

# Florida Department of Environmental Protection

Southwest District

Lawton Chiles, Governor

3804 Coconut Palm Dr.

813-744-6100

Tampa, Florida 33619

Virginia Wetherell, Secretary

June 11, 1993

Mr. J.R. Prestridge  
Hardee County  
Department of Solid Waste  
Post Office Box 246  
Wauchula, FL 33873

Re: Hardee County Solid Waste Facility  
Pending Permits: SO25-214306 (Class I Landfill)  
SO25-212896 (C & D Debris)  
WT25-209268 (Waste Tire Site)

Dear Mr. Prestridge:

This is to acknowledge receipt of supporting information related to the application for Hardee County Solid Waste Facility.

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

Your applications 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 applications [Chapter 17-701, Florida Administrative Code (F.A.C.)]:

1. Your March 17, 1993 cost estimates have been approved and have been forwarded to Mr. Fred Wick of the Solid Waste Section in Tallahassee. You are requested to work directly with him to obtain approval of Hardee County's financial responsibility documents.
2. Sufficient information has been provided in support of the construction and demolition debris disposal and waste tire site activities. These will be included as part of one permit when the other remaining issues are resolved.
3. Please provide your response to Ms. Allison Amram's June 11, 1993 attachment memorandum. Ms. Amram may be contacted at (813) 744-6100, extension 336.

4. The sequence of filling shown on plans is not sufficient. Leachate generation must be minimized, and also prevented from running off active areas into adjacent stormwater system by constructing berms or ditches. Initial or intermediate cover that may receive leachate shall be graded to shed runoff into the leachate collection system and to minimize mixing of leachate runoff and stormwater. Bales shall be stacked to prevent leachate runoff outside disposal area. Provide rationale in support of structural integrity of the landfill side slopes and top final cover utilizing waste bales. Include frequency of cover and cover depth over stacked bales as well as the depth of bales stacked prior to covering. The filling sequence should be clearly described in 3 month increments until such time as the sequence is repeated or the area has reached final contours.

The drawing provided shows an outdated filling sequence and lacks the detail required to properly operate the landfill. Provide plans and cross-sections showing all berms, berm details, access roads and details, side slopes with intermediate cover, and operation schedule for using future high rise area, and schedule for closure. If any areas will be closed within five years, Hardee County should consider developing closing plans. A recent site inspection showed eroded side slopes. Describe measures to correct and prevent future erosion of intermediate cover.

5. The hydrogeologic evaluation by Mevers & Associates verifies that leachate spray irrigated discharges to the creek south of the sprayfield. This is an unauthorized discharge in violation of Department rules and must be corrected. The current spraying operation is similar to recirculation and shall meet the requirements of FAC Rule 17-701.400(5). Leachate management shall meet the requirements of FAC Rule 17-701.500(8). Corrective action plans are required to demonstrate reasonable assurance that leachate will be collected and removed. Lining the south side of the sprayfield appears to be essential to facilitate leachate collection and to prevent unauthorized discharges of leachate. The current and proposed spraying techniques do not demonstrate removal. Removal includes basically two options:
  1. Evaporation (no mounding)
  2. Off-site treatment

Mr. J.R. Prestridge  
Hardee County  
Department of Solid Waste

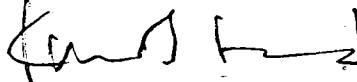
June 11, 1993  
Page Three

Wade-Trim has requested more time to gather needed information to design leachate management systems. Please be advised: The information needed was requested by FDER on March 22, 1993, see attached letter. Further delays are unacceptable and may result in permit denial and subsequent enforcement action.

"NOTICE! Pursuant to the provisions of Section 120.600, F.S. and Chapter 17-12.070(5), F.A.C., if the Department does not receive a response to this request for information within 30 days of the date of this letter, the Department may issue a final order denying your application. 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."

If there are points which must be discussed and resolved, please contact me at (813) 744-6100, extension 382.

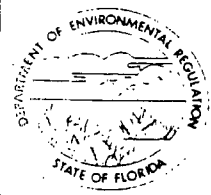
Sincerely,



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

KBF/ab  
Attachments

cc: Steven Dutch, P.E., Wade-Trim  
David Mevers, P.E., Mevers & Associates  
Robert Butera, P.E., FDER Tampa  
Steve Morgan, FDER Tampa  
Allison Amram, P.G., FDER Tampa  
Kathy Anderson, FDER Tallahassee  
Fred Wick, FDER Tallahassee



State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

# Interoffice Memorandum

TO: Kim Ford, P.E.

THROUGH: Robert Butera, P.E. *RB*

FROM: Allison Amram, P.G. *Amram*

DATE: June 11, 1993

SUBJECT: Hardee County Landfill  
Pending Permit No.: SO25-214306

The Solid Waste Section has reviewed the May 17, 1993 submittal from Mevers & Associates addressing the Department's April 13, 1993 comments on the Hardee County Landfill. The following comments need to be addressed:

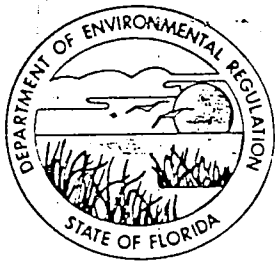
- 1) The data provided for the field permeability in the recent submittal states that the piezometers have 15 feet of well screen. The March 1993 submittal shows the boring information from these piezometers ending at 15 feet or less. Please provide the entire piezometer boring logs and construction details. This information is needed to evaluate the permeability calculations.
- 2) The MODFLOW model was reviewed from the data disk provided by Mevers & Associates. The model, as constructed, defined both monitoring wells, piezometers and surface waters to be constant head nodes. As leachate spraying continues, these surface water and groundwater elevations change. The model was re-run using variable heads for these nodes, and a mounding effect was still observed in the sprayfield. Under current conditions, it appears that the leachate has created a groundwater mound that is moving toward the south, unlined area of the sprayfield. This migration is not acceptable to the Department. Alternatives need to be presented to the Department to provide reasonable assurance that the leachate is managed in a manner that will not degrade surface or groundwaters. This comment is also included in attached letter from Mr. Kim Ford.



3) The following comments refer to the Groundwater Monitoring Plan:

- The Groundwater Monitoring Plan mentions that eight (8) monitoring wells will be monitored, but only seven (7) are present on Plate 4. The Department assumes that these seven monitoring well (MW-1 through MW-7) are all to be monitored in this plan. Is the eighth well the one proposed in the March 1993 submittal to monitor the sprayfield? Please clarify, and provide the location, proposed well construction and purpose of this well.
- Lead shall be sampled quarterly in all groundwater monitoring wells. It appears that this parameter was inadvertently left out of the listed parameters in Section 3 of the submittal.
- Piezometer construction and boring log data must be provided before a determination on the use of these monitoring points can be made (see comment no. 1).
- Leachate sampling for the parameters listed in Chapter 17-701.510 (8)(c) shall be analyzed quarterly. Sampling frequency was not clear in the May 1993 submittal.
- All groundwater monitoring points shall be measured to 0.01 feet accuracy. There is a typographical error in Chapter 17-701.510(9)(a)8 that will be changed in the next rule revision.
- The monitoring plan mentions surface water sampling, but no sampling points are stated. Are there surface water monitoring points at the landfill that will be included in the monitoring plan? If so, please provide these locations.

Please provide two (2) copies of your response to these comments to facilitate the Department's review.



# Florida Department of Environmental Regulation

**Southwest District**

Lawton Chiles, Governor

3804 Coconut Palm

813-744-6100

Tampa, Florida 33619

Virginia B. Wetherell, Secretary

MAR 22 1993

J.R. Prestridge  
Superintendent  
Hardee County Solid Waste  
74 Hanchy Road  
Wauchula, FL 33873

RE: Hardee County Landfill  
Permit No. SO25-096551  
Quantity Report

Dear Mr. Prestridge:

The Department requests the following information and/or reports to be submitted prior to May 15, 1993. Please provide daily records from January 1, 1993 through April 1, 1993 for the following:

- \* Quantities of leachate collected
- \* Quantities of leachate stored or impounded
- \* Quantities of leachate recirculated
- \* Quantities of leachate hauled or piped to a wastewater treatment plant

This information will be evaluated by the Department. Design or operational changes may be needed to prevent unauthorized discharges or excessive head over lined disposal areas. If you have any questions, you may call me at (813) 744-6100 ext. 382.

Sincerely,

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

cc: Robert Butera, FDER Tampa  
Steve Morgan, FDER Tampa  
Kathy Anderson, FDER Tallahassee

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION  
RESOURCE RECOVERY AND MANAGEMENT FACILITY INSPECTION REPORT

GMS I.D. No. \_\_\_\_\_

Inspection Date: 5/21/93

Facility Name: LAUREL Permit No.: 5025-04655 Expiration Date: 5/1/92

Address (or location by section, township and range): \_\_\_\_\_

City: WACARA State: \_\_\_\_\_ Zip: \_\_\_\_\_

Permittee or Operating Authority: \_\_\_\_\_

Address (Mailing): \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone Number (Permittee or Operating Authority): ( ) \_\_\_\_\_

Inspection Participants - Include All Landfill and Department Employees Specifying Titles (Indicate Principal Inspector) Kim Ford, Bob Bostrom

TYPE OF FACILITY:

Sanitary Landfill

☒ Class I

☐ Class II

☐ Class III: Trash/Yard Trash

☐ Class III: Yard Trash Composting

Volume Reduction

☐ Composting

☐ Shredder

☐ Incinerator/Trench Burner

☐ Resource Recovery

☐ Energy ☐ Materials

TYPE OF INSPECTION:

☐ Construction Completion (\_\_\_\_ phase)

☐ Operation

☐ Closure

☐ Post-Closure

☐ Reinspection

☐ Complaint Response

☐ Facility File Review

☐ Other

REQUIREMENTS

THE REQUIREMENTS LISTED ON THIS INSPECTION REPORT ARE BASED UPON RULES OF THE FLORIDA ADMINISTRATIVE CODE. A "NO" RESPONSE TO A REQUIREMENT (UNLESS OTHERWISE NOTED) REFLECTS A VIOLATION OF THE CORRESPONDING DEPARTMENT RULE(S). EACH VIOLATION IS DISCUSSED IN THE NARRATIVE SECTION OF THIS REPORT.

I CONSTRUCTION VERIFICATION

1. Subgrade or foundation adequately prepared? 17-7.050(4)(a)(d)
2. Liner construction/installation according to plans? 17-7.050(4)(a)(c)(d)
3. Leachate control system installation according to plans? 17-7.050(4)(e)(f)
4. Surface water management system construction according to plans? 17-7.050(4)(g)(h)
5. Gas control system installation according to plans? 17-7.050(4)(i)(j)
6. Groundwater monitoring system constructed per approved plan? 17-7.050(3)(e)(5)(a)

II OPERATIONS

7. Copy of approved drawings, plans, reports, operational plan, supporting information, and permit kept on-site? 17-7.030(8)
8. All permit specific conditions complied with? 17-7.030(1)
9. Only permitted waste types disposed of? 17-7.050(1)
10. Sludge properly disposed of at site (indicate type in "comments")? 17-7.050(1)
11. Waste quantity/type records kept and forwarded as required? 17-7.050(5)(c)
12. Weighing or measuring of incoming waste? 17-7.050(5)(b)
13. Method and sequence of filling waste according to plans? 17-7.050(5)(b)
14. Waste compaction as required? 17-7.050(5)(j)
15. Working face/grades above ground no greater than a slope of 30 degrees? 17-7.050(5)(k)
16. Narrow working face practiced? 17-7.050(5)(l)
17. Attendant present? 17-7.050(5)(d)
18. Sufficient operating equipment? 17-7.050(5)(e)
19. Sufficient reserve equipment (or other arrangements)? 17-7.050(5)(e)
20. Safety devices on equipment to shield and protect operators? 17-7.050(5)(e)
21. Adequate communication facilities? 17-7.050(5)(d)
22. Salvaging or resource recovery under control of operating authority? 17-7.050(5)(q)
23. Burning of allowable wastes only, in a properly operated incinerator/trench burner with a valid air permit? 17-7.060(1)
24. Proper control or disposal of asbestos and other special wastes? 17-7.060
25. Required signs for operational directions and public information? 17-7.050(5)(c)

Yes	No	Unk	N/A
			<input checked="" type="checkbox"/>
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Department copy (white)  
Facility copy (yellow)

