pipe (that is, 3/16-in. holes at 3-in. center would permit a 0.2206-in.² area).

TABLE 6 Pipe Stiffness
(Minimum Pipe Stiffness at 5 % Deflection ($F/\Delta y$))

Nominal Pipe Size, in.	Pipe Stiffness, kPa		Pipe Stiffness, lbf/in.·in.	
	Type PS 28	Type PS 46	Type PS 28	Type PS 46
4	190	320	28	46
6	190	320	28	46
8	190	320	28	46

shall be in conformance with Table 6, when tested in accordance with 10.1.

8.2 *Quality Control*:

8.2.1 *Scope*—The tests in this section are producer's quality control tests and are not intended for simulated service tests.

8.2.2 *Impact Strength*—The minimum drop weight impact strength values for pipe and fabricated fittings shall be as given in Table 7, when tested in accordance with 10.2.

NOTE 3—Development of a test for molded fittings is under study by ASTM. Requirements will be included when available.

8.2.3 *Pipe Flattening*—When examined without the use of magnification equipment, there shall be no evidence of splitting, cracking, or breaking when pipe is tested in accordance with 10.3.

8.2.4 *Solvent Cement Joint Tightness (Referee Test)*—The

TABLE 7 Impact Strength at 0°C

Nominal Pipe Size, in.	J		ft-lbf	
	Type PS 28	Type PS 46	Type PS 28	Type PS 46
4	75	88	55	65
6	88	115	65	85
8	102	129	75	95

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solvent-cement-type joints of nonperforated pipe shall not leak when tested in accordance with 10.4.

8.2.5 *Extrusion Quality*—The pipe shall not flake or disintegrate when tested for 20 min in accordance with Test Method D 2152.

9. Conditioning

9.1 *Referee Testing*—When conditioning is required for tests, the specimens shall be conditioned in accordance with Procedure A in Practice D 618 at 23 ± 2°C and 50 ± 5 % relative humidity for not less than 40 h prior to test. The impact specimens and the surrounding conditioning medium are to be in thermal equilibrium with one another at a temperature of 0 to 1.6°C. Tests shall be conducted under the same conditions of temperature and humidity, unless otherwise specified.

9.2 *Quality Control*.

9.2.1 For quality control tests, specimens shall be conditioned for a minimum of 3 h in air, or 1 h in liquid at 23 ± 2°C. They shall be tested at 23 ± 2°C without regard to relative humidity.

9.2.2 For the impact test, specimens shall be conditioned at 0 to 1.6°C for at least 1 h in liquid or other suitable means to obtain thermal equilibrium.

10. Test Methods

10.1 *Pipe Stiffness*—Determine the pipe stiffness at 5 % deflection using Test Method D 2412. Test three specimens each 6 ± 1/16 in. (150 ± 2 mm) long and determine the average pipe stiffness at 5 % deflection in accordance with 9.1.9 of Test Method D 2412. The pipe stiffness shall equal or exceed the minimum values listed in Table 6. Nonperforated pipe samples shall be placed so that the minimum wall thickness is uppermost (adjacent to the top bearing plate). Perforated pipe samples shall be placed with the marking uppermost (see Table 5).

10.2 *Impact Resistance*—Five specimens, each 6 ± 1/16 in. (150 ± 2 mm) long, shall be tested in accordance with Test Method D 2444, using a 20-lb (9.1-kg) Tup B, and the flat plate (Holder B). When testing is performed in an environment where temperatures are above 0°C, no more than 15 s shall elapse from the time of removal of the specimen from the conditioning bath until completion of that test. Perforated specimens must be positioned with the print marking uppermost, as shown in Table 5; other specimens may be positioned with a random surface uppermost. All specimens shall be located so that the contact point is centered under the tup. All five specimens shall pass. If one specimen fails, another five specimens shall be tested; nine out of ten specimens passing shall be acceptable.

10.3 *Pipe Flattening*—Flatten three specimens of pipe each 6 ± 1/16 in. (150 ± 2 mm) long, between parallel plates in a suitable press until the distance between the plates is twice the wall thickness plus 5 % of the nominal diameter of the pipe. The rate of loading shall be uniform and such that the compression is completed within 2 to 5 min. Remove the load and examine the specimens. There shall be no evidence of splitting, cracking, or breaking.

10.4 *Solvent Cement Joint Tightness, Referee Test*—A section of unperforated pipe shall be cemented to a bell or coupling, using the manufacturer's recommendations or, in their absence, the methods described in Practice D 2855. Unless otherwise specified, the assembly shall be allowed to stand for at least 6 h. It shall then be subjected to an internal pressure of at least 25 psi (170 kPa) using water as the test medium. The pressure shall be maintained for at least 1 h. There shall be no leakage. Elastomeric seal joints shall conform with Specification D 3212.

11. Retest and Rejection

11.1 If the results of any test(s) do not meet the requirements of this specification, the test(s) may be conducted again in accordance with an agreement between the purchaser and the seller. There shall be no agreement to lower the minimum requirement of the specification by such means as omitting tests that are a part of the specification, substituting or modifying a test method, or by changing the specification limits. In retesting, the product requirements of this specification shall be met, and the test methods designated in the specification shall be followed. If, upon retest, failure occurs, the quantity of product represented by the test(s) does not meet the requirements of this specification.

12. Certification

12.1 When specified in the purchase order or contract, a producer's or supplier's certification shall be furnished to the purchaser that the material was manufactured, sampled, tested, and inspected in accordance with this specification and has been found to meet the requirements. When specified in the purchase order or contract, a report of the test results shall be furnished.

13. Marking

13.1 *Quality of Marking*—The marking shall be applied to the pipe in such a manner that it remains legible (easily read) after installation and inspection.

13.2 All pipe shall be clearly marked at intervals of no more than 5 ft (1.5 m) with 3/8-in. (9-mm) or larger letters as follows:

13.2.1 Manufacturer's name or trademark,

13.2.2 Nominal pipe size,

13.2.3 Material designation (cell classification),

13.2.4 Optional: The words "HIGHWAY UNDERDRAIN",

13.2.5 "Type PS 28" or "Type PS 46",

13.2.6 This designation, "ASTM F 758", and

13.2.7 Date of manufacture, plant designation, and other control symbols are internally required by the manufacturer.

13.3 Marking on perforated pipe shall be placed as shown on the diagram in Table 5.

13.4 All bends and fabricated fittings shall be marked as follows:

13.4.1 Manufacturer's name or trademark,

13.4.2 Nominal size,

13.4.3 Material designation (PVC),

13.4.4 This designation "ASTM F 758", and

13.4.5 Bends shall also be marked to show the degree and radius of curvature, that is, 90° 24 in. R.

14. Quality Assurance

14.1 When the product is marked with this designation, F 758, the manufacturer affirms that the product was manufactured, inspected, sampled, and tested in accordance with this specification and has been found to meet the requirements of this specification.

GOVERNMENT/MILITARY PROCUREMENT

These requirements apply *only* to federal/military procurements, not domestic sales or transfers.

S1. *Responsibility for Inspection*—Unless otherwise specified in the contract or purchase order, the producer is responsible for the performance of all inspection and test requirements specified herein. The producer may use his own or any other suitable facilities for the performance of the inspection and test requirements specified herein, unless disapproved by the purchaser. The purchaser shall have the right to perform any of the inspections and tests set forth in this specification where such inspections are deemed necessary to ensure that material conforms to prescribed requirements.

NOTE S1.1—In U. S. federal contracts, the contractor is responsible for inspection.

S2. *Packaging and Marking for U. S. Government Procurement*:

S2.1 *Packaging*—Unless otherwise specified in the contract, the material shall be packaged in accordance with the supplier's standard practice in a manner ensuring arrival at destination in satisfactory condition and which will be acceptable to the carrier at lowest rates. Containers and packing shall comply with Uniform Freight Classification rules or National Motor Freight Classification rules.

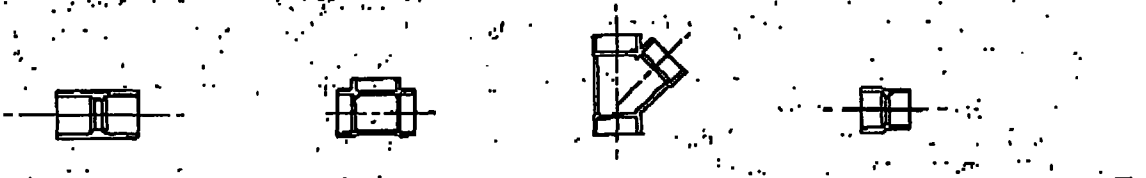
S2.2 *Marking*—Marking for shipment shall be in accordance with Fed. Std. No. 123 for civil agencies and MIL-STD-129 for military agencies.

NOTE S2.1—The inclusion of U.S. Government procurement requirements should not be construed as an indication that the U.S. Government uses or endorses the products described in this specification.

ANNEX

(Mandatory Information)

A1. TYPICAL MOLDED FITTINGS[A]



Couplings Nominal Size, In.	Tees Nominal Size, In.	Wyes Nominal Size, In.	Reducers Nominal Size, In.
4	4	4	4 × 6
6	6	6	6 × 8
8	8	8	

[A] Requirements and dimensions of these and other fittings are described in Specification D 3034.

The American Society for Testing and Materials takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, 100 Barr Harbor Drive, West Conshohocken, PA 19428.