# REQUIREMENTS

## III MAINTENANCE

26. Effective and intact barrier to prevent unauthorized entry and dumping? 17-7.050(5)(c)
27. Adequate vector control by approved methods? 17-7.050(5)(p)
28. Disposal area easily accessible? 17-7.050(2)(c)(5)(c)
29. Retention and/or detention ponds/ditches, culverts, berms maintained? 17-7.050(4)(g)(h)
30. Adequate approved dust control methods? 17-7.050(5)(c)
31. Litter control maintained? 17-7.050(5)(c)
32. Fire protection and fire fighting facilities adequate and operational? 17-7.050(5)(c)
33. Groundwater wells intact and functioning properly? 17-7.075(6)
34. Gas vents intact and functioning properly? 17-7.050(5)(i)

## IV WATER MANAGEMENT AND MONITORING

35. Groundwater sampling and testing according to standard procedures and at required frequency? 17-7.050(3)(e)(5)(a)
36. Mixing of leachate and stormwater prevented or minimized? 17-7.050(4)(h)
37. Stormwater runoff controlled, collected, treated as required? 17-7.050(4)(h)(5)(g)
38. Leachate control, collection and treatment as required? 17-7.050(4)(e)(5)(h)

## COVER

39. Adequate quantity of acceptable cover material on hand? 17-7.050(2)(c)
40. Frequency, amount and quality of initial cover, as required? 17-7.050(5)(m)
41. Frequency, amount and quality of intermediate cover, as required? 17-7.050(5)(n)
42. Frequency, amount and quality of final cover, as required? 17-7.050(5)(o); 17-7.073(6)(c)
43. Adequate erosion control? 17-7.073(6)(c)

## VI CLOSURE

44. Final cover installation according to approved design plans and present condition and function adequate? 17-7.073(6)(c)
45. Facility meets closure requirements prohibiting unauthorized dumping? 17-7.073(6)(h)
46. All actions for closure completed satisfactorily according to approved closure operation plan? 17-7.073(7)
47. Final survey and as-built report with all survey monuments and other permanent markers installed satisfactorily? 17-7.074(2)(3)
48. Authorized use of closed landfill and integrity of environmental protection measures maintained? 17-7.074(6)(7)
49. Long term care performed adequately? 17-7.075

## VII NON-LANDFILL SITES

50. Volume reduction plant operation in compliance with all permit conditions and other applicable requirements? 17-7.090
51. Transfer station operation in compliance with all requirements and general permit conditions? 17-7.091
52. Milling facility in compliance with all required conditions of operation? 17-7.060(4)
53. Resource recovery facility in compliance with all permit conditions and applicable requirements? 17-7.090

## VIII NARRATIVE

Explanation for all "no" responses and other comments (continue on separate sheet if necessary)

#13. ~~NO~~ SEQUENCE TO PREVENT UNAUTHORIZED ENTRY AND DUMPING (ALSO #36, 38.)  
 #41. INTERMEDIATE COVER ON SIDE SLOPE BROKE (ALSO #43.)  
 #51. MUST COVER TRUCKS HAVING BAILS TO DISPOSAL AREA

TO PREVENT LEACHATE  
 #31. LITTER OUTSIDE LINES

#33. NEED INSIDE CAPS ON G.W. WELLS

Signed: *[Signature]*  
 DER Representative

Date: 5/24/93

Received:

*[Signature]*  
 Site Representative

Date: 5/21-93

Department copy (white)  
 Facility copy (yellow)



# Wade-Trim

4919 Memorial Highway, Suite 200  
Tampa, FL 33634  
(813) 882-8366 • FAX: (813) 884-5990

# Letter of Transmittal

WT189-01

If transmitted items are not as noted, notify writer immediately.

Date: 5/17/93

To: Kim Ford Attn: \_\_\_\_\_

FDER

Tampa FL

RE: Hardee County L.F.

Transmitted: ☐ change order ☐ copy of letter ☐ drawings ☐ prints ☐ product literature  
☐ samples ☐ shop drawings ☐ specs ☐ tracings ☐ disks  
☐ work orders ☐ plans  
☒ other Computer Disk

Copies	Date or No.	Description
1		Computer Disk w/ Modflow files

For your: ☐ action ☐ approval ☐ information ☐ records/files ☐ review & comment  
☐ use ☐ signature

Remarks: Inadvertently, left out of package ~~and~~ submitted  
yesterday (5/17)

Copy to:

By: [Signature]

Job No. HAR 200 1.01

C: EMACS - b: hard bas

↳ editor

escape O → insert mode

~~Q~~ hard. bas

escape S - save  
enter to resave file name

escape Q - quit file

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
SOUTHWEST DISTRICT  
4520 OAK FAIR BOULEVARD  
TAMPA, FLORIDA 33610-7347

HADES  
CAMERON  
MODERATOR  
5/17/93

*Protecting Florida and Your Quality of Life*

# Media Insert

Dep Box Number: DWM-SWD-SW-201

Pride Box Number: DEPS-S11 B1762

PreIndex ID Number: 1552067

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<input type="text"/>	→	<input type="text" value="Negatives"/>
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Notes:

**HARDEE COUNTY**

**LANDFILL  
MUDFLOW FILES**

**5/17/1993**



0

TIME SUMMARY AT END OF TIME STEP 1 IN STRESS PERIOD 1	SECONDS	MINUTES	HOURS	DAYS	YEARS
TIME STEP LENGTH	0.315360E+08	525600.	8760.00	365.000	0.999316
STRESS PERIOD TIME	0.315360E+08	525600.	8760.00	365.000	0.999316
TOTAL SIMULATION TIME	0.315360E+08	525600.	8760.00	365.000	0.999316

1

1 3. GEOLOGICAL SURVEY MODU. : FINITE-DIFFERENCE GROUND-WATER MODEL  
 OHARDEE COUNTY LANDFILL  
 1 LAYERS 28 ROWS 30 COLUMNS  
 1 STRESS PERIOD(S) IN SIMULATION  
 MODEL TIME UNIT IS DAYS  
 OI/O UNITS:  
 ELEMENT OF IUNIT: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24  
 I/O UNIT: 3 0 0 0 0 0 0 0 11 12 0 0 14 0 0 0 0 0 0 0 0 0 0  
 OBAS1 -- BASIC MODEL PACKAGE, VERSION 1, 9/1/87 INPUT READ FROM UNIT 1  
 ARRAYS RHS AND BUFF WILL SHARE MEMORY.  
 START HEAD WILL BE SAVED  
 7622 ELEMENTS IN X ARRAY ARE USED BY BAS  
 7622 ELEMENTS OF X ARRAY USED OUT OF 517000  
 OBCF1 -- BLOCK-CENTERED FLOW PACKAGE, VERSION 1, 9/1/87 INPUT READ FROM UNIT 3  
 STEADY-STATE SIMULATION  
 CONSTANT HEAD CELL-BY-CELL FLOWS WILL BE PRINTED  
 LAYER AQUIFER TYPE  
 -----  
 1 1  
 1681 ELEMENTS IN X ARRAY ARE USED BY BCF  
 9303 ELEMENTS OF X ARRAY USED OUT OF 517000  
 ORCH1 -- RECHARGE PACKAGE, VERSION 1, 9/1/87 INPUT READ FROM UNIT 11  
 OPTION 1 -- RECHARGE TO TOP LAYER  
 840 ELEMENTS OF X ARRAY USED FOR RECHARGE  
 10143 ELEMENTS OF X ARRAY USED OUT OF 517000  
 OSIP1 -- STRONGLY IMPLICIT PROCEDURE SOLUTION PACKAGE, VERSION 1, 9/1/87 INPUT READ FROM UNIT 12  
 MAXIMUM OF 50 ITERATIONS ALLOWED FOR CLOSURE  
 5 ITERATION PARAMETERS  
 3565 ELEMENTS IN X ARRAY ARE USED BY SIP  
 13708 ELEMENTS OF X ARRAY USED OUT OF 517000  
 1HARDEE COUNTY LANDFILL  
 0

BOUNDARY ARRAY FOR LAYER 1 WILL BE READ ON UNIT 1 USING FORMAT: (30I3)  
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OAQUIFER HEAD WILL BE SET TO 999.99 AT ALL NO-FLOW NODES (IBOUND=0).  
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INITIAL HEAD FOR LAYER 1 WILL BE READ ON UNIT 1 USING FORMAT: (30F10.0)  
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OHEAD PRINT FORMAT IS FORMAT NUMBER -9 DRAWDOWN PRINT FORMAT IS FORMAT NUMBER 0  
 OHEADS WILL BE SAVED ON UNIT 20 DRAWDOWNS WILL BE SAVED ON UNIT 20  
 OOUTPUT CONTROL IS SPECIFIED EVERY TIME STEP  
 0 COLUMN TO ROW ANISOTROPY = 1.000000  
 0

DELR WILL BE READ ON UNIT 3 USING FORMAT: (30F10.0)  
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DELC WILL BE READ ON UNIT 3 USING FORMAT: (28F10.0)  
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✓ HYD. COND. ALONG ROWS = 5.000000 FOR LAYER 1

BOTTOM FOR LAYER 1 WILL BE READ ON UNIT 3 USING FORMAT: (30F10.0)  
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# SOLUTION BY THE STRONGLY IMPLICIT PROCEDURE

MAXIMUM ITERATIONS ALLOWED FOR CLOSURE = 50  
 ACCELERATION PARAMETER = 1.0000  
 HEAD CHANGE CRITERION FOR CLOSURE = 0.10000E-01  
 SIP HEAD CHANGE PRINTOUT INTERVAL = 999  
 CALCULATE ITERATION PARAMETERS FROM MODEL CALCULATED WSEED  
 STRESS PERIOD NO. 1, LENGTH = 365.0000

NUMBER OF TIME STEPS = 1

MULTIPLIER FOR DELT = 1.000

INITIAL TIME STEP SIZE = 365.0000  
 RECHARGE = 0.5000000E-02

O AVERAGE SEED = 0.00144803  
 MINIMUM SEED = 0.00024738

5 ITERATION PARAMETERS CALCULATED FROM AVERAGE SEED:

0.0000000E+00 0.8049283E+00 0.9619470E+00 0.9925770E+00 0.9985520E+00

15 ITERATIONS FOR TIME STEP 1 IN STRESS PERIOD 1

OMAXIMUM HEAD CHANGE FOR EACH ITERATION:

O HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL

4.432 ( 1, 14, 3) 3.085 ( 1, 12, 22) 5.136 ( 1, 22, 9) 9.252 ( 1, 11, 23) 1.385 ( 1, 23, 20)  
 -0.4330 ( 1, 22, 10) -0.3199 ( 1, 18, 16) -0.4066 ( 1, 17, 19) -0.4644 ( 1, 18, 20) -0.3467 ( 1, 11, 23)  
 -0.3422E-01 ( 1, 7, 9) -0.3631E-01 ( 1, 9, 8) 0.2805E-01 ( 1, 19, 22) 0.5521E-01 ( 1, 11, 23) -0.7011E-02 ( 1, 24, 10)

O HEAD/DRAWDOWN PRINTOUT FLAG = 1 TOTAL BUDGET PRINTOUT FLAG = 1 CELL-BY-CELL FLOW TERM FLAG = 0

O OUTPUT FLAGS FOR ALL LAYERS ARE THE SAME:

HEAD DRAWDOWN HEAD DRAWDOWN  
 PRINTOUT PRINTOUT SAVE SAVE

1 0 1 0  
 HEAD IN LAYER 1 AT END OF TIME STEP 1 IN STRESS PERIOD 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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0 2	82.00	83.02	83.50	83.75	83.84	83.86	83.76	83.52	82.77	82.50	82.41	82.38	82.38	82.38	82.38	82.38	82.38	82.39	82.40	82.43
0 3	82.00	83.68	84.48	84.92	85.10	85.13	84.99	84.66	83.13	82.71	82.57	82.54	82.53	82.53	82.53	82.52	82.53	82.54	82.56	82.59
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0 5	82.00	84.33	85.49	86.12	86.40	86.46	86.31	86.06	86.30	85.01	82.60	80.22	79.30	79.27	79.94	81.62	84.02	86.95	90.03	92.39
0 6	82.00	84.72	86.08	86.83	87.18	87.26	87.09	86.77	86.45	85.05	82.53	79.57	77.15	77.00	78.01	81.08	83.88	86.91	90.02	92.38
0 7	82.00	85.23	86.87	87.78	88.23	88.33	88.13	87.65	86.82	85.20	82.45	79.09	76.55	74.00	77.43	80.62	83.63	86.81	89.97	92.34
0 8	82.00	85.71	87.60	88.68	89.22	89.36	89.11	88.49	87.38	85.54	82.60	79.12	76.41	74.00	77.07	80.33	83.41	86.65	89.84	92.21
0 9	82.00	86.05	88.12	89.32	89.94	90.10	89.84	89.15	87.92	85.96	82.91	79.38	76.69	74.00	77.29	80.26	83.22	86.44	89.65	92.04
0 10	82.00	86.29	88.49	89.78	90.46	90.67	90.42	89.71	88.45	86.46	83.34	79.69	76.88	74.00	77.34	80.23	83.05	86.24	89.44	91.85
0 11	82.00	86.42	88.69	90.03	90.73	90.99	90.78	90.10	88.87	86.92	83.83	80.08	77.12	74.00	77.28	80.23	83.08	86.13	89.24	91.68
0 12	82.00	86.48	88.78	90.15	90.90	91.16	90.97	90.32	89.13	87.22	84.21	80.45	77.37	74.00	77.30	80.35	83.14	86.05	89.08	91.58
0 13	82.00	86.53	88.85	90.24	91.01	91.30	91.13	90.51	89.36	87.51	84.62	80.98	77.80	74.00	77.49	80.60	83.24	85.93	88.87	91.52
0 14	82.00	86.56	88.91	90.31	91.10	91.41	91.28	90.70	89.59	87.83	85.12	81.83	78.80	74.00	78.33	81.15	83.34	85.73	88.54	*****
0 15	82.00	86.59	88.95	90.37	91.18	91.52	91.42	90.88	89.83	88.16	85.68	83.13	81.81	81.29	81.34	82.09	83.39	85.43	*****	93.30
0 16	82.00	86.60	88.97	90.40	91.24	91.60	91.54	91.05	90.06	88.49	86.21	84.08	83.20	82.81	82.50	82.56	83.15	*****	93.69	93.32
0 17	82.00	86.61	88.98	90.42	91.27	91.66	91.65	91.22	90.29	88.81	86.68	84.60	83.93	83.71	*****	*****	*****	93.87	93.68	93.31
0 18	82.00	86.60	88.97	90.42	91.29	91.71	91.74	91.38	90.51	89.13	87.11	*****	*****	*****	93.83	93.84	93.84	93.83	93.64	93.26
0 19	82.00	86.58	88.95	90.40	91.28	91.73	91.81	91.54	90.73	89.43	*****	93.65	93.68	93.71	93.75	93.78	93.79	93.75	93.55	93.18
0 20	82.00	86.54	88.90	90.35	91.24	91.72	91.86	91.70	90.93	*****	93.36	93.54	93.60	93.63	93.65	93.67	93.68	93.63	93.45	93.05
0 21	82.00	86.50	88.83	90.27	91.17	91.67	91.88	91.87	*****	92.93	93.25	93.41	93.46	93.48	93.50	93.52	93.52	93.46	93.26	92.89

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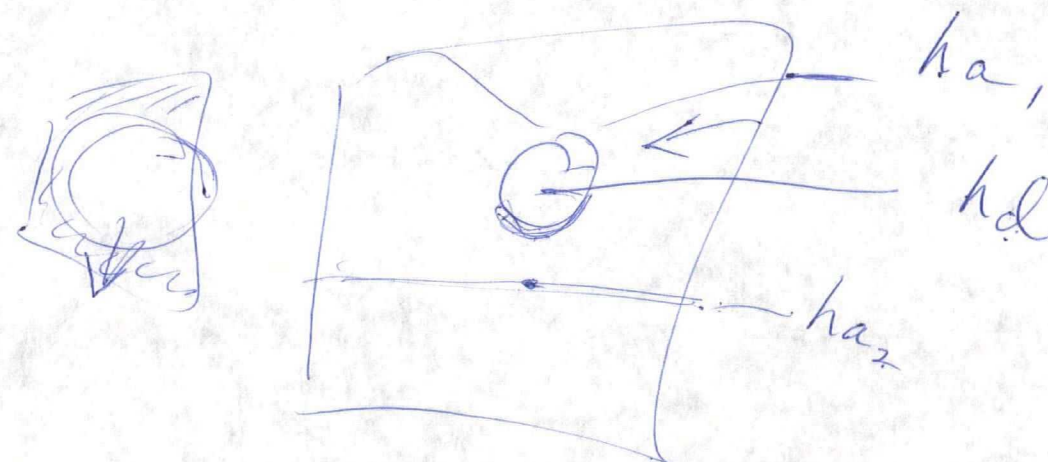
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 1 HEAD IN LAYER 1 AT END OF TIME STEP 1 IN STRESS PERIOD 1

	21	22	23	24	25	26	27	28	29	30
0 1	82.00	82.00	82.00	82.00	82.00	82.00	82.00	82.00	82.00	82.00
0 2	82.42	82.42	82.45	82.48	82.51	82.52	82.51	82.47	82.34	82.00
0 3	82.59	82.59	82.62	82.67	82.70	82.70	82.68	82.64	82.46	82.00
0 4	*****	*****	*****	*****	*****	*****	*****	82.68	82.49	82.00
0 5	94.17	95.48	96.37	96.76	96.93	96.99	*****	82.70	82.51	82.00
0 6	94.16	95.46	96.36	96.75	96.92	96.99	*****	82.71	82.52	82.00
0 7	94.11	95.42	96.32	96.71	96.89	96.96	*****	82.71	82.52	82.00
0 8	94.01	95.31	96.22	96.63	96.81	96.89	*****	82.73	82.53	82.00
0 9	93.84	95.17	96.09	96.52	96.71	96.79	*****	82.86	82.61	82.00
0 10	93.63	94.96	95.90	96.40	96.62	96.70	*****	83.24	82.85	82.00
0 11	93.42	94.74	95.69	*****	*****	*****	84.67	84.28	83.38	82.00
0 12	93.26	94.59	*****	88.51	87.84	86.83	85.87	84.98	83.71	82.00
0 13	93.09	*****	90.09	88.84	87.99	87.00	86.20	85.32	83.91	82.00
0 14	*****	91.56	90.27	89.07	88.15	87.16	86.38	85.52	84.04	82.00
0 15	92.72	91.68	90.41	89.22	88.29	87.28	86.50	85.64	84.13	82.00
0 16	92.72	91.76	90.51	89.32	88.38	87.37	86.59	85.71	84.18	82.00
0 17	92.71	91.79	90.57	89.39	88.44	87.41	86.63	85.76	84.21	82.00
0 18	92.67	91.79	90.60	89.42	88.46	87.44	86.66	85.78	84.23	82.00
0 19	92.60	91.75	90.59	89.41	88.46	87.44	86.66	85.79	84.23	82.00
0 20	92.49	91.68	90.53	89.37	88.43	87.42	86.65	85.78	84.23	82.00
0 21	92.34	91.56	90.45	89.31	88.38	87.39	86.63	85.76	84.23	82.00
0 22	92.15	91.40	90.32	89.22	88.32	87.34	86.59	85.74	84.22	82.00
0 23	91.80	91.09	90.07	89.03	88.16	87.21	86.48	85.66	84.17	82.00
0 24	91.05	90.42	89.51	88.56	87.76	86.88	86.20	85.43	84.04	82.00
0 25	89.84	89.32	88.56	87.75	87.07	86.31	85.71	85.03	83.80	82.00
0 26	88.13	87.76	87.20	86.59	86.07	85.47	85.00	84.46	83.47	82.00
0 27	85.70	85.50	85.21	84.87	84.57	84.23	83.94	83.60	82.97	82.00
0 28	82.00	82.00	82.00	82.00	82.00	82.00	82.00	82.00	82.00	82.00

OHEAD WILL BE SAVED ON UNIT 20 AT END OF TIME STEP 1, STRESS PERIOD 1



# VOLUMETRIC BUDGET FOR ENTIRE MODEL AT END OF TIME STEP 1 IN STRESS PERIOD 1

	CUMULATIVE VOLUMES	L**3	RATES FOR THIS TIME STEP	L**3/T
0	IN:		IN:	
	STORAGE =	0.00000	STORAGE =	0.00000
	CONSTANT HEAD =	0.00000	CONSTANT HEAD =	0.00000
	RECHARGE =	0.57493E+07	RECHARGE =	15752.
0	TOTAL IN =	0.57493E+07	TOTAL IN =	15752.
0	OUT:		OUT:	
	STORAGE =	0.00000	STORAGE =	0.00000
	CONSTANT HEAD =	0.57490E+07	CONSTANT HEAD =	15751.
	RECHARGE =	0.00000	RECHARGE =	0.00000
0	TOTAL OUT =	0.57490E+07	TOTAL OUT =	15751.
0	IN - OUT =	256.00	IN - OUT =	0.70117
0	PERCENT DISCREPANCY =	0.00	PERCENT DISCREPANCY =	0.00



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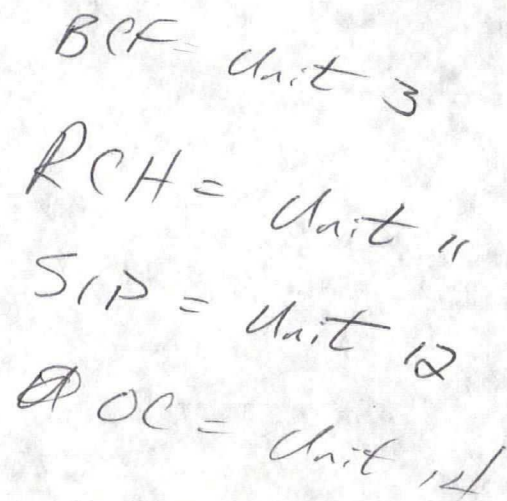
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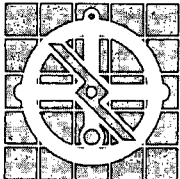
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May 14, 1993

RECEIVED  
MAY 17 1993

Department of Environmental Regulation  
SOUTH WEST DISTRICT  
BY \_\_\_\_\_

Mr. Kim Ford  
Division of Waste Management  
Florida Department of Environmental Regulation  
3804 Coconut Palm Drive  
Tampa, Florida 33619



Re: Hardee County Landfill  
Pending Permit No. S025-214306

Dear Mr. Ford:

In response to your letters of April 15, 1993, we are submitting the following responses:

Group  
Services:

Engineering  
Planning  
Sciences  
Landscape  
Architecture

- ✓ 1. No response required
2. Response to Ms. Allison Amram's memo attached
- ✓ 3. No response required
4. Attached is a Revised Sequence of Fill plan. The initial lift is based on an annual solid waste volume of 30,910 cubic yards (including interim cover material). Each lift of cells is constructed with a double layer of bales 5 feet high working across the face of the disposal area. Each designated area is approximately 420 x 100' and capable of holding a volume of 7770 cubic yards. Three months waste volume is approximately 7750 cubic yards. The site is filled beginning in the southwest corner of each lift and proceeding in a northerly direction until the designated area is filled. The filling procedure is then repeated in a southerly direction adjacent to the first area. The procedure continues until the entire layer is filled. When a lift is completed, filling begins again at the southwest corner. The top of each succeeding lift is stepped in 15 feet to maintain a 3 to 1 side slope.

Surface runoff from the sideslopes of the landfill drain to the perimeter swales. Since the top of the landfill slopes in a northerly direction, a series of temporary berms and swales should be maintained on the north and east top of slopes to ensure that leachate from the newly placed material is diverted to the dewatering ditch.





Mr. Kim Ford  
May 14, 1993  
Page 2

5. Upon review of the revised hydrogeologic evaluation, we propose a meeting between Hardee County and the FDER to discuss viable and permittable options for improving leachate treatment and/or disposal. Initially, we propose that:
- a. A flow meter be installed at the leachate pump station to accurately measure disposal volumes;
  - b. water levels be monitored in the piezometers on the south side of the leachate disposal area;
  - c. the model be calibrated and rerun based on recorded water levels, rainfall, leachate application rates, and;
  - d. sampling of water in the swale be conducted to determine if leachate indicators are present.
6. See response to Ms. Amram's memo

If you have any questions, please call.

Very truly yours,

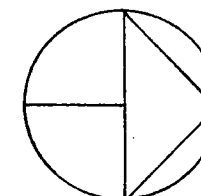
WADE-TRIM, INC.