FDEP	3804 Coconut Palm Drive, Tampa, FL 33619-8318

FAX

FAXED

Date: 5/29/98

Number of pages including cover sheet: 3

To: Ben Alx

Manatee County

Phone: 941 748-5543

Fax phone: 941 795-3451

CC:

From: Kim Ford

Phone: (813) 744-6100

Fax phone: (813) 744-6125

REMARKS: ☐ Urgent ☐ For your review ☐ Reply ASAP ☐ Please comment

Department of Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

May 29, 1998

Mr. Ben Alex
Solid Waste Management
Manatee County
3333 Lena Road
Bradenton, FL 34202

Re Stormwater System and Gradient Improvements
Permit No.: SO41-211176, Manatee County
Pending Permit #39884-001-SO

Dear Mr. Alex:

The Department appreciates the effort made by Manatee County in providing the proposed improvements shown on the construction plans received May 12, 1998. Based on a review of the design, related literature and conversations with others responsible for similar type of systems, the following concerns are presented for consideration:

1. An off-line infiltration basin separated from the conveyance ditch but connected with valved piping may be most helpful in reducing sediment buildup and subsequent required maintenance. By conveying all stormwater to the south stormwater pond first, and holding it prior to discharge into the infiltration basin, most sedimentation would occur in the south pond rather than in the infiltration basin.

2. Raising the elevation of the underdrain piping approximately one foot, or more on the low end, would allow the infiltration basin to dry out between storms and prevent algae or bacterial growth from inhibiting infiltration and related maintenance.

3. The sluice gate on the stormwater control structure at station 6+52 appears to be very close to the pond bottom which could become clogged with sediment and allow pond bottom sediment to flow to the infiltration basin increasing maintenance or causing system failure. The inside bottom of the structure should be grouted flush with the pipe and outfall to prevent sediment buildup and related maintenance.

4. A flap/gate valve on the south end of the steel pipe culvert at station 13+80 would prevent backflow into the conveyance ditch and subsequent percolation and leachate generation. This flap/gate valve would be especially helpful when the south stormwater pond is drained to the infiltration basin.

5. A mixture similar to the slurry wall design should be used to grout the underdrain noted at station 14+00 such as a mixture of cement and bentonite that remains both pliable and expansive to fill all voids, and highly impermeable. As an option, the culvert could be removed and the slurry wall repaired.

6. The permeability of clay ditch lining was not provided. If the possibility exists for leachate to rise to the level of the ditch or for stormwater to pond in the ditch, then the clay should be more impermeable. The leachate level in PZ-18 is requested and will be evaluated to estimate the potential rise of leachate in the vicinity of the ditch.

The Department's decision to approve the proposed improvements will be delayed until these concerns have been resolved. The Department will make every effort to continue to expedite its review of these corrective actions and revisions.

On all future correspondence, please include Robert Butera on distribution. 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/ab

cc: Len Bramble, Manatee County
Gus DiFonso, Manatee County
Dan Gray, Manatee County
Timothy Hochuli, Manatee County
Randy Cooper, P.E., FDEP Tampa, ERP Section
RB Robert Butera, P.E., FDEP Tampa, Solid Waste Section

Transmit Confirmation Report

No.	:	005
Receiver	:	819417953451
Transmitter	:	WASTE MGT TAMPA SWDIST
Date	:	May 29 98 11:26
Time	:	02'11
Mode	:	Norm
Pages	:	03
Result	:	OK

State of Florida

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Interoffice Memorandum

TO: Kim Ford, Solid Waste Section

FROM: Randy Cooper, ERP Surface Water Section RC

DATE: May 28, 1998

SUBJECT: Lean Road Landfill - Proposed Stormwater Treatment Improvements & Gradient Improvements

---

After we met with Ben Alex yesterday, I have a better idea of how the proposed stormwater treatment improvements will work. While the operation of the filter system is a bit unusual, I suppose it will be all right. Maybe Ben's narrative description of the system operation will help to clarify things even more.

It appears that they will remove just about all of the existing perforated CMP drain pipe and replace it with more than enough new perforated PVC pipe. The details of the new system (as shown on Sheet 21) look OK; the sand grain size and sand filter depth meet the Chapter 17-25 rule. The extra lengths of perforated pipe and the two 12" diameter new pipes at the proposed berm have the potential to cause an increase in off-site discharge, which could trigger an ERP. I would feel better if only one of the two 12" diameter pipes were to opened at one time, unless they can demonstrate through modeling or calculations that no adverse off-site impacts would occur if both were left wide open. I will mention this subject to Ben when I see him next week.

I have no objection to them proceeding with the construction of the new system.

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: _____	Date: _____	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: Mr. Bob Kriegel
Mr. Richard Sublette
Mr. Gerry Neubauer
Mr. Jerry Owen
Mr. Richard Vogh
Mr. Alex Alexander
Dr. Richard Garrity
Mr. Roy Duke
Mr. Phil Edwards
Mr. Rodney DeHan
Mr. George Baragona

D. E. R.

FROM: Eric H. Livingston, Administrator Eric
Nonpoint Source Management Program

FEB 0 4 1985

DATE: January 30, 1985

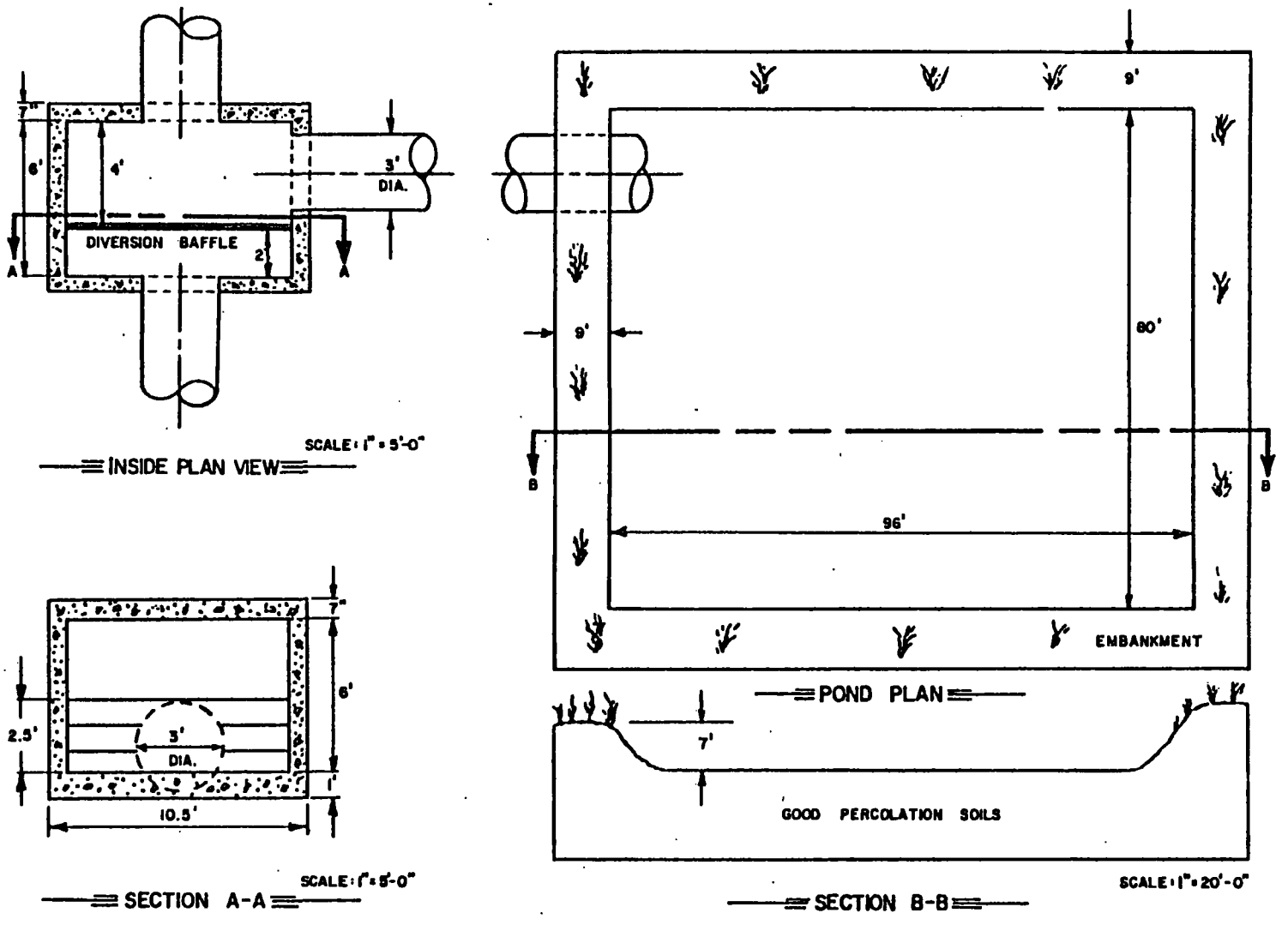
SOUTH WEST DISTRICT
TAMPA

SUBJECT: Review of the Florida Development Manual: A Guide to Sound Land and Water Management

The attached draft document represents the final output of the Florida Areawide Water Quality Management Program conducted under Section 208 of the Clean Water Act. The purpose of the Florida Development Manual: A Guide to Sound Land and Water Management is to provide a reference manual that includes the most recent information on the control of nonpoint sources of pollution. Since nonpoint sources are intimately related to land use and development, it is hoped that the manual will promote carefully planned development that will ensure the continued protection of Florida's natural and financial resources. The cost-effective abatement of nonpoint sources that can be achieved through careful planning and quality design will be an important factor in preserving the future quality of life for all Floridans.

During the next several months, this document will be reviewed by various public agencies and members of the private sector. Comments made by reviewers will be incorporated into the final document prior to its release to the public in October 1985. I would appreciate any comments that you or your staff may care to make on this manual. The Districts' stormwater permitter should be the primary reviewer and should coordinate any comments provided by other members of your staff. If you have comments, please send them to me before June 1, 1985. Thank you very much for your assistance.

EHL/ag
Attachment
cc: Mr. Steve Fox
Mr. Howard Rhodes



DIVERSION STRUCTURE / PERCOLATION POND,

Figure 6-25

(after Wanielista, 1981. "Stormwater Management Manual")

performed carefully to remove all accumulated sediment. Relatively light equipment is recommended for this operation to avoid deep compaction of the basin floor. After the final grading is completed, the basin floor should be deeply tilled with rotary tillers or disc harrows to open the soil pores and provide a well-aerated, highly porous surface texture for seeding or sodding.

Basin shape depends largely on the configuration of the available site. The shape providing the greatest area will infiltrate water most rapidly. However, an increase in basin floor area may not necessarily bring about a corresponding increase in the rate of infiltration. After operation begins, lateral drainage through the basin wall may become more rapid than vertical percolation should the bottom become less pervious as silt deposits build up.

Some designers tend to compensate by proposing to use deeper facilities since increased depth can provide greater lateral infiltration area. However, basin sideslopes should be 3:1 or flatter to prevent erosion, improve appearance and ease maintenance. Moreover, deep installations in residential areas should be fenced, and at least one bank slope should be 4:1 or flatter to allow a point where exit would not be difficult should someone fall into the basin by accident.

As noted earlier, detention or sedimentation basins can be used in prior to infiltration basins so that suspended solids will settle out before the water is released into the infiltration basin. These ponds must be large enough to hold storm runoff for a sufficient settlement time. This could vary from one or two hours to a day or more depending on soil type and particle size. Detention ponds are usually larger and shallower than the actual infiltration basin.

Landscaping of infiltration basin facilities creates pleasing appearance and should always be considered when basins are located near residential areas. Without landscaping and maintenance, a basin will accumulate the inevitable old tires, shopping carts, broken glass, and trash thus becoming a community nuisance. The landscaped basin can be used as a park or recreation area. Such a project requires plants, trees and facilities capable of withstanding temporary inundation. Basin sides should be gently sloped to give a park-like appearance.

A typical park-type installation is shown in Figure 6-28. It consists of a large detention and sedimentation basin with a smaller basin for infiltration of stormwater. During summer months, the grass in these park basins may need to be sprinkled and additional inflow may occur from domestic watering or irrigation.

Infiltration basins are sometimes lined with material to help prevent the build-up of impervious silt deposits on the soil surface. A 6-inch (0.15 m) layer of pea gravel on the basin floor can serve to effectively screen out suspended solids and keep infiltration rates high. The gravel layer can be replaced or cleaned when it becomes clogged. However, planting of grass on basin sideslopes is probably a more economical alternative to extend infiltration efficiency, keep the soil pervious, reduce maintenance due to clogging and prevent erosion.

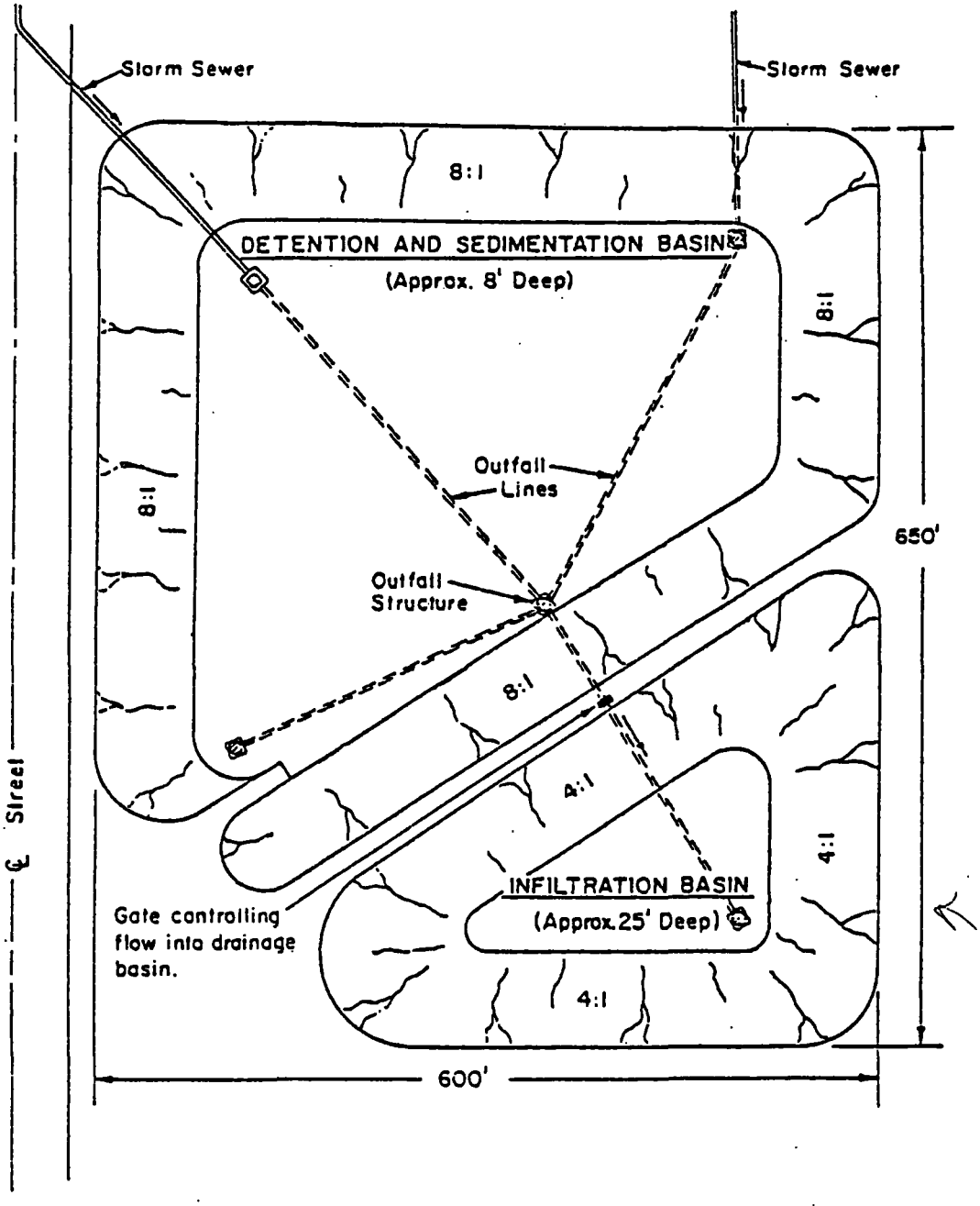


Figure 6-28

Multi-Use Park/Infiltration Basin Facility
Fresno Metro Flood Control District

(after Hannon, J.B. 1980. "Underground Disposal of Stormwater Runoff")

Grass serves as a good filter material, particularly the Bermuda variety which is extremely hardy and can withstand several days of submergence. Well established Bermuda on a basin floor will grow up through silt deposits, forming a porous turf and preventing the formation of an impermeable layer. Bermuda grass infiltration works well with long narrow shoulder-type basins (swales, ditches, etc.) where highway runoff flows down a grassy slope between the roadway and the basin. Bermuda requires little attention besides summer irrigation.

Coarse organic material (such as cotton boll hulls, leaves, stems, etc.) is sometimes specified for discing or spading into the basin floor to increase the permeability of clayey soils. The basin floor should be soaked or inundated for a brief period then allowed to dry subsequent to this operation. This is thought to induce the organic material to decay rapidly, loosening the upper soil layer.

Trench Construction

Trench construction techniques will vary with local soil conditions. Designs usually consist of trenches constructed with permeable backfill and perforated or slotted pipe. For detailed design requirements refer to Standards and Specifications for Exfiltration Trenches.

Infiltration or recharge trenches can be constructed with minimal difficulty in various types of stable soil where sufficient permeability for drainage is provided. Strict adherence to OSHA's Trench Safety Code or other local regulations relative to acceptable construction practice, should be observed.

Maintenance and Inspection

General

All stormwater systems should be inspected on a routine basis to ensure that they are functioning properly. Major inspections can be on an annual or semi- annual basis, but brief inspections should always be conducted following major storms. Systems that incorporate infiltration are most critical since poor maintenance practices can soon render them inefficient. Procedures for maintenance of these systems are discussed in this section. It should be stressed that good records should be kept on all maintenance operations to help plan future work and identify facilities requiring attention.

Retention Basins

Infiltration basin surfaces are sometimes scarified to break up silt deposits and restore topsoil porosity. This should be accomplished after all sediment has been removed from the basin floor. However, this operation can be eliminated or minimized by the establishment of grass cover on the basin floor and slopes. Such cover helps maintain soil porosity.