  
Steven A. Dutch, PE  
Project Manager

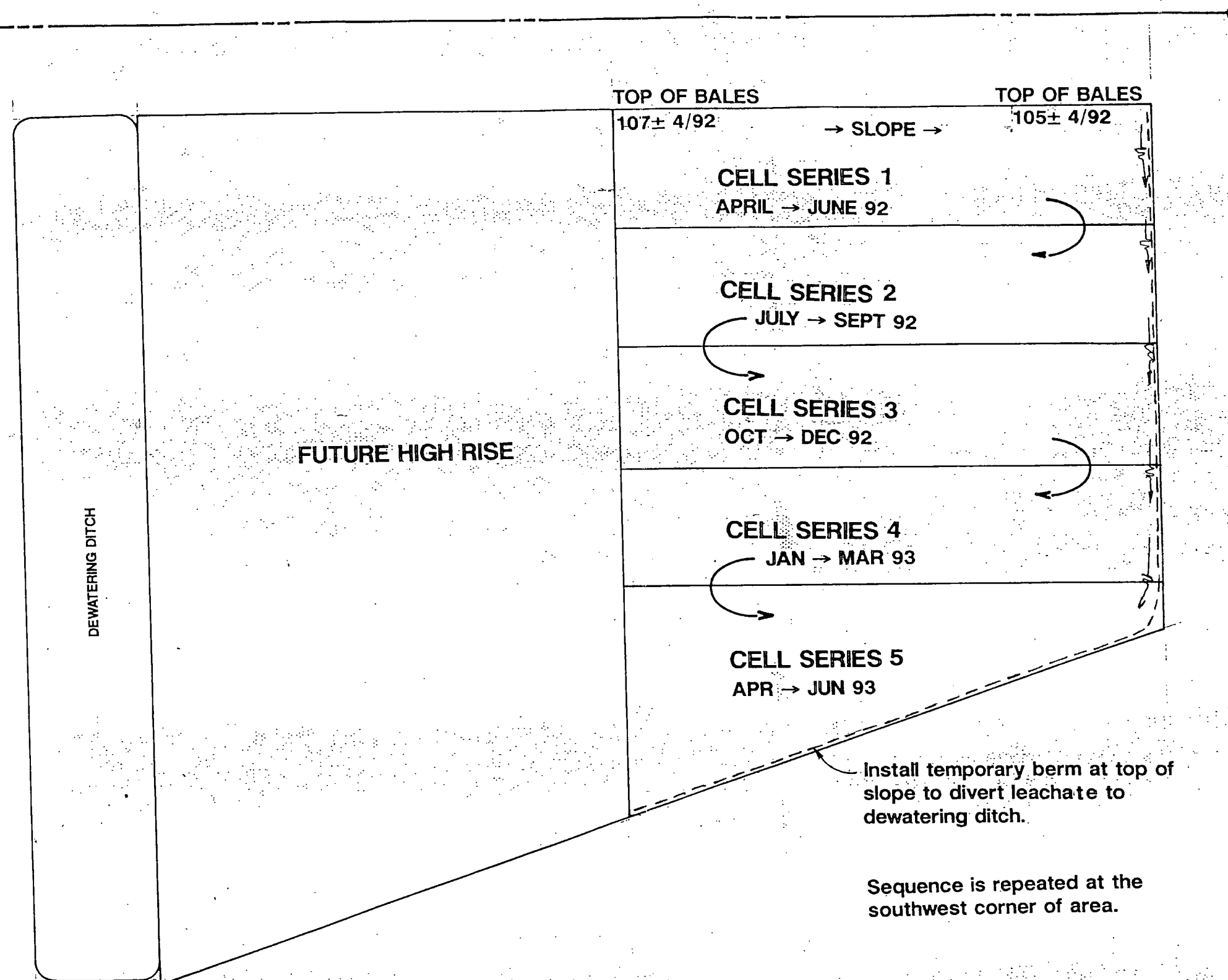
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HAR1:FORD2.LTR  
HAR2001.01

cc: J.R. Prestridge

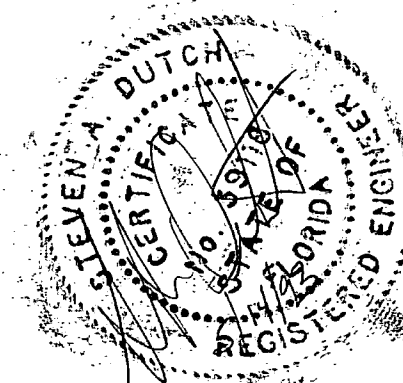




NORTH



D.E.R.  
MAY 17 1993  
SOUTHWEST DISTRICT  
TAMPA



# SEQUENCE OF FILL HARDEE COUNTY LANDFILL



Wade-Trim, Inc.

4919 Memorial Highway  
Suite 200, Tampa, FL 33634  
813-882-8366  
Fax No. 813-884-5990

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 4-15-93 Subject GW Monitoring  
Time 3 Permit No. \_\_\_\_\_  
County Hardee Co  
M Tanice Telephone No. \_\_\_\_\_

Representing Hardee Co. LE

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

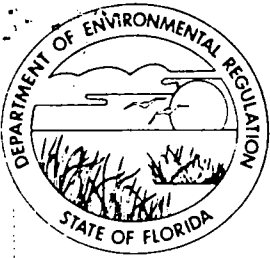
Other Individuals Involved in Conversation/Meeting \_\_\_\_\_

Summary of Conversation/Meeting \_\_\_\_\_

MW-2 is to be monitored for water levels only - she called in response to the incompleteness letter on the GW monitoring. Their existing permit does exclude MW-2 from sampling. It is located 2 ditches away from the Class 1

(continue on another  
sheet, if necessary)

Signature Amman  
Title ES3



# Florida Department of Environmental Regulation

Southwest District

Lawton Chiles, Governor

3804 Coconut Palm Dr.

813-744-6100

Tampa, Florida 33619

Virginia Wetherell, Secretary

April 15, 1993

Mr. J.R. Prestridge  
Hardee County  
Department of Solid Waste  
Post Office Box 246  
Wauchula, FL 33873

Re: Hardee County Solid Waste Facility  
Pending Permits: SO25-214306 (Class I Landfill)  
SO25-212896 (C & D Debris)  
WT25-209268 (Waste Tire Site)

Dear Mr. Prestridge:

This is to acknowledge receipt of supporting information related to the application for Hardee County Solid Waste Facility.

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

Your applications 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 applications [Chapter 17-701, Florida Administrative Code (F.A.C.)]:

- ✓ 1. Your March 17, 1993 cost estimates have been approved and have been forwarded to Mr. Fred Wick of the Solid Waste Section in Tallahassee. You are requested to work directly with him to obtain approval of Hardee County's financial responsibility documents.
2. Please provide your response to Ms. Allison Amram's April 13, 1993 attachment memorandum. Ms. Amram may be contacted at (813) 744-6100, extension 336.
- ✓ 3. Sufficient information has been provided in support of the construction and demolition debris disposal and waste tire site activities. These will be included as part of one permit when the other remaining issues are resolved.

4. The sequence of filling shown on plans is not sufficient. Leachate generation must be minimized, and also prevented from running off active areas into adjacent stormwater system by constructing berms or ditches. Initial or intermediate cover that may receive leachate shall be graded to shed runoff into the leachate collection system and to minimize mixing of leachate runoff and stormwater. The filling sequence should be clearly described in 3 month increments until such time as the sequence is repeated or the area has reached final contours.
5. The hydrogeologic evaluation by Mevers & Associates verifies that leachate spray irrigated discharges to the creek south of the sprayfield. This is an unauthorized discharge in violation of Department rules and must be corrected. The current spraying operation is similar to recirculation and shall meet the requirements of FAC Rule 17-701.400(5). Leachate management shall meet the requirements of FAC Rule 17-701.500(8). Corrective action plans are required to demonstrate reasonable assurance that leachate will be collected and removed. The current and proposed spraying techniques do not demonstrate removal. Removal includes basically two options:
  1. Evaporation (no mounding)
  2. Off-site treatment
6. Provide plans to comply with FAC Rule 17-701.510, Water Quality and Leachate Monitoring Requirements

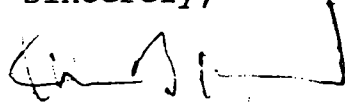
"NOTICE! Pursuant to the provisions of Section 120.600, F.S. and Chapter 17-12.070(5), F.A.C., if the Department does not receive a response to this request for information within 30 days of the date of this letter, the Department may issue a final order denying your application. If the response will 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."

Mr. J.R. Prestridge  
Hardee County  
Department of Solid Waste

April 15, 1993  
Page Three

If there are points which must be discussed and resolved, please contact me at (813) 744-6100, extension 382.

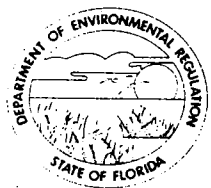
Sincerely,



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

KBF/ab  
Attachment

cc: Steven Dutch, P.E., Wade-Trim  
Robert Butera, P.E., FDER Tampa  
Steve Morgan, FDER Tampa  
Allison Amram, P.G., FDER Tampa  
Kathy Anderson, FDER Tallahassee  
Fred Wick, FDER Tallahassee



State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

# Interoffice Memorandum

TO: Kim Ford, P.E.

THROUGH: Robert Butera, P.E.

FROM: Allison Amram, P.G. *Amram*

DATE: April 13, 1993

SUBJECT: Hardee County Landfill  
Pending Permit No.: SO25-214306

The Solid Waste Section has reviewed the March 17, 1993 submittal from Wade-Trim and Mevers & Associates addressing the Department's October 13, 1992 and January 11, 1993 comments on the Hardee County Landfill. These issues were also discussed at a March 1, 1993 meeting at the Department. The following comments on the Mever's submittal need to be addressed:

1. What field permeability tests were conducted to determine the 5 feet per day hydraulic conductivity? This was not summarized in Plates 1-3 as referenced in the report. Provide test data, description and results for all permeability tests conducted.
2. Test borings P-10, PA-5, and PA-4 did not encounter the clay confining unit described as Units 5 and 6 in the Mever's report. These were shallow borings, but all were in the northeast corner of the site area. It is possible that the clay confining unit is either deeper than the boring, or not continuous across the study area. At this time, no further investigative studies appear to be warranted, but this possible condition should be acknowledged.
3. There are differences in the groundwater flow map as prepared based on the MODFLOW model, and with the actual data collected from the wells and piezometers. Field measurements indicate a groundwater mound in the sprayfield, but not in the landfill. Piezometers in the landfill indicate that the leachate levels are below that of the surrounding groundwater outside the landfill, which supports the inward gradient, but there are no data points in the landfill that support the groundwater mounding that MODFLOW presented. Please evaluate the field data

and prepare a groundwater contour map of the surficial aquifer, placing the water elevations in the wells/piezometers on the map. Also describe the possible influences to groundwater flow conditions of the landfill, sprayfield, dewatering ditch, ditch/creek located south of the sprayfield, and the low-lying, swampy areas that appear to be located west of the site road. From the groundwater elevations measured, and the MODFLOW model, it appears that the sprayfield has caused a groundwater mound which may discharge into the ditch located south of the sprayfield. This condition could adversely impact both ground and surface waters, and therefore is unacceptable to the Department.

4. The MODFLOW data presented in Appendix A is insufficient for the Department to evaluate. The following items are necessary for review:
  - A site map with the grid overlay to locate the monitoring points, sprayfield, dewatering ditch, creek and swampy area to evaluate the output.
  - Input parameters, and the source of that data.
  - Initial head array to observe piezometer/well heads.
  - Size of the grid spacing.
  - Recharge array to observe where recharge was set to occur, and how much recharge is applied.
  - Boundary array to observe how the dewatering ditch and creek boundaries were defined.
  - The model needs to be refined so that cells do not go dry, as shown in both time steps. Once the cell goes dry, the information provided in adjacent cells has greater error.
  - A copy of the data diskette is also useful for review of the model.
5. In order for the Department to prepare an operating permit for this facility, a water quality and leachate monitoring plan needs to be proposed. This plan shall include all applicable conditions of Chapter 17-701.510, Florida Administrative Code. The plan shall specifically include groundwater monitoring wells to be sampled (including the location of the proposed well south of the sprayfield), piezometers to be monitored for water levels, location and monitoring frequency of the staff gauge in the dewatering ditch, surface water and leachate sampling points, the screened interval of wells MW-1, MW-2 and MW-3.



Department of Environmental Regulation  
**Routing and Transmittal Slip**

**GENERAL INFORMATION**

Facility Name:

Address (Main)

Address (Mail)

Permittee (Of)

## TYPE OF LAI

☒ Class I  
☐ Class II  
☐ Class III  
☐ Exempt

Reviewing Person:

**II. GENERAL**

A. Type of Facility:

☐ Trust Fund  
☐ Letter  
☐ Insurance  
☐ Stand

B. General:

1. GROUND  
Quality

2. GAS MO

3. MAINTENANCE  
COLLECTION  
MONITORING4. COLLECTION  
TREATMENT

5. BENCHMARK

6. LANDSCAPE  
Mowing  
Fertilizing  
Sprinkling

7. MAINTENANCE OF COVER  
INTEGRITY AND SURFACE  
WATER CONTROLS

8. REMEDIAL ACTION

TOTAL ANNUAL COST OF LONG TERM CARE

To: (Name, Office, Location)

1.

FRED WICK

2.

SOLID WASTE MANAGEMENT

3.

TALLAHASSEE

4.