Algae or bacterial growth can also inhibit infiltration. While chlorination of the runoff water can solve this problem, it is more practical to make

certain that the basin is permitted to dry out between storms and during summer months.

Holding ponds or sedimentation basins can be used to reduce maintenance in conjunction with infiltration basins by settling out suspended solids or removing oil and grease before the water is released into the infiltration basin.

Chemical flocculants can also be used to speed up settlement in these holding or sedimentation ponds. Flocculants should be added to the runoff water within the settlement pond inlet pipe or culvert where turbulence will ensure more thorough mixing. After suspended matter has flocculated and settled in the settling pond, the water may be released into the infiltration basin for disposal. Although chemical flocculants may be impractical for general use, they might well be considerd in special cases.

Cleanout frequency of infiltration basins will depend on whether they are vegetated or non-vegetated and will be a function of their storage capacity, infiltration characteristics, volume of inflow and amount and type of sediment load.
Infiltration basins should be thoroughly inspected at least once a year. Sedimentation basins and traps may require more frequent inspections and cleanout. These structures should have a prescribed sediment level at which they are cleaned.

Non-vegetated basins can be scarified on an annual basis following removal of all accumulated sediments. Rotary tillers or disc harrows with light tractors are recommended for maintenance of retention basins. Use of heavy equipment should be discouraged to prevent excessive compaction of surface soils. The basin floor should be left level and smooth after the tilling operation to ease future removal of sediment and minimize the amount of material to be removed during future cleaning operations. A levelling drag, towed behind the equipment on the last pass, will accomplish this.

Trenches

The clogging mechanism of trenches is similar to that associated with other infiltration systems. The clogging of trenches due to silt and suspended material is generally more critical than that of basins. Maintenance methods associated with these systems are discussed more thoroughly in the Standards and Specifications for Exfiltration Systems.

ATEE COUNTY
VERNMENT
: Works Department

RANDY
my only SET
OF PLANS
LETS VISIT SITE
AND REVIEW LAST
WEEK in May
Talk tom 5/18/98

RECEIVED
MAY 12 1998
SOUTHWEST DISTRICT

May 11, 1998

Kim Ford, P.E.
Division of Waste Management
Department of Environmental Protection, South West District
3804 Coconut Palm Drive
Tampa, FL 33619

Re: Lena Road Landfill, Permit Renewal
Corrective Actions, Storm Water and Gradient Improvements

Dear Mr. Ford:

As discussed at our October 2, 1997 meeting, several modifications to the Stage I storm water management system and Stage III gradient site improvements are required before a new operating permit can be issued. Attached is one set of signed and sealed plans describing these improvements as discussed at the referenced meeting.

In summary, the plan calls for regrading and lining (clay) a portion of the Stage I storm water ditch, improvements to the existing filter ditch, provisions for more control of storm water exiting the storm water pond and a ditch block to provide for improved gradient control on the south side of Stage III. Your assistance in this matter is greatly appreciated. If you need additional information, please contact me (941) 748-5543.

Sincerely,

Benjamin L. Alex
Solid Waste Technical Coordinator

cc: Len Bramble, P.E., Director of Public Services
Dan Gray, Utilities Operations Manager
Gus DiFonzo, Solid Waste Manager
Bob Butera, P.E. FDEP
Clay Barth, P.E., MCPWD
Fred Sebesta, P.E., HDR

RANDY

PLS REVIEW AND CALL CLAY TO DISCUSS

1. IS UNDERDRAIN DESIGN OK ?
2. WHAT IS HOLE TYPE? A, B OR C
3. ARE REDUCERS AVAILABLE TO GO FROM 6" TO 8" TO 10" ?

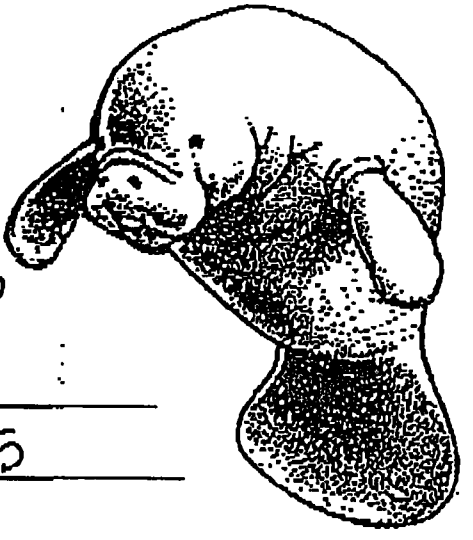
FAX from 6/8/98

r GOVERNMENT

ER MEMO

795-3442
UNTY) 5442

OLLOWING PAGE(S)



813 744 6125

EXT:

TIME TRANSMITTED:

Drain Detail Manatee County

PLEASE CALL UPON RECEIPT _____ HANDLE CONFIDENTIALLY _____

COMMENTS: Revised detail and manufacturers information sent per your request.

COVER PAGE PLUS 10 PAGES

PUBLIC WORKS DEPARTMENT
PROJECT MANAGEMENT / ENGINEERING / SURVEY / STORMWATER / MAPPING / LOCATIONS
4410 66TH STREET WEST, BRADENTON FLORIDA 34210

MANATEE COUNTY GOVERNMENT

Public Works Department

RECEIVED
DEC 15 1998
FDEP

December 10, 1998

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

Re: Perforated Pipe Specification, Lena Landfill Filter Facility

Dear Mr. Ford:

According to your request, I have researched the specification that pertains to the pipe material, perforation hole placement, and hole diameter for the pipe materials that are to be installed in the filter facility. The plan calls for underdrain pipe material to conform to FDOT Standard Specification 440. In turn, 440 refers to material Specification 948-1 for PVC pipe. Paragraph 948-1.5 requires the pipe to conform to ASTM F 758 or ASTM F 949, and it also may conform to ASTM D 3034, when perforated according to ASTM F 758 or F 949.

According to these ASTM Specifications, the holes are to be drilled in four rows. The top two rows are to be drilled 10 degrees below the mid-line of the pipe. The bottom two rows are to be spaced 90 to 120 degrees apart and centered on the pipe invert. Holes may be 3/16" to 3/8" in diameter and must provide at least 0.2200 square inches of inlet area per foot of pipe length.

I have observed the perforated pipe material that is stockpiled at the job site awaiting installation, and have found that the pipe materials, wall thicknesses, hole diameters and hole patterns are all in conformance with the approved specification.

I hope this answers your question about the applicability of this material. Please let me know if you have any further concern about it.

Signed,

Clayton L. Barth, P.E.
Engineering Division

Copy to:
Ben Alex, Solid Waste Technical Coordinator
Dan Gray, Utilities Operations Manager
Dan Rosier, Maintenance Superintendent

ADMINISTRATION • 4410 - 66th Street West, Bradenton, Florida 34210 • (941) 792-8811 • FAX (941) 795-3490

P.O. Box 25010, Bradenton, Florida 34206

Department of Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

May 26, 1998

Mr. Len Bramble
Director of Public Works
4410 66th Street West
Bradenton, FL 34210

Re: Lena Road Landfill Operation Permit Renewal
Pending Permit No. : 39884-001-SO, Manatee County

Dear Mr. Bramble:

This is to acknowledge receipt of the additional information is support of your permit application received April 27, 1998 to operate the landfill and related facilities.

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 72-701, Florida Administrative Code (F.A.C.)]. Please provide:

1. **Item D.13.** Proof of publication of notice of application, see attachment.

2. **Item G.8.** Design details and supporting information for all permanent changes to the stormwater control system including the weir for the Stage I outfall ditch are required for review prior to construction.

3. **Part K.** Cover sheet with title and date, and table of contents requested for the Operations Plan - Part K. This Operations Plan should include all clarification provided in response to items #5 through #17 in this letter. Has Appendix A including the HHW Collection Plan been deleted or replaced? The entire Appendix A including a description of all related on-site activities and facilities is requested.

4. **62-701.500 (1).** Verification of training for each trained spotter.

5. **62-701.500(2)(b).** Alternative sites for disposal, and use of water wagon to extinguish fires.

6. **62-701.500(2)(c).** Number and location of spotters for each working face; procedures for removal, storage, and disposal of all types of unauthorized or hazardous wastes, and design details of each storage area for all types of unauthorized or hazardous wastes.

7. **62-701.500(5).** Description of access controls around entire site and related signs.

8. **62-701.500(6)** Description of compliance with each of these requirements.

9. **62-701.500(7)(b).** Description of first waste layer necessary to protect pump stations and the LCRS.

10. **62-701.500(7)(f).** Procedures for applying intermediate cover of 12" in addition to 6" initial soil cover within seven days.

11. **62-701.500(7)(h).** Confirmation that scavenging is not allowed.

12. **62-701.500(7)(j).** Procedures for containment and control of all stormwater within the working face area, initially covered area, and intermediately covered areas.

13. **62-701.500(8)(c) and (e).** Agreements with each WWTP that may accept leachate for treatment. The LCRS description in the S/LMP should describe the system after completion of improvements and installation of all new monitoring devices.

14. **62–701.500(8)(g).** Table K-3 for 1997 only, and confirmation that this table will be provided annually for each subsequent year.

15. **62-701.500(9).** Revised figure K-2 to include all changes and table K-4 for 1997 only, and confirmation that this table will be provided annually for each subsequent year.

16. **62-701.500(10).** Approval is required by FDEP of all stormwater system improvements. The stormwater system description in the S/LMP should describe the system after completion of improvements.

17. **62-701.500(11)(e),(f),(g) and (h).** A response to each of these items is required.

18. A response to each of Ms. Allison Amram's comments and concerns expressed in her May 19, 1998 memorandum, attached. You may call Mr. Morris to discuss items in Ms. Amram's memorandum at (813) 744-6100, extension 336.

The Department requests monthly progress reports and a schedule for completion of all site improvements necessary for compliance. Please address each item contained in FDEP's November 24, 1997 (letter attached) which has not been resolved.

Please provide all responses that relate to engineering required for operation, signed and sealed by a professional engineer.

"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 response to this request for information within 90 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 receive this letter, responding to as many of the information requests as possible 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, 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/pj
Attachments

cc: Gus DiFonzo, Manatee County
Dan Gray, Manatee County
Ben Alex, Manatee County
Timothy Hochuli, Manatee County
Fred Sebesta, P.E., HDR
Terry Tiedemann, P.E., HDR
David Stedje, P.G., PSI
Randy Cooper, P.E., FDEP Tampa, ERP Section
RB Robert Butera, P.E., FDEP Tampa, Solid Waste Section
John Morris, P.G., FDEP Tampa, Solid Waste Section

17-103.150 Public Notice of Application and Proposed Agency Action
(1) Each person who files an application for a Department permit may publish, or may be required to publish, and provide proof of publication to the Department, at his own expense, a Notice of Application in a newspaper of general circulation in the county in which the activity will be located or take place. Publication of a Notice of Application shall be required for those projects which, because of their size, potential effect on the environment or natural resources, controversial nature, or location, are reasonably expected by the Department to result in a heightened public concern or likelihood of request for administrative proceedings. If required, the notice shall be published one time only within fourteen (14) days after a complete application is filed and shall contain:

(a) name of applicant, a brief description of the project and its location;

(b) where the application file is located and when it is available for public inspection;

(c) the notice shall be prepared by the Department and shall comply with the following format:

State of Florida
Department of Environmental Protection
Notice of Application

The Department announces receipt of an application for permit from Manatee County Public Works for operation of a solid waste landfill and related facilities subject to Department rules, located at 3333 Lena Road, Bradenton, one mile east of I-75 and north of S.R. 64, Manatee County, Florida.

This application is being processed and is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department of Environmental Protection, Southwest District Office, 3804 Coconut Palm Drive, Tampa, Florida 33619-8318.

Department of
Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

November 24, 1997

Mr. Gus DiFonso
Solid Waste Management
Manatee County
3333 Lena Road
Bradenton, FL 34202

RE: Lena Road Landfill Corrective Actions
Permit No.: SO41-211176, Manatee County

Dear Mr. DiFonso:

The Department requests a comprehensive list of all proposed site improvements anticipated as necessary for compliance and a schedule for construction completion by December 5, 1997. Monthly progress reports are requested until the essential site improvements are completed, certified, and approved by DEP and all permit issues resolved. The Department requests a proposal for each site improvement for review and approval prior to implementation. This request was previously made in the DEP's October 3, 1997 letter (attached) which resulted in a meeting on October 30, 1997. Further clarification on the issues to be addressed is provided as follows:

1. New piezometers for gradient monitoring, including proposed locations and construction details.

2. Plan, including sampling and testing, for approval by DEP's Domestic Waste Section to allow stormwater discharge into the adjacent WWTP effluent ponds.

3. Results of the LCRS inspection and cleaning, and a proposal for any corrective actions that may be necessary. The Department requests the inspection include a performance evaluation of each related pump used as part of the system.

4. Stormwater system corrective actions to provide assurance that Stage I underdrains do not collect leachate from Stage III, including schedule for underdrain removal, related survey data, and proposed ditch regrading.

5. Plan for surface water monitoring.

6. Plan for maintaining an inward gradient. Data previously provided indicates an inward gradient can be maintained by raising the water level in the Stage III perimeter ditch.

7. Plan for raising the manholes and pump station access structures in Stage III to allow for future disposal adjacent to the slurry wall.

8. Agreement with WWTP to accept all leachate necessary to maintain an inward gradient between the leachate and stormwater ponds. An explanation is requested for the inability to maintain the leachate pond elevation at 28.0 or lower as previously requested by the Department.

The Department received the draft operation plan on October 31, 1997 which will remain subject to revision until all essential systems are constructed and functioning as required.

On all future correspondence, please include Robert Butera on distribution. 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/ab
Attachment

cc: Len Bramble, P.E., Manatee County
Dan Gray, Manatee County
Ben Alex, Manatee County
Timothy Hochuli, Manatee County
Fred Sebesta, P.E., HDR
Terry Tiedemann, P.E., HDR
Randy Cooper, P.E., FDEP Tampa, ERP Section
RB Robert Butera, P.E., FDEP Tampa, Solid Waste Section
Allison Amram, P.G., FDEP Tampa, Solid Waste Section

Florida Department of

Memorandum — Environmental Protection

TO: Kim Ford, P.E.

FROM: Allison Amram, P.G. AA

SUBJECT: Lena Road Landfill Operation Permit Renewal response dated April 27, 1998

DATE: May 19, 1998

CC: John Morris, P.G.

==========

I have reviewed the response to the water quality monitoring and gas monitoring comments. These are referenced by section of the permit application.

1. Section H. This comment has been adequately addressed.

2. Section K. Gas monitoring point MGW-18 will be included in the gas monitoring plan, and GMP-7 will be deleted.

3. Section K. This comment has been adequately addressed.

4. Section K. This comment has been adequately addressed.

5. Section M. This comment has been adequately addressed.

6. Drawing 2 and 2A. This comment has been adequately addressed.

The following comments are from Section L of the permit application:

7. Ground water parameters: Parameters listed in the revised Section L are acceptable.

8. Ground water reporting: The semi-annual reporting requirements listed in the revised Section L are acceptable. The biannual ground water evaluation needs to also include a comparison of water quality between shallow and deeper aquifer zones.

9. Surface water monitoring: One monitoring point, SW-1 in Cypress Strand, is proposed for compliance with F.A.C. Rule 62-701.510(4). This location could not be found on Drawing 2. As this monitoring point is downstream of the landfill, any impacts to Class III freshwater quality could be attributed to the landfill; it is advisable that an upstream location be sampled as well to establish offsite impacts to the water body.

10. Leachate monitoring: As the objective of the leachate monitoring is to characterize the leachate prior to any pumping or treatment, it appears from the leachate operation that samples should be collected at the pump stations receiving water from waste-filled areas, instead of after pumping to the leachate pond. These samples could either be analyzed separately to provide the landfill with characterization of leachate from different waste areas, or combined for one sample to characterize the leachate from the site. The proposed sampling parameters and frequency are acceptable.

11. Gradient monitoring: A monthly gradient monitoring frequency is adequate. The list of gradient monitoring pairs presented in Table 2 of the Storm Water/Leachate Management Plan (dated April 1998) will be listed in the permit for easy reference.

The following comments are from the 1996/1997 Groundwater Monitoring Plan Biannual Evaluation dated December 31, 1997, and February 26, 1998 response prepared by Professional Service Industries, Inc. Please submit a copy of the February 26, 1998 response that is signed and sealed by the professional who conducted/oversaw the work.

12. This comment has been adequately addressed.

13. Please provide the date(s) of the survey shown in the last column of the table in the February 26, 1998 response. If well construction and boring logs are not available for the following wells: MW-1, MW-2, MW-3, SA-2 and SA-3, then the open interval must be determined in order to evaluate if they are appropriately located for use as monitoring wells.

14. The proposed resampling for arsenic in wells GC-2, GC-3 and SMR-1 is acceptable. Documentation that samples were collected in accordance with DEP's January 1994 technical document Determining Representative Ground Water Samples, Filtered or Unfiltered must be submitted with the sample results. Samples should be collected, analyzed and reported with the response to this incompleteness letter. If the County wishes to pursue collection of field-filtered samples from the site monitoring wells, the demonstration required by this document must be submitted for the wells included in the request. At this time, filtered samples are not approved for demonstrating compliance with ground water standards. If these samples still show arsenic impacts to well GC-2, then assessment monitoring as described in F.A.C. Rule 62-701.510(7) should begin.

If the applicant has any questions, they may contact John Morris at 813/744-6100, ext. 336.

aa

MANATEE COUNTY GOVERNMENT
Public Works Department

RECEIVED
MAY 22 1998
Department of Environmental Protection
BY SOUTHWEST DISTRICT

May 19, 1998

Kim Ford, P.E.
Division of Waste Management
Department of Environmental Protection, South West District
3804 Coconut Palm Drive
Tampa, FL 33619

Re: Manatee County, Lena Road Landfill
Piezometer Installation

Dear Mr. Ford:

Per your January 15, 1998 approval letter for the installation of four (4) new piezometers, attached please find the boring location map, soil profile and monitoring well detail. Elevation of top of casing will be forwarded to your office when they become available. These wells are included in the permit application response dated April 27, 1998. Your assistance in this matter is appreciated. If you need additional information please call me at 941-748-5543.