Remarks:

your copy  
 of COST ESTIMATE  
 financial  
 for  
 HARRIS COUNTY

From

Cm

Date

4/15/93

Phone

Expiration Date: 6/11/92

Fill Acreage: 11.86

Date:

closure plan)

**FOR ESTIMATE**

Third Party Work

is Attached

\$500.00

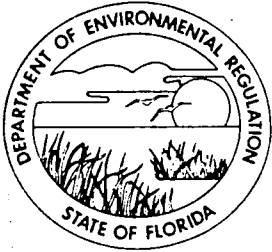
\$2,000.00

\$28,000.00

X30

Cm

Permit file



# Florida Department of Environmental Regulation

Southwest District

Lawton Chiles, Governor

3804 Coconut Palm Dr.

813-744-6100

Tampa, Florida 33619

Virginia Wetherell, Secretary

APR 13 1993

J.R. Prestridge, Solid Waste Superintendent  
Hardee County  
P.O. Box 246  
Wauchula, FL 33873

RE: Hardee County Sanitary Landfill  
Permit No.: SO25-164435

Dear Mr. Prestridge:

The permit conditions for Hardee County Sanitary Landfill specify the frequency and sampling parameters for the groundwater monitoring plan. Review of your latest groundwater reports, dated March 30, 1993, indicates the following deficiencies:

All wells were not sampled and analyzed. Reports should include:  
MW-2

Please correct these issues prior to the next report period or enforcement action will be considered. If you have any questions please call me at (813) 744-6100 ext. 336.

Sincerely,

Allison Amram, P.G.  
Environmental Specialist  
Department of Environmental Regulation

cc: Steve Morgan, FDER



# Florida Department of Environmental Regulation

**Southwest District**

Lawton Chiles, Governor

3804 Coconut Palm

813-744-6100

Tampa, Florida 33619

Virginia B. Wetherell, Secretary

MAR 22 1993

J.R. Prestridge  
Superintendent  
Hardee County Solid Waste  
74 Hanchy Road  
Wauchula, FL 33873

RE: Hardee County Landfill  
Permit No. SO25-096551  
Quantity Report

Dear Mr. Prestridge:

The Department requests the following information and/or reports to be submitted prior to May 15, 1993. Please provide daily records from January 1, 1993 through April 1, 1993 for the following:

- \* Quantities of leachate collected
- \* Quantities of leachate stored or impounded
- \* Quantities of leachate recirculated
- \* Quantities of leachate hauled or piped to a wastewater treatment plant

This information will be evaluated by the Department. Design or operational changes may be needed to prevent unauthorized discharges or excessive head over lined disposal areas. If you have any questions, you may call me at (813) 744-6100 ext. 382.

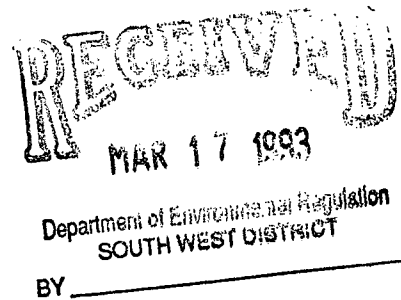
Sincerely,

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

cc: Robert Butera, FDER Tampa  
Steve Morgan, FDER Tampa  
Kathy Anderson, FDER Tallahassee

March 17, 1993

Mr. Kim Ford  
Division of Waste Management  
Florida Department of Environmental Regulation  
3804 Coconut Palm Drive  
Tampa, FL 33619-8318



**Re: Hardee County Landfill**  
**Permit No. 5025-214306 and SC2S-212896**

Dear Mr. Ford:

In response to your letters of October 13, 1992, and January 11, 1993, our meeting of March 1, 1993 and your conversation with J.R. Prestridge of Hardee County we are submitting the following information:

Group  
Services:

Engineering  
Planning  
Sciences  
Landscape  
Architecture

*Oct 13, 1992 #5*

- ✓ 1. Enclosed is estimate for closure and long term care as submitted in July 1992.
- ② 2. Enclosed are two revised sets of plans showing the approximate 1997 cross sections and the 1997 contours.
- ✓ 3. The final cover material will be excavated from an off-site location as yet undetermined. The material will be a clay with an anticipated permeability of less than  $1.0 \times 10^{-7}$  cm/sec.
4. Enclosed is leachate control system evaluation.
- sk* 5. No response required per your telephone conversation with J.R. Prestridge.
6. See response to # 4. No operations manual for the leachate system was developed as part of the design of the system other than the information contained in the Operation Plan. Hardee County has not been monitoring the system as proposed in the March 20, 1987 Ardaman Associates letter.
7. Mary Yeargan's Memo
  - (1) No response required.
  - (2) Construction details and lithologs for MW-1, MW-2 and MW-3 have not be found in the County's files.



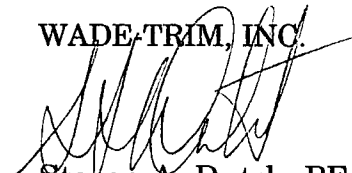
Mr. Kim Ford  
March 17, 1993  
Page 2

- (3) No response required per your conversation with J.R. Prestridge.
- (4) See response to # 6. *above*
- (5) Attached is monitoring well information.
- (6) No response required per your conversation with J.R. Prestridge.
- (7) No response required.
- (8) All drawings, reports and documents are sealed.

If you have any questions, please call.

Sincerely,

WADE-TRIM, INC.

  
Steven A. Dutch, PE  
Project Manager

SAD:ram

HAR1:KIMFORD.LTR  
HAR2001.01

Attachment

cc: J.R. Prestridge, Hardee County



STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION  
FINANCIAL RESPONSIBILITY CHECKLIST

ID NO.

**GENERAL INFORMATION:**

Facility Name: Hardee County Regional LF Permit No.: S025-096551 Expiration Date: 6/11/92  
Address (Main Entrance): 74 Hanchey Road, Wauchula, FL 33873  
Address (Mailing): P. O. Box 24  
Permittee (Operating Authority): Hardee County Facility Lat/Long: 81 degrees 47' 1"/27 degrees 34' 10" Fill Acreage: 11.86

**TYPE OF LANDFILL:**

☒ Class I  
☐ Class II  
☐ Class II: Trash/Yard Trash  
☐ Exempt: Type of Exemption: \_\_\_\_\_  
Closure Plan Approved: X Yes  
No

Reviewing Person (Include Title): \_\_\_\_\_ Date: \_\_\_\_\_

**II. GENERAL SOLID WASTE LANDFILL:**

**A. Type of Financial Document Submitted to Ensure Financial Responsibility:**

☐ Trust Fund Agreement  
☐ Letter of Credit  
☐ Insurance Certificate  
☐ Standby Trust Fund Agreement  
☐ Performance Bond (only for landfills with an approved closure plan)  
☒ Financial Guarantee Bond  
☐ Escrow Account  
☐ Other (Explain): \_\_\_\_\_

**B. General Solid Waste Landfill Estimated Itemized Annual Cost of Long Term Care.**

ITEM	UNIT COST	TOTAL ANNUAL COST	SOURCE OF ESTIMATE
			(Third Party Work)
1. GROUNDWATER MONITORING Quality Sampling	<u>\$3,300/sample</u>	<u>\$18,000.00</u>	<u>See Attached</u>
2. GAS MONITORING		<u>\$500.00</u>	
3. MAINTENANCE OF LEACHATE COLLECTION SYSTEM GROUNDWATER MONITORING WELLS		<u>\$5,500.00</u>	
4. COLLECTION AND DISPOSAL/ TREATMENT OF LEACHATE		<u>\$1,000.00</u>	
5. BENCHMARK MAINTENANCE		<u>0</u>	
6. LANDSCAPE MAINTENANCE Mowing Fertilizing Sprinkling	<u>                    </u> <u>                    </u> <u>                    </u>	<u>\$500.00</u> <u>-</u> <u>-</u>	<u>                    </u> <u>                    </u> <u>                    </u>
7. MAINTENANCE OF COVER INTEGRITY AND SURFACE WATER CONTROLS	<u>                    </u> <u>                    </u>	<u>\$500.00</u>	<u>                    </u> <u>                    </u>
8. REMEDIAL ACTION	<u>15%</u>	<u>\$2,000.00</u>	<u>                    </u>
TOTAL ANNUAL COST OF LONG TERM CARE		<u>\$28,000.00</u>	<u>                    </u>

X30

pk  
for

B. General Solid Waste Landfill Estimated Itemized Closure Cost for the Time Period in the Landfill Operation when the extent and Manner of its Operation Makes Closing Most Expensive

ITEM	UNIT COST	TOTAL ANNUAL COST	SOURCE OF ESTIMATE (Third Party Work)
1. MONITORING WELLS			
Borehole Excavation		\$0.00	See Attached
Backfill			
Gravel Pack			
Slotted Screen			
Casing			
Cap			
2. SLOPE AND FILL			
Excavation		\$4,000.00	
Placement/Spreading			
Compaction			
Delivery of Off Site Material			
3. COVER MATERIAL			
Clay Admixture			
Synthetic Material			
On-site Clay/Soil	9.00/CU	\$412,605.00	
Off Site Clay/Soil			
4. TOP SOIL COVER			
Purchase			
Delivery	225/CU	\$25,787.00	
Spreading			
Compaction			
5. CONTOUR GRADING AND SURFACE WATER DIVERSION (STORMWATER CONTROL)			
Excavation, Grading and Recontouring		\$2,000.00	
Diversion Ditch and Berm Construction			
6. GAS MIGRATION CONTROL			
Passive Type		\$15,000.00	
Active Type			
Sprinkling			
7. REVEGETATION			
Spreader			
Soil Preparation/Grading			
Seeding		\$500.00	
Fertilizer			
Mulch			
Sprinkling			
8. SECURITY SYSTEM			
Fencing		\$0.00	
Gate(s)			
Sign(s)			
9. BENCHMARK INSTALLATION		\$0.00	
10. CERTIFICATION OF CLOSURE		\$20,000.00	
TOTAL CLOSURE COST		\$479,892.00	
PROJECT CONTINGENCY		\$119,973.00	
TOTAL		\$599,865.00	

OK  
LEW



Hardee County Regional Landfill

Permit No. SO25-096551

Basis of Closure and Post Closure Costs

Costs are based on estimated 1993 construction costs

**CLOSURE COSTS**

**MONITORING WELLS:**

Ground water sampling and monitoring will continue as required by the Permit. No new monitoring wells should be required for closure.

Estimated Cost: \$0.00

**BACKFILL:**

It is expected that the disposal site can be readily placed into an acceptable closure condition; 3:1 slopes and appropriate top grades by suing on site equipment and clay materials.

Estimated Cost: \$4,000.00

**CLAY CAP:**

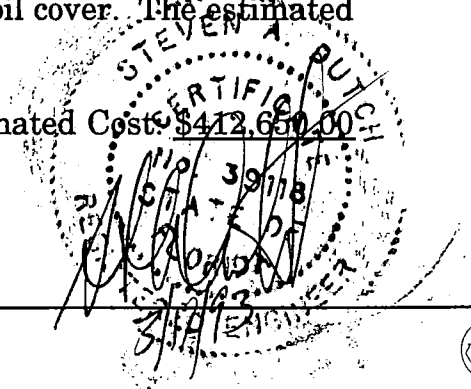
The site will be capped by (2) feet for compacted clay, obtained from an off-site source to be developed at time of closure. The cap is expected to have a permeability of less than  $1 \times 10^{-7}$  cm/sec. This will require: 38,200 cubic yards, 45,850 loose cubic yards at 20% swell over the 11.82 acre site, which will require soil cover. The estimated unit cost is \$9.00/CY.

Estimated Cost: \$412,650.00

HAR1:HARDEECT.RPT  
HAR2001.01



Wade-Trim



#### TOPSOIL:

The site development plan requires a topsoil cover of 6 inches over the two (2) feet compacted clay cap (10,971 loose cubic yards at 15% swell). The estimated cost is \$2.25 dollars per loose cubic yard.

Estimated Cost: \$25,785.00

#### CONTOUR GRADING/SURFACE WATER:

Placement of the site into a closure configuration and appropriate final cover, requires contour grading to insure surface water drainage. This is accomplished as the materials are being placed. The site will require finish grading.

Estimated Cost: \$2,000.00

#### GAS MIGRATION CONTROL:

The synthetic liner should prevent any gas migration off site. A gas venting system consisting of perforated PVC pipe placed in the top layer interim cover with vents at regular intervals will be constructed. Approximately 1500LF of collection pipe will be required configuration of the system will be determined by the gas migration investigation to be conducted as part of the Closure Plan. Odor control is not anticipated at this time.

Estimated Cost: \$15,000.00

#### BENCH MARKS:

The property in which Phase I of the Hardee County Sanitary Landfill is located, has survey markers already in place.