Sincerely,

Ben Alex

Ben Alex,
Solid Waste Technical Coordinator

cc: Len Bramble, P.E., Public Works Director
Dan Gray, Utilities Operations Manager
Gus DiFonzo, Solid Waste Manager
Bob Butera, P.E., FDEP
Allison Amram, P.G, FDEP

ADMINISTRATION • 4410 - 66th Street West, Bradenton, Florida 34210 • (941) 792-8811 • FAX (941) 795-3490

P.O. Box 25010, Bradenton, Florida 34206

Environmental
Geotechnical
Construction
Consulting • Engineering • Testing

May 15, 1998

Manatee County Public Works
Solid Waste Management Division
3333 Lena Road
Bradenton, Florida 34202

Attention: Mr. Benjamin L. Alex

Re: Work Assignment No. 146
Installation of Four Permanent Monitor Wells
Lena Road Landfill, Bradenton, Florida
PSI Project No. 387-74011

Dear Mr. Alex:

In accordance with Work Assignment No. 146, Requisition No. 140780, Professional Service Industries, Inc. (PSI) has completed the monitor well installation at the Lena Road Landfill.

The scope of the field services included the installation of four (4) shallow, monitor (piezometer) wells (PZ-15B, PZ-16A, PZ-18, and PZ-19). The location of the wells was designated by yourself in the form of a site plan provided to the Sarasota PSI office. A boring location plan, found on Sheet 1, was prepared to illustrate the approximate locations of the four (4) new wells relative to the landfill stages and other site features.

Each monitor well was installed after first completing a Standard Penetration Test (SPT) boring in accordance with ASTM D-1586 to a depth of 15 feet below existing grades utilizing rotary mud drilling methods. The verticle soil profile for each new monitor well location was visually examined and classified in our laboratory. Soil profiles, based on the visual classification, are displayed on Sheet 1.

Groundwater levels measured during field exploration ranged from five (5) to ten (10) feet below existing grades. Due to the nature of the landfill debris encountered in boring PZ-19, groundwater levels were not encountered during normal drilling operations.

Approximately three (3) feet of each well's casing is above the ground surface and enclosed in a stainless steel protective cover. The remaining pertinent information regarding the well installation can be found on Sheet 2.

PSI appreciates the opportunity to be of service. Should there be any questions, please do not hesitate to contact our office at (941) 378-9001.

Respectfully Submitted,

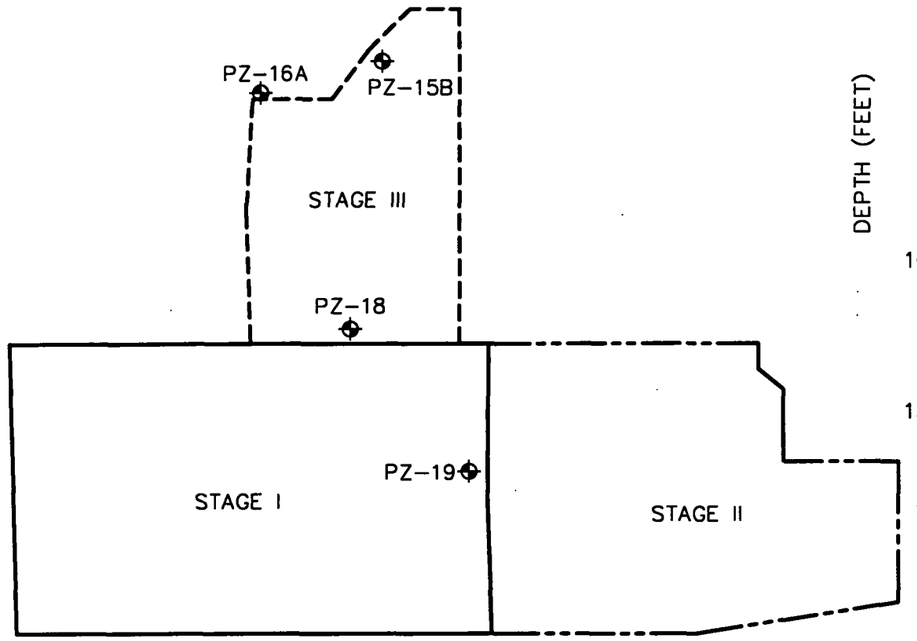
Professional Service Industries, Inc.

Lee J. Smith
Staff Engineer

Keith L. Butts
Branch Manager

LJS/KLB/tks

Enclosures



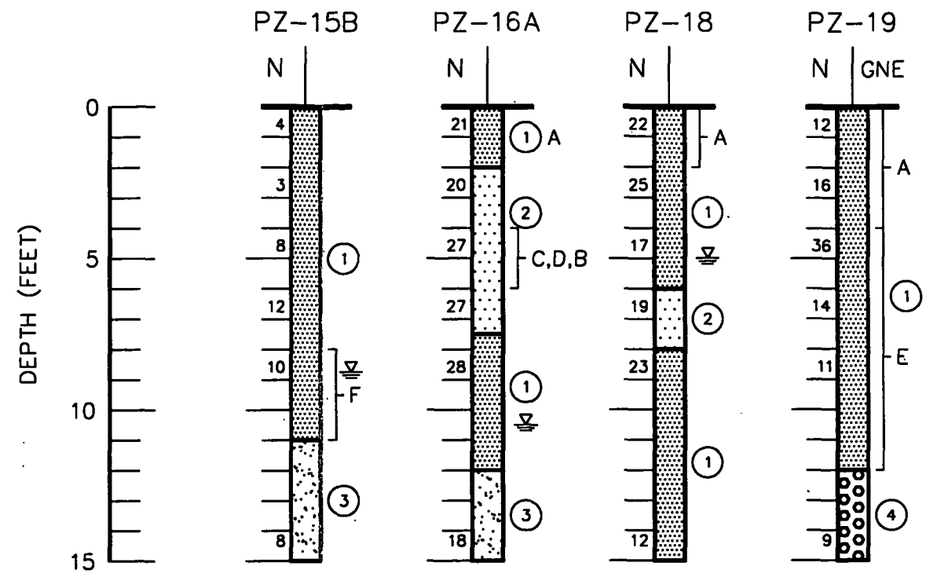
BORING LOCATION PLAN

NOT TO SCALE

——— EXISTING STAGE I SLURRY WALL

– – – – EXISTING STAGE II SLURRY WALL

– – – – EXISTING STAGE III SLURRY WALL



SOIL PROFILES

0 5'

VERTICAL SCALE

LEGEND

1. Tan to dark brown clean to slightly silty fine SAND (SP/SP-SM)
2. Tan to brown slightly silty fine SAND (SP-SM)
3. Light brown/gray silty fine SAND (SM)
4. Large phosphatic GRAVEL

SP Unified Soil Classification System (ASTM D 2487) *group symbol* as determined by visual review

Groundwater level, April 1998

GNE Groundwater level not encountered

N SPT N-value in blows/foot

A With highly fragmented marine shell

B With phosphatic gravel

C With clay streaks

D With fragmented rock

E With an assortment of landfill debris including rope, carpet, cable, wood, concrete

F With large wood fragments

Approximate boring location

DRAWN	NMR
CHECKED	LJS
APPROVED	KLB
SCALE	NOTED

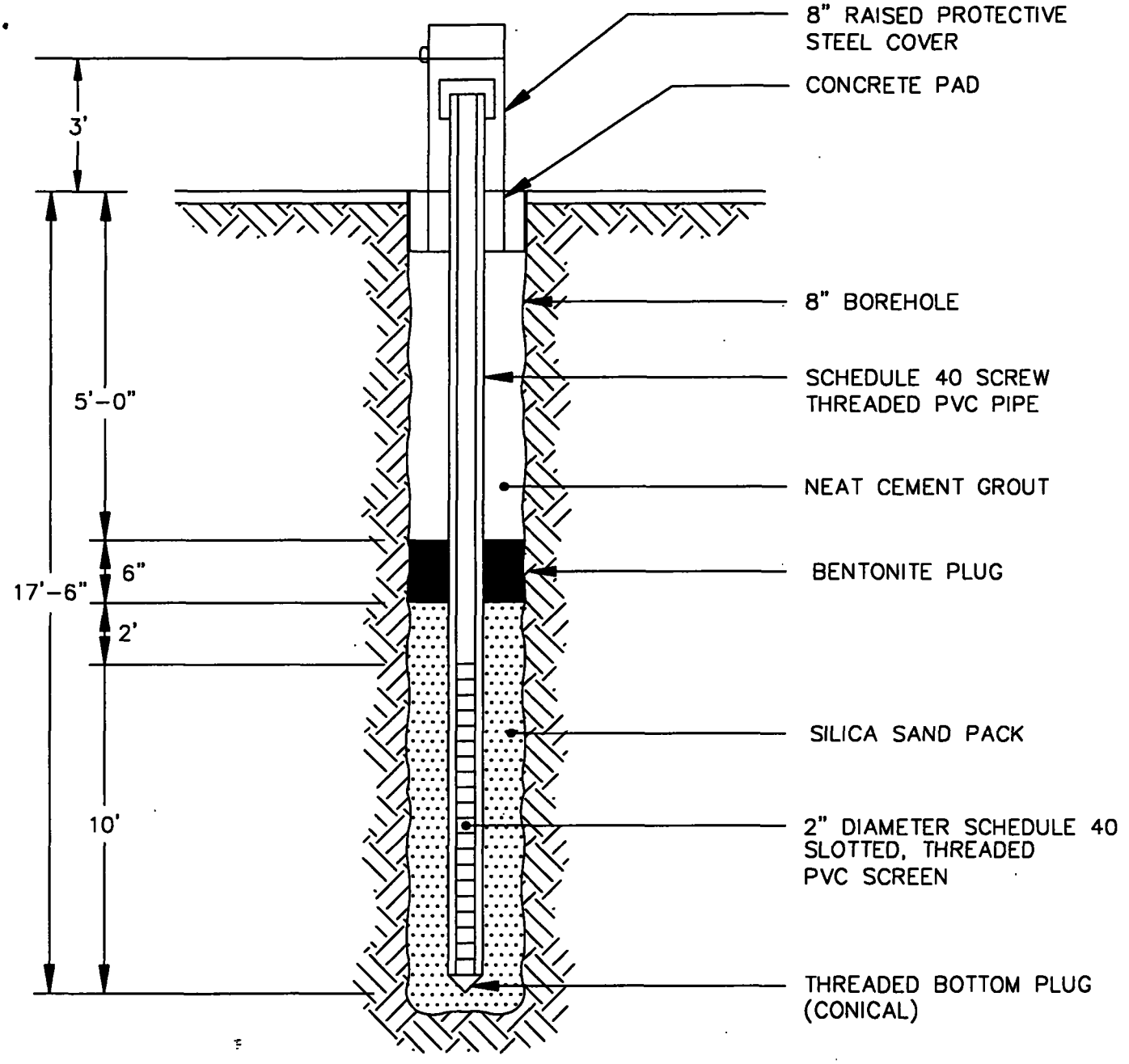
GEOTECHNICAL SERVICES

LENA ROAD LANDFILL

MANATEE COUNTY, FLORIDA

psi ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION

DATE	PROJ. NO.	SHEET
APR 98	387-74011	SHEET 1



MONITOR WELL DETAIL

GEOTECHNICAL SERVICES

LENA ROAD LANDFILL

MANATEE COUNTY, FLORIDA

psi ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION

DRAWN NMR	SCALE NOTED	PROJ. NO. 387-74011
CHECKED LJS	DATE APR 98	SHEET 2

Florida Department of

Memorandum — Environmental Protection

TO: Kim Ford, P.E.

FROM: Allison Amram, P.G. AA

SUBJECT: Lena Road Landfill Operation Permit Renewal response dated April 27, 1998

DATE: May 19, 1998

CC: John Morris, P.G.

==========

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The following comments are from the 1996/1997 Groundwater Monitoring Plan Biannual Evaluation dated December 31, 1997, and February 26, 1998 response prepared by Professional Service Industries, Inc. Please submit a copy of the February 26, 1998 response that is signed and sealed by the professional who conducted/oversaw the work.

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If the applicant has any questions, they may contact John Morris at 813/744-6100, ext. 336.

aa

MANATEE COUNTY GOVERNMENT

Public Works Department

RECEIVED
MAY 12 1998
Department of Environmental Protection
BY SOUTHWEST DISTRICT

May 11, 1998

Kim Ford, P.E.
Division of Waste Management
Department of Environmental Protection, South West District
3804 Coconut Palm Drive
Tampa, FL 33619

Re: Lena Road Landfill, Permit Renewal
Corrective Actions, Storm Water and Gradient Improvements

Dear Mr. Ford:

As discussed at our October 2, 1997 meeting, several modifications to the Stage I storm water management system and Stage III gradient site improvements are required before a new operating permit can be issued. Attached is one set of signed and sealed plans describing these improvements as discussed at the referenced meeting.

In summary, the plan calls for regrading and lining (clay) a portion of the Stage I storm water ditch, improvements to the existing filter ditch, provisions for more control of storm water exiting the storm water pond and a ditch block to provide for improved gradient control on the south side of Stage III. Your assistance in this matter is greatly appreciated. If you need additional information, please contact me (941) 748-5543.

Sincerely,

Benjamin L. Alex
Solid Waste Technical Coordinator

cc: Len Bramble, P.E., Director of Public Services
Dan Gray, Utilities Operations Manager
Gus DiFonzo, Solid Waste Manager
Bob Butera, P.E. FDEP
Clay Barth, P.E., MCPWD
Fred Sebesta, P.E., HDR

ADMINISTRATION • 4410 - 66th Street West, Bradenton, Florida 34210 • (941) 792-8811 • FAX (941) 795-3490

P.O. Box 25010, Bradenton, Florida 34206

HDR

April 30, 1998

Mr. Kim Ford, P.E.
Solid Waste Engineer
Florida Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, FL 33619-8318

RECEIVED
MAY 01 1998
Department of Environmental Protection
BY SOUTHWEST DISTRICT

RE: Lena Road Landfill
Renewal of Operation Permit
Permit Number: S041-211176
HDR Project Number: 07982-024-096

Dear Mr. Ford:

We have discovered our April 27, 1998 response to your January 28, 1998 comment letter regarding the Lena Road Landfill Operation Permit Renewal Application was incomplete and contained some inaccuracies. These are addressed below.

The list of enclosed items should have included the following items in addition to those listed in our April 27 letter:

- Corrected pages of the application form:
  - Page 24 of 36
  - Page 26 of 36
  - Page 28 of 36
  - Page 29 of 36
- Revised Part H, Hydrogeological Investigation
- Revised Stormwater/Leachate Management Plan

These items were included in our April 27 submittal.

The following items, (four copies of each are enclosed) were omitted from our April 27 submittal:

- Revised Part M, Special Waste Handling
- Letter from Professional Service Industries, Inc., dated February 26, 1998 (Our references to the December 31, 1997 letter from Professional Service Industries, Inc., should have been to this February 26, 1998 letter.

W:\MANATEE\OPERMIT\S106G053.WPD

HDR Engineering, Inc.
Employee-owned
Suite 300
5100 W. Kennedy Boulevard
Tampa, Florida
33609-1840
Telephone
813 282-2300
Fax
813 282-2449

Our response number 3 regarding Item G.8. should have read:

> Sormwater--A weir will be installed by Manatee County at the west end of the Stage I discharge ditch. Details will be provided upon installation.

We apologize for any inconvenience these oversights have caused. Please call me at (813) 282-2402 with any comments or questions.

Sincerely,

HDR ENGINEERING, INC.

Fred W. Sebesta

Fred W. Sebesta, P.E.
Senior Project Manager

Enclosures

cc: Len Bramble
Gus DiFonzo
Dan Gray
Ben Alex
Robert Butera
Greg Goodwin
Neal Poteet
Dave Pelham

PART M. SPECIAL WASTE HANDLING

1. MOTOR VEHICLES

Motor vehicles are not presently accepted for disposal or temporary storage at Lena Road Landfill while awaiting recycling. If the County wishes to accept motor vehicles for storage while awaiting recycling in the future, they will be stored temporarily in a separate area until they are removed for recycling. Any vehicles not recycled will have all fluids and batteries removed and will be compacted to minimize voids before being placed in the landfill area. A temporary storage area will be identified and approval of this area will be obtained from FDEP prior to accepting motor vehicles for temporary storage and recycling.

2. SHREDDED WASTE

Shredded municipal waste is not presently accepted for disposal at Lena Road Landfill. Shredded tires and/or automobile fluff may be accepted. Such waste will either be landfilled along with the municipal solid waste or, with FDEP approval, used to supplement daily cover soil.

3. ASBESTOS

Asbestos containing materials from sources covered under the National Emission Standards for Asbestos, 40 CFR Part 61, Subpart M are accepted at Lena Road Landfill, with prior approval of the County. These materials will be placed in the landfill by appointment only, covered with non-asbestos containing waste or soil, and the location will be recorded in accordance with 40 CFR Part 61.154. A record of the location of asbestos containing waste will be maintained.

4. CONTAMINATED SOIL

The following soils will be accepted at the discretion of the County:

- Soils contaminated with non-hazardous waste
- Petroleum contaminated soil which has been treated pursuant to Chapter 62-775, F.A.C.
- Soils which are not hazardous or meet any of the other prohibitions in Rule 62-701.300, F.A.C.

Properly treated petroleum contaminated soils may be used to supplement initial cover soil.

PSI Environmental Geotechnical Construction
Consulting • Engineering • Testing

February 26, 1998

D.E.P.
MAY 1 1998
SOUTHWEST DISTRICT
TAMPA

Department of Environmental Protection
Southwest District
Division of Waste Management
3804 Coconut Palm Drive
Tampa, Florida 33619

Attention: Mr. Kim B. Ford, P.E.
Solid Waste Section

Re: Response to FDEP Comments - 1996/1997
Groundwater Monitoring Plan Biannual Evaluation
Lena Road Landfill, Permit No. SO41-211176
Manatee County, Florida
PSI Project No. 552-4L015-138

Dear Mr. Ford:

Professional Service Industries, Inc. (PSI) has prepared responses to the Department comments dated August 7, 1996. The Department comments pertain to the Groundwater Monitoring Plan Biannual Evaluation prepared by PSI and dated December 31, 1997. PSI has the following responses to the Department's comments:

FDEP Comment No. 1: *Groundwater elevations in figures 6 and 7 are identical. Please provide corrected ground water maps (for the August and November 1996 sampling events.)*

Consultants Response to No. 1: The groundwater elevations shown on Figure 6, August 1996, were correct as shown. Figure 7 has been revised to include the groundwater elevations from November 18-20, 1996. The revised figure is included in Attachment A.