Estimated Cost: \$0.00

#### LANDSCAPING:

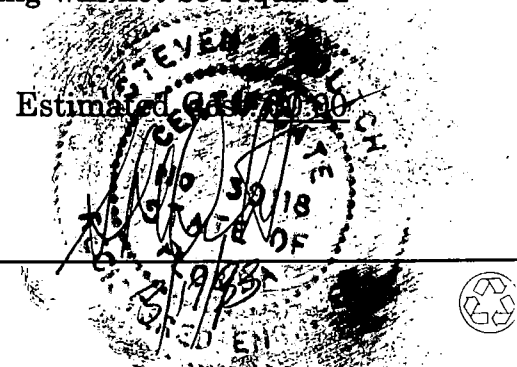
The Hardee County facility will be landscaped using sand and clay found within the property boundaries. These soils readily support native vegetation. It is expected that fertilizing will not be required on a regular basis.

Estimated Cost: \$0.00

HAR1:HARDEECT.RPT  
HAR2001.01



Wade-Trim



## REVEGETATION:

After placing a final cover, seeding of site will be done to provide a quick cover for erosion control and to provide a permanent grass cover to blend in with the surrounding area.

Estimated Cost: \$500.00

## SECURITY SYSTEM:

The in place fencing, gates, and attendants should provide ample security to the closed site.

Estimated Cost: \$0.00

## POST CLOSURE COSTS

### SAMPLING:

The monitor wells will be sampled quarterly, the first three (3) years. Upon satisfactory results from this program, the sampling will be reduced to a semi-annual frequency for the next seventeen (17) years. Labor, equipment, and expenses for each of these events is estimated at \$1,500.00.

Year 1 thru 3 - Estimated Cost: \$6,000.00/yr.

Year 4 thru 20 - Estimated Cost: \$3,600.00/yr.

### CHEMICAL ANALYSIS:

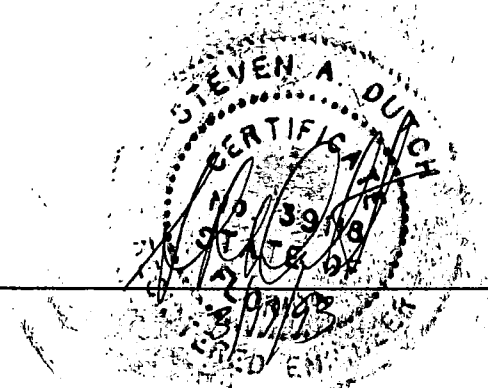
The analytical chemistry shall be completed as required under 17-701. The cost per sample is estimated at \$500.00. The facility utilizes six (6) groundwater monitoring wells. The total cost for chemical analysis will be (\$500.00/sample) (6 samples/sampling events) (46 events).

Year 1 thru 3 - Estimated Cost: \$12,000.00/yr.

Year 4 thru 20 - Estimated Cost: \$6,000.00/yr.

HAR1:HARDEECT.RPT  
HAR2001.01

Wade-Trim



## GAS MONITORING:

Gas monitoring will be conducted quarterly with groundwater sampling combustible gas levels will be measured in accordance with 17-701.

Estimated Cost: \$500.00

## LEACHATE COLLECTION:

The operation of the leachate collection and spray field will continue after closure of the landfill. Pump stations and spray field will be maintained.

Estimated Cost: \$1,500.00/yr.

## LEACHATE SYSTEM MONITORING REPORT:

An evaluation of the leachate control system shall be prepared annually by a professional geologist or engineer based on review of collected samples, water level data and operating data in accordance with 17-701.

Estimated Cost: \$5,000.00/yr.

## LANDSCAPE MAINTENANCE:

Landscape maintenance will consist of mowing as needed to control natural vegetation.

Estimated Cost: \$500.00/yr.

## COVER MAINTENANCE:

Maintenance of the cover will consist of repair of depressions and erosion area.

Estimated Cost: \$500.00/yr

## REMEDIAL ACTIONS:

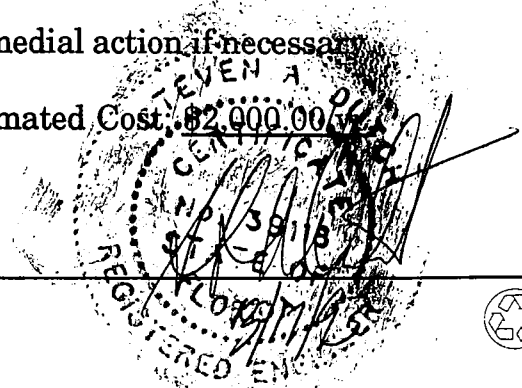
A  $\pm 15\%$  contingency will be set aside for remedial action if necessary.

Estimated Cost: \$2,000.00

HAR1-HARDEECT.RPT  
HAR2001.01



Wade-Trim



HARDEE COUNTY LANDFILL  
GROUNDWATER LEVELS

PARAMETER	TOP OF WEL	SAMPLE DATE																	
		12/1/87	3/8/88	6/8/88	9/16/88	12/9/88	3/27/89	6/8/89	8/30/89	11/15/89	2/2/90	4/30/90	7/25/90	11/14/90	1/23/91	5/7/91	8/6/91	11/4/91	2/17/92
WELL#1	87.97	83.8	84.05	79.6	84.06	81.64	80.97	80.72	82.3	82.09	81.89	80.89	83.8	82.75	82.17	81.67	84.39	82.37	---
WELL#2	85.86	80.44	81.03	78.65	80.77	78.03	77.74	78.11	79.86	78.86	78.7	77.78	79.53	78.88	78.86	78.94	81.4	79.36	78.56
WELL#3	87.75	80.83	80.5	79.17	84.25	81.33	79.92	77.67	81.08	81.17	81.33	80.92	81.71	81.83	81.26	80.75	84.5	82.15	---
WELL#4	87.16	79.75	82.5	79.6	83.09	79.74	78.91	77.91	81.74	80.08	80.08	79.12	80.16	80.5	79.96	79.58	82.49	80.41	---
WELL#5	88.76	77.95	80.51	77.43	81.34	78.09	77.01	76.09	78.76	79.26	83.18	77.8	78.05	78.03	76.76	78.34	78.41	76.86	---
WELL#6	87.94	80.03	81.11	78.36	83.4	81.94	81.19	79.52	82.86	81.94	82.69	80.98	81.89	82	82.29	81.52	81.95	79.75	---
WELL#7	87.51	81.51	81.43	78.09	83.24	81.5	80.8	79.01	82.09	81.34	81.76	80.51	81.89	81.21	83.65	80.93	83.3	81.21	---

NOTE: DATA ON WATER ELEVATIONS PROVIDED TO WADE-TRIM AS  
ELEVATIONS. NO RAW MEASUREMENTS PROVIDED.

3/1/93

Haas LF

Attendance phone

Company

Tom FORD 744-6100 x 382 FIDELITY TAMPA

DAVE MEYERS 530-3533 MEYERS & ASSOC., INC.

Steve Dutch 882-8366 Wade Trim

Allison Amram <sup>813</sup>744-6100 x 336 EDER

STEVEN G. MORGAN (813) 744-6100 x 385 FOER



## Wade-Trim

Group  
Services:  
Engineering  
Planning  
Sciences  
Landscape  
Architecture

**Steven A. Dutch, PE**

Local Government Group Manager

4919 Memorial Highway • Suite 200 • Tampa, FL 33634  
813-882-8366 • FAX: 813-884-5990

**MEYERS & ASSOCIATES, INC.**  
**ENGINEERING CONSULTANTS**

**David A. Meyers, P.E.**

President

Specializing in Geotechnical, Hydrogeologic,  
and Environmental Consulting Services

2310 Tall Pines Drive • Suite 210 • Largo, FL 34641 • (813) 530-3533

Hardee Co. Mtg

3/1/93  
Kim Ford  
Steve McGowan  
Allison McGowan  
Steve Dutch  
David

Reference to Oct 1992 letter

- #4 - Propose to place PZ's inside liner adj to MWs to check direction of gradient - will survey
- Borings outside CF to get WLS ~~more PZ's~~ - will survey
- staff gauge present in ditch - will make sure to monitor
- asked to provide MW 1-3 construc. details
- initial gw mon - Co. will provide
- Told Co. to do samp. for permit renewal - he has parameter list. Will <sup>(S. Dutch)</sup> make sure that it gets included in ~~2<sup>nd</sup>~~ Q 1993 sampling - April

\* No County representative attended the meeting

Mtg reviewed outstanding permit issues; permit has expired.



Discussed add'l pz's in spray field  
& between MW 7, 8 & ditch

Submittal will be in 3/17/93 - will  
show the results of the borings  
& water levels

Hardee Co.  
Review of Comments  
1/28/93

Received  
JR 1/11/93  
1/28/93  
Expenses  
What is needed.  
[initials]

Kim -

I have no comment on your 1/11/93 letter.

For the Oct 13, 1992 letter:

#4 I looked at their groundwater elevations for 5/92 + 8/92 (no water elevations for the ditch were included) & it shows a mound over the landfill + sprayfield (see attached). An outward gradient appears to be present.

I'd suggest that they include water level monitoring of the ditch. -- They have suggested this, but never provided the data.

For Mary's Oct 27, 1992 comments

1. A compilation of data from 1985-present appears adequate to address 17-522.6. An updated potable well survey (9/30/92) was provided by Wade Trim.

[2.] May be in archived 1985 Seaburn & Robinson report. We have some well construction data, but no info on well seal or filter pack.

3. I made up water table maps for 5/92 + 8/92. Both show mounding under the landfill + sprayfield.

3 (cont) They need to evaluate the ditch w/ the groundwater elevations. Looks like a high risk flow pattern w/ the current info, & really, the ditch won't make much difference.

4. This asks for water levels in the ditch. They volunteered this info earlier & never produced it.

5. Delete. Request for next 1/4 info.

6. This was provided. However, I never found the results of their initial gw sampling. Please provide.

7. Delete. I looked @ the parameters & did not see significant trends.

8. Do it.

9. Seal interpretive reports.

AA  
1/25/13

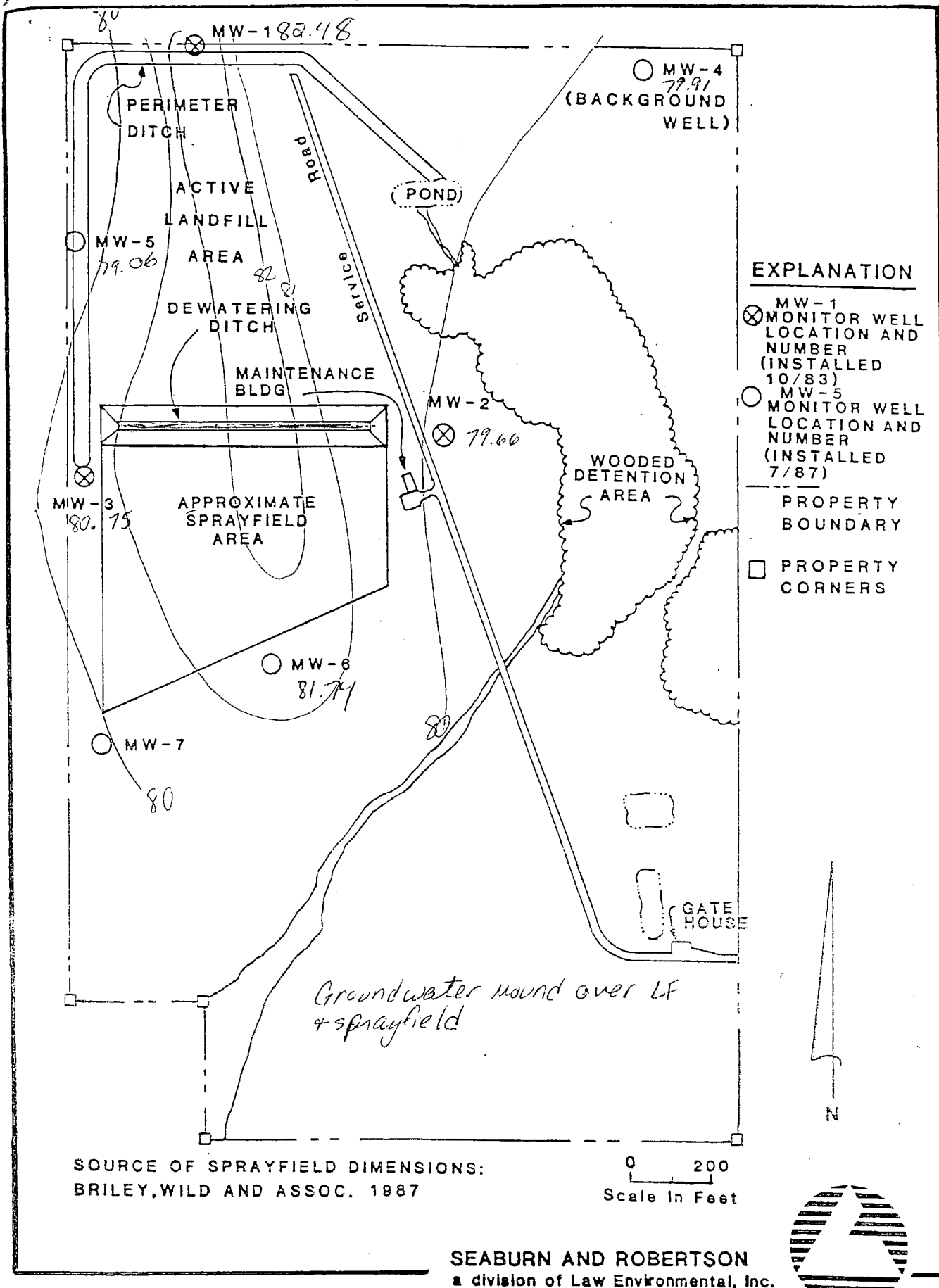


FIGURE 2.- LOCATION OF MONITOR WELLS.

May 4, 1992 - Dry Season

Ha Lee Co LF

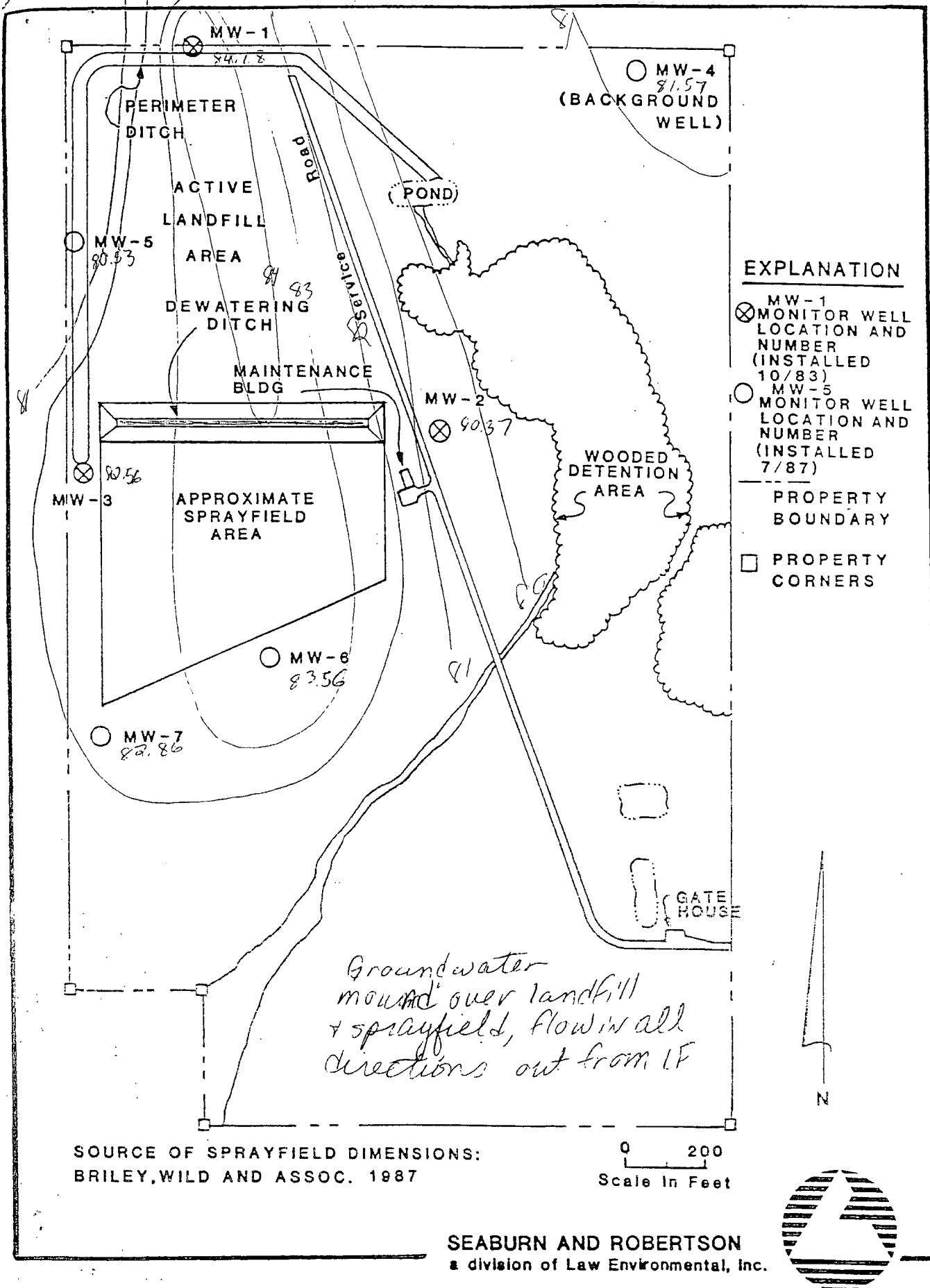
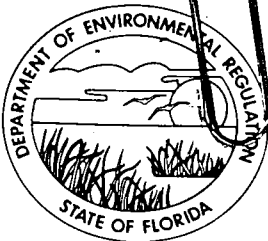


FIGURE 2.- LOCATION OF MONITOR WELLS.

August 20, 1992 - Wet Season



# Florida Department of Environmental Regulation

Southwest District

Lawton Chiles, Governor

3804 Coconut Palm

813-744-6100

Tampa, Florida 33619

Carol M. Browner, Secretary

Hardee County Board of County Commissioners  
James Harrison, Chairman  
Room A-204, Courthouse Annex  
412 West Orange Street  
Wauchula, FL 33873-2867

FEB 12 1993

Re: Hardee County Regional Landfill Closure and/or Long-term Care  
Permit # SO25-096551, Hardee County

Dear Mr. Harrison:

A review of Department files indicates that the annual cost estimates for closure and long term care for the above referenced facility have not been received by the Department, as required by Florida Administrative Code, (FAC), Rule 17-701.630(4). All cost estimates shall be prepared in accordance with FAC Rule 17-701.630 (attachment), signed and sealed by a professional engineer, and submitted to the District office for review. Please note that for facilities which receive waste after January 6, 1993, annual long-term care estimates should be based on 30 years of post closure long-term care.

You are requested to submit the requested information to the Department as soon as possible. Please be advised that should the cost estimates for the subject facility not be received by the Department within 45 days of receipt of this letter, the Department will initiate enforcement action to bring the facility into compliance.

If you have any further questions, please contact Kim Ford at (813) 744-6100 ext. 382.

Sincerely,

Robert J. Butera, P.E.  
Solid Waste Manager  
Waste Management Division

cc: Fred Wick, FDER, Tallahassee  
Kim Ford, FDER, Tampa  
Steve Morgan, FDER, Tampa  
Attachments  
RB/dn

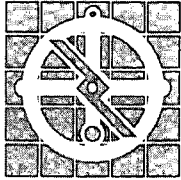
February 10, 1993

D.E.R.

FEB 11 1993

Mr. Kim Ford  
Division of Solid Waste Management  
3804 Coconut Palm Drive  
Tampa, Florida 33619

COUNTY WEST DISTRICT TAMPA



Re: Hardee County Landfill  
Pending Permit No. S025-214306

Dear Mr. Ford:

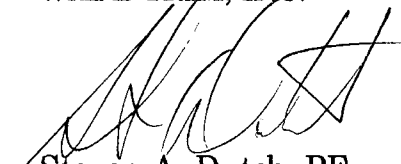
Group  
Services:  
Engineering  
Planning  
Sciences  
Landscape  
Architecture

Due to the changes in comments and responses necessary and additional comments received, we are requesting on behalf of the County, an extension in submittal date to March 17, 1993.

If you have any questions, please call.

Very truly yours,

WADE-TRIM, INC.



Steven A. Dutch, PE  
Project Manager

SAD:amf

HAR:FORD.LTR  
HAR2001.01

cc: J.R. Prestidge, Hardee County







**HARDEE COUNTY**  
**Department of Solid Waste & Recycling Center**  
P.O. Box 246  
Wauchula, Florida 33873

January 25, 1993

Department of Environmental Regulations  
Attention: Kim B. Ford, P.E.  
Solid Waste Section  
Division of Waste Management  
3804 Coconut Palm Drive  
Tampa, FL 33619-8318

D. E. R.

JAN 27 1993

SOUTHWEST DISTRICT  
TAMPA

RE: Pending Permit S025-214306, Class I Landfill

Dear Mr. Ford:

Hardee County Board of County Commissioners have been requested to authorize a hydrogeologic evaluation of the landfill in order to respond to your questions on the permit renewal application.

Hardee County Sanitary Landfill was studied extensively by Envisors prior to construction and was constructed as approved by the FDER. Seaburn and Roberts did Hydrological studies. In addition, landfill improvements were made by Briley, Wild and Associates, which included leachate control system spray field irrigation, extended side liners and the installation of two additional monitoring wells which were also approved by the FDER.

The Hardee County Board of County Commissioners questions the need for the additional work and would like for FDER to explain why the additional work is required to renew the operating permit.

The commissioners have scheduled a meeting for 1:30 p.m., on February 1, 1993, at the Hardee County Court House located at 412 West Main Street. They request that a representative from FDER attend the meeting to explain the need for additional hydrogeological evaluations of the Class I Landfill.

Should you have any questions or comments please contact the solid waste department.

Sincerely,

J.R. Prestridge,  
Solid Waste Superintendent

jw

JAN 25 1993 14:14

1234 HARDEE COUNTY COMM

TEL 813-773-0958

P. 1

**HARDEE COUNTY  
BOARD OF COUNTY COMMISSIONERS**

Room A-204, Courthouse Annex  
412 West Orange Street  
Wauchula, Florida 33873-2867  
(813) 773-6952 • (813) 773-9430 • FAX (813) 773-0958

- MINOR L. BRYANT  
District I
- BENNY W. ALBRITTON  
District II
- TED HITE  
District III
- ROYCE TYSON, JR.  
District IV
- WALTER OLLIFF, JR.  
District V
- GARY ODEN  
County Manager
- GARY A. VORBECK  
County Attorney

**FAX TRANSMITTAL**

DATE: 1-25-92  
TIME: 1:10 p.m.

TO: DER  
Kim Ford

COPIES TO:  
2

FAX NUMBER:  
813-744-6090

FROM: Hardee  
County

SUBJECT: Pending Perm  
# 5025-214306

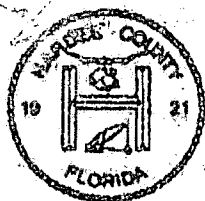
NUMBER OF PAGES:  
(Including this sheet)

PLEASE DELIVER THESE PAGES TO THE INDIVIDUAL NAMED ABOVE. IF YOU HAVE ANY DIFFICULTY RECEIVING THIS TRANSMISSION OR IF PAGES ARE MISSING OR ILLEGIBLE, PLEASE CALL 813/773-6952 OR 813/773-9430 AND SPEAK WITH:

\*\*\*\*\*

COMMENTS: J.W.

\*\*\*\*\*



**HARDEE COUNTY**  
**Department of Solid Waste & Recycling Center**  
P.O. Box 246  
Wauchula, Florida 33873

January 25, 1993

Department of Environmental Regulations  
Attention: Kim B. Ford, P.E.  
Solid Waste Section  
Division of Waste Management  
3804 Coconut Palm Drive  
Tampa, FL 33619-8318

RE: Pending Permit SO25-214306, Class I Landfill

Dear Mr. Ford:

Hardee County Board of County Commissioners have been requested to authorize a hydrogeologic evaluation of the landfill in order to respond to your questions on the permit renewal application.

Hardee County Sanitary Landfill was studied extensively by FDER prior to construction and was constructed as approved by the FDER. Seaburn and Roberts did Hydrological studies. In addition, landfill improvements were made by Briley, Wild and Associates, which included leachate control system spray field irrigation, extended side liners and the installation of two additional monitoring wells which were also approved by the FDER.

The Hardee County Board of County Commissioners questions the need for the additional work and would like for FDER to explain why the additional work is required to renew the operating permit.

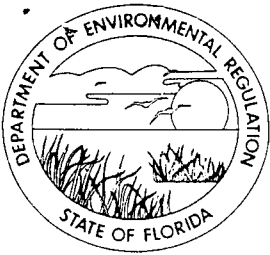
The commissioners have scheduled a meeting for 1:30 p.m., on February 1, 1993, at the Hardee County Court House located at 412 West Main Street. They request that a representative from FDER attend the meeting to explain the need for additional hydrogeological evaluations of the Class I Landfill.