FDEP Comment No. 2: *Please provide a table with the most current top of casing elevation for all site monitoring wells and peizometers, and the well construction and boring logs for the following wells: MW-1, MW-2, MW-3, MW-4, SA-2 and SA-3. This information is incomplete in the FDEP's files.*

Consultants Response to No. 2: A table with the most current top of casing elevations is included in Attachment 2. There are currently no monitor wells at the Lena Road Landfill facility with the designation, MW-4. Well construction and boring logs for MW-1, MW-2, MW-3, MW-4, SA-2, and SA-3 could not be located.

FDEP Comment No. 3: *Arsenic has been found in the ground water at well GC-2 at concentrations above the ground water standards for 3 of the past 5 monitoring events. In each of these past 3 events, the concentrations have increased. Is there any reason for this increase? In accordance with Specific Condition No. 36, the contaminant has been confirmed and assessment monitoring as described in F.A.C. Rule 62-701.510 (7) should begin. Please initiate the requirement. It also appears that iron concentrations are highest in this well and the adjacent LRII-1.*

Consultants Response to No. 3: Our review of the field data sheets completed at the time of the last three sampling events indicates the initial turbidity of the purge water at GC-2 was relatively high (91.3 to 45.0 NTU). Generally the final turbidity, after low flow purging, was below the recommended 5 NTU, however, during the June 26, 1997 sampling event the final turbidity was 12.2 NTU. In accordance with the landfill's original Groundwater Monitoring Plan and FDEP technical documents for determining representative ground water samples, we recommend resampling GC-2, GC-3 and the background well SMR-1 in order to confirm that the concentration of arsenic detected is representative of actual ground water quality. The sampling procedures will be in accordance with FDEP technical guidelines and will be used to justify the use of field filtered samples for GC-2 for future compliance monitoring. The general procedure will be to purge the wells at <0.2 gallons per minute, collect split samples (one for field filtration and the other unfiltered) and analyze the split samples for arsenic in accordance with EPA Method 7060.

The conclusions included in the 1996/1997 Groundwater Monitoring Plan Biannual Evaluation remain essentially unchanged by the preceding corrections and recommendations.

PSI appreciates the opportunity to be of service on this important project. If you have any questions, please do not hesitate to contact us.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

David A. Stedje, P.G.
Project Hydrogeologist

Donald R. Polanis, Jr.
Environmental Services Manager

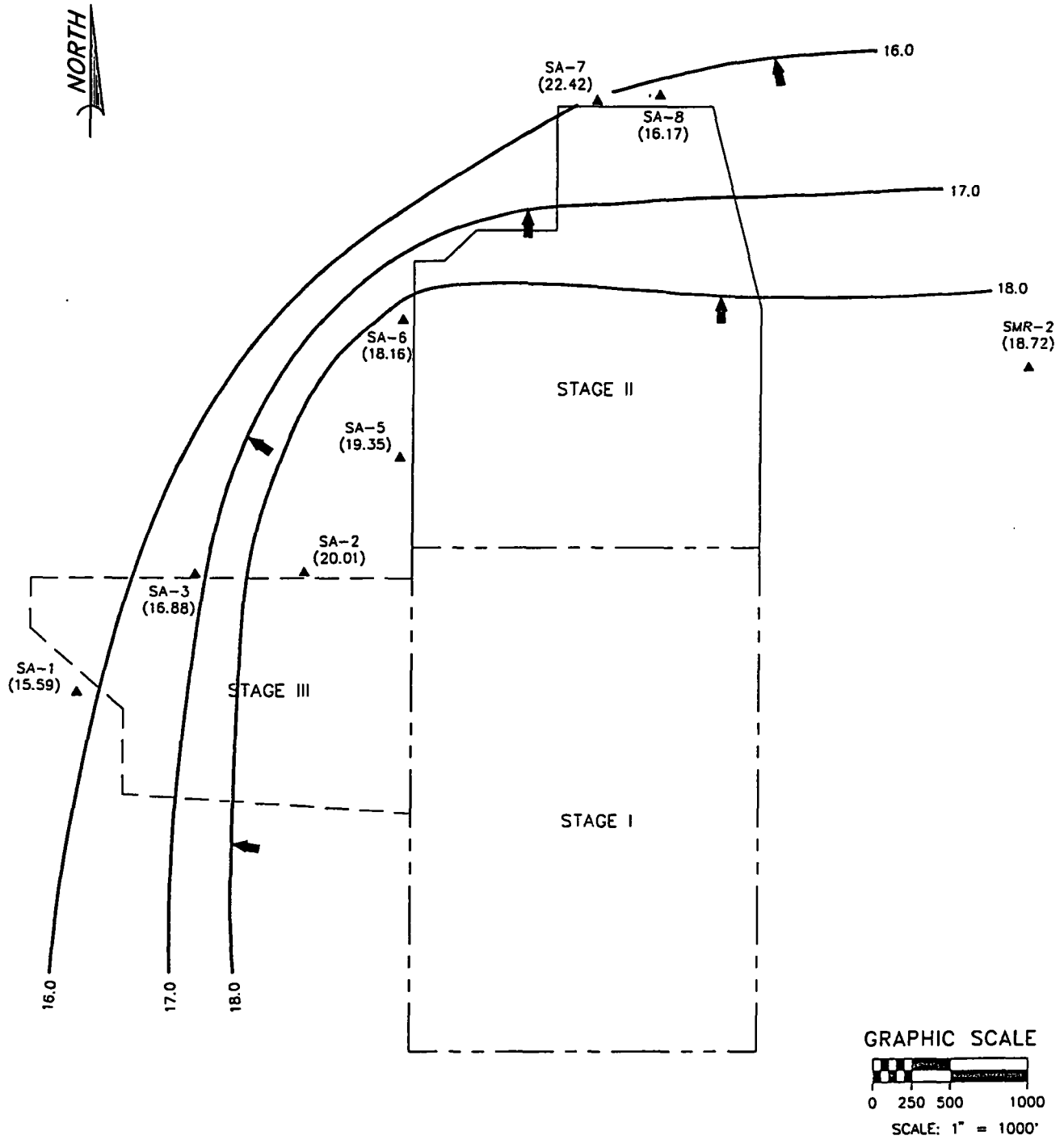
Attachments

Copy to: Ben Alex, Manatee County Public Works

98letters1\4L015-138-ltr-2-9-98.doc

psi

ATTACHMENT 1
Revised Groundwater Elevation Contour Map



LEGEND

- EXISTING STAGE I SLURRY WALL
- EXISTING STAGE II SLURRY WALL
- EXISTING STAGE III SLURRY WALL
- ▲ APPROXIMATE DEEP AQUIFER WELL LOCATION
- INFERRED DIRECTION OF GROUNDWATER FLOW

NOTE: DATA FROM SA-7 OMITTED FROM CONTOUR MAP

NOVEMBER 18-20, 1996

DEEP AQUIFER GROUNDWATER ELEVATION CONTOUR MAP

LENA ROAD LANDFILL

3333 LENA ROAD

BRADENTON, FLORIDA

psi Information To Build On

Engineering • Consulting • Testing

DRAWN BY: NMR	SCALE: 1" = 1000	PROJ. NO.: 552-4L015-138
CHKD. BY: OAS	DATE: 2/4/98	DWG.: 7

05201620v98.DWG

ATTACHMENT 2

Casing Elevation Table and Well Construction Logs

Table of Current Casing Elevations
Lena Road Landfill

Monitor Well #	Total Depth (ft)	Casing Height (ft)	NGVD [1] Elevation (ft)	Piezometer Well #	NGVD [2] Elevation (ft
Stage 1					
MW-1	14.53	1.83	38.71	PZ-3	44.93
MW-2	13.97	1.18	37.87	PZ-2	42.53
MW-3	13.37	3.08	40.07		
MW-5	21.42	3.00	39.96	PZ-1	42.53
MW-6	20.72	3.22	39.29	PZ-7	47.97
CW-4	17.94	2.94	37.54	PZ-4A	47.73
CW-5A	17.92	-	41.23	PZ-5	43.96
				PZ-6	45.04
Stage 2					
SA-5	153.02	3.02	37.87		
LR2-1	21.12	3.12	37.97	PZ-11	37.94
SA-6	153.04	3.04	36.20		
LR2-2	22.83	3.33	36.53	PZ-10	37.05
SA-7	152.97	2.97	39.83		
LR2-3	22.61	3.11	33.46	PZ-9	36.56
SA-8	153.38	3.38	34.44		
LR2-4	22.50	3.00	33,86		
LR2-5	22.78	3.26	36.74	PZ-8	37.63
Stage 3					
SA-2	154.93	2.97	37.97		
GC-2	18.03	3.03	38.19	PZ-12	38.39
SA-3	163.02	3.02	35.12		
GC-3	22.58	3.08	35.02	PZ-13	35.09
GC-4	21.80	3.88	33.91	PZ-14	33.47
SA-4	143.78	3.78	31.21		
GC-1A	23.76	4.26	31.74	PZ-15A	33.20
GC-5	22.02	4.02	36.50	PZ-16	34.63
GC-6	22.40	3.90	39.06	PZ-17	40.82
Background					
SMR-1	22.88	3.04	36.60		
SMR-2	150.00	2.70	36.22		

1 - Elevation from 11-2-94

2 - Elevations for PZ-1, PZ-4A, PZ-5, PZ-6, PZ-7 and PZ-15A from 4-15-96