Should you have any questions or comments please contact the solid waste department.

Sincerely,

U.R. Prestridge,  
Solid Waste Superintendent

jw



# Florida Department of Environmental Regulation

Southwest District

Lawton Chiles, Governor

3804 Coconut Palm

813-744-6100

Tampa, Florida 33619

Carol M. Browner, Secretary

January 11, 1993

Mr. J.R. Prestridge  
Hardee County  
Department of Solid Waste  
Post Office Box 246  
Wauchula, FL 33873

Re: Hardee County Solid Waste Facility  
Pending Permits: SO25-214306 (Class I Landfill)  
SO25-212896 (C & D Debris)  
WT25-209268 (Waste Tire Site)

Dear Mr. Prestridge:

This is to acknowledge receipt of supporting information related to the application for Hardee County Solid Waste Facility.

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

Your applications 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 applications [Chapters 17-701 and 17-711, Florida Administrative Code (F.A.C.)]:

1. Provide all the information requested in the Department's October 13, 1992 letter and its attachments.

3/17/93 2.

The cost estimates by Wade-Trim dated November 13, 1992 are not acceptable. In order to approve the financial responsibility cost estimates for closure and long-term care, please indicate the source of clay on the plans and provide the permeability of the clay to be used for final cover. Verify that the clay is in sufficient quantity to complete closure and is appropriate for use as final cover so that it can be easily worked to obtain the required permeability and thickness. Also, include the cost of installing gas vents and gas monitoring. In the estimate for leachate management, include the cost of sampling and analyses of treated effluent prior to spraying and monitoring the spray irrigation system. Cost estimates must be signed and sealed by a professional engineer. Approved cost estimates will be forwarded to Mr. Fred Wick of the Solid Waste Section in Tallahassee. You are requested to work directly with him to obtain approval of Hardee County's financial responsibility documents.

Mr. J.R. Prestridge  
Hardee County  
Department of Solid Waste

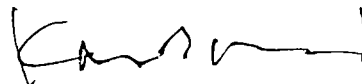
January 11, 1993  
Page Two

3. Sufficient information has been provided in support of the construction and demolition debris disposal and waste tire site activities. These will be included as part of one permit when the other remaining issues are resolved.

"NOTICE! Pursuant to the provisions of Section 120.600, F.S. and Chapter 17-12.070(5), F.A.C., if the Department does not receive a response to this request for information within 30 days of the date of this letter, the Department may issue a final order denying your application. 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."

If there are points which must be discussed and resolved, please contact me at (813) 744-6100, extension 382.

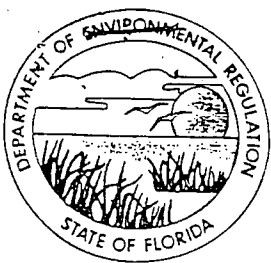
Sincerely,



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

KBF/ab  
Attachments

cc: Steven Dutch, P.E., Wade-Trim  
Robert Butera, P.E., FDER Tampa  
Steve Morgan, FDER Tampa  
Mary Yeargan, P.G., FDER Tampa  
Kathy Anderson, FDER Tallahassee  
Fred Wick, FDER Tallahassee



# Florida Department of Environmental Regulation

Southwest District

4520 Oak Fair Boulevard

Tampa, Florida 33610-7347

Lawton Chiles, Governor

813-620-6100

Carol M. Browner, Secretary

October 13, 1992

Mr. J.R. Prestridge  
Hardee County  
Department of Solid Waste  
Post Office Box 246  
Wauchula, FL 33873

Re: Hardee County Landfill  
Pending Permit No.: S025-214306  
Hardee County

Dear Mr. Prestridge:

This is to acknowledge receipt of your applications for landfill operation.

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

Your applications for 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 applications [Chapters 17-701 and 17-711, Florida Administrative Code (F.A.C.)]:

3/17/93 ☒ 1. In order to approve the financial responsibility cost estimates for closure and long-term care, please indicate the source of clay on the plans and provide the permeability of the clay to be used for final cover. In the estimate for leachate management, include the cost of monitoring the spray irrigation system. Cost estimates must be signed and sealed by a professional engineer. Approved cost estimates will be forwarded to Mr. Fred Wick of the Solid Waste Section in Tallahassee. You are requested to work directly with him to obtain approval of Hardee County's financial responsibility documents.

☒ 2. Cross-sections showing both original and proposed fill elevations are required. Proposed fill cross-sections should show the final elevations at the landfill, sequence of filling and lift heights. Plans showing the 1997 final contours cannot be found. Please submit 2 sets of updated plans, signed and sealed by a professional engineer.

3. Source location, quantity, and characteristics of final cover material.
4. A evaluation in report form of the condition and effectiveness of the existing leachate control and removal system performance, spray field including water balance calculations, and the surface water management system. The report shall contain professional conclusions and recommendations and shall be signed and sealed by a professional engineer.

The leachate levels inside the landfill shall remain below the water levels outside the landfill. Provide reasonable assurance to show that an inward gradient will be maintained continuously since this is the basis of FDER's previous approval of the landfill containment and leachate removal system, including the sprayfield.

All monitoring wells and piezometers must be shown on plans. The site evaluation report shall provide conclusions and recommendations regarding the possible need for additional wells and piezometers for the landfill and sprayfield. A water table contour map shall be provided for the wet and dry seasons for the past 12 months. Record drawings of the leachate collection and removal system are requested.

5. Provide the HELP or similar model data that shows the monthly quantity of leachate generated and the monthly quantity of other drainage and seepage expected to reach the dewatering ditch. The total quantity sprayed should be in gallons and include seepage from the landfill, sprayfield, and runoff from the unclosed portions of the landfill.

To confirm the quantity and quality of leachate to be sprayed, provide the past 12 months of data from the monitoring program specified on page 10 of Ardaman's March 20, 1987 report and the past 12 months of data from permit SO25-096551 specific condition #9 (see attachments).

6. Information found in previous reports from the FDER's files indicate Hardee County has been allowed to spray up to 2 inches of leachate in one day, based on spraying only once per week. This application rate equates to 250,000 gallons of leachate sprayed in one day which is not acceptable. For more recent projects a maximum application of .2 inches in one day was used to prevent runoff of "treated effluent".

piezometers  
Leachate Lake  
Monitoring  
possible  
outward  
gradient

USE  
SPEC.  
COND.  
USE  
HELP MODEL  
RESULTS FROM  
ARDEMAN  
MARCH 20, 1987  
REPORT  
PAGE 8

Please provide the HELP or similar model data that shows the maximum daily rate of spray irrigation included with rainfall to determine how many days runoff would be expected and how many days of storage would be required for the leachate dewatering ditch/holding pond. The model should consider the slope and characteristics of the final cover and the soil and runoff characteristics of the sprayfield. Explain how runoff will not occur from spray irrigation based on the following condition:

This permit allows spray irrigation of a maximum 25,000 gallons per day (24 hours) at an application rate of .20 inches per day of leachate from the associated dewatering ditch. Under no circumstances shall leachate be allowed to discharge as runoff to adjacent stormwater systems or conveyance ditches. Spraying shall take place only when runoff into the onsite retention areas downgradient from the spray areas has terminated for 24 hours. The aforementioned is based on daily inspections of the influent point to retention area, or as follows, whichever is more restrictive:

- a. at least 4 hours after a rainfall of 1/4" or less 1" or
- b. at least 24 hours after a day or rainfall of 1/4" 1" or
- c. at least 48 hours after a day or rainfall of 1" or greater

The ... "maximum 25,000 gallons per day (24 hours) at an application rate of .20 inches per day" ... is used as an example and may be revised to fit actual site conditions. All other parts of this permit condition will remain unchanged. A berm/swale system may be required along the south border of the sprayfield to allow runoff to be more easily detected. Plans shall show the location of all sprayheads and the spraying pattern of each. An operations manual for the spray irrigation system is requested.

7. Your response to Mary Yeargan's June 26, 1992 attached memorandum. Ms. Yeargan may be contacted at (813) 744-6100, extension 376.

"NOTICE! Pursuant to the provisions of Section 120.600, F.S. and Chapter 17-12.070(5), F.A.C., if the Department does not receive a response to this request for information within 30 days of the date of this letter, the Department may issue a final order denying your application. If the response will require longer than 30 days to develop, you should develop a specific time table



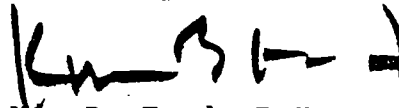
Mr. J.R. Prestridge  
Hardee County Department of  
Solid Waste

October 13, 1992  
Page Four

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 a 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."

If there are points which must be discussed and/or resolved, please contact me at (813) 744-6100, extension 382.

Sincerely,



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

KBF/ab

cc: Steven Dutch, P.E., WADE-TRIM  
Robert Butera, P.E., FDER Tampa  
Steve Morgan, FDER Tampa  
Mary Yeargan, P.G., FDER Tampa  
Kathy Anderson, FDER Tallahassee  
Fred Wick, FDER Tallahassee

Anderson

### Leachate Collection System

A leachate collection system is required at the site to collect and convey the leachate to the dewatering ditch and to prevent leachate from building up within the landfill and from exiting the above ground landfill side walls in the future. In addition, the leachate collection system will lower the hydraulic head necessary for recharge into the underlying aquifer.

We recommend a peripheral leachate collection underdrain on the west, north and east sides of the landfill. The underdrains should be a minimum of 4 feet below natural ground and should slope toward the dewatering ditch. Figure 6 illustrates two alternative leachate collection underdrain design concepts.

The first alternative consists of a minimum 14-inch wide trench and an 8-inch diameter corrugated, slotted HDPE pipe completely surrounded by at least 3 inches of clean filter aggregates. Though the anticipated steady-state leachate flow of approximately 0.004 gpm per lineal feet of pipe can be handled by a 6-inch diameter pipe, we recommend using a minimum 8-inch inside diameter underdrain pipe for clean out purposes.

The second alternative consists of a minimum 24-inch wide trench and an 8-inch diameter corrugated slotted HDPE pipe completely surrounded by at least 3 inches of locally available coarse concrete aggregates which in turn is completely wrapped in a filter fabric as shown in Figure 6.

The underdrain pipe should meet ASTM F-667 specifications for corrugated heavy duty polyethylene tubing and fittings.

The filter aggregate or concrete aggregate that surrounds the slotted pipe should be clean, non-calcareous, and should not be susceptible to attack from acids and alkalies with a pH of 3 to 11 and must be sized to prevent the backfill above the filter aggregate from entering the filter system and to prevent the filter aggregate or concrete aggregate from entering the slotted pipe.

The specifications for the leachate collection system are provided in Appendix 7.

### Monitoring Program

A monitoring program is proposed for the LAS. The following monitoring program will serve to aid in operation of the system:

- Flow meter to monitor leachate generation
- Raingage at spray irrigation site
- Water table monitoring wells
- Staff gage in holding pond (i.e., dewatering ditch)
- Flow meter on irrigated water

The flow into the dewatering ditch will be documented by the raingage and the flow meter. The change in storage level in the ditch will be documented by the staff gage in the pond. The flow meter on the irrigated water and site raingage

PERMITTEE:

Samuel L. Rauls, Chairman PERMIT NO.: SD-096551  
Hardee County Class I Sanitary Landfill

SPECIFIC CONDITIONS (con't):

7. (con't):

D. Data from each of the above sampling efforts shall be submitted to the Southwest District Office, C/O Solid Waste Section, within 30 days after collection.

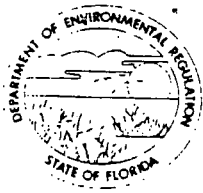
8. The permittee shall ensure that neither ponding nor run-off from the spray site occurs as a result of the spray irrigation. The Department considers ponding to be any residual which remains on the surface sufficient time to contaminate stormwater runoff or otherwise be environmentally objectionable due to odor or public health criteria. Vegetation on the spray site shall be cropped regularly. Spray nozzles are to be regularly inspected for proper operation.

9. The spray irrigation system for leachate disposal shall be sampled initially and quarterly thereafter for the following parameters. Results shall be submitted along with results from the groundwater monitoring well samples. Leachate shall not be spray irrigated on unlined areas if violations of standards for Class III surface water bodies occur. This shall include the standards outlined in Chapter 17-3.051, along with

Quantity	Total Organic Carbon
Dissolved Oxygen	Iron
pH	Turbidity
Specific Conductance	Lead
Total Coliform	

10. Evidence of methane gas buildup or migration may necessitate installation of measures to control such buildup and/or migration in addition to those proposed.

11. An adequate Quality Control Plan shall be submitted to the Department, C/O Solid Waste Section, Southwest District Office, 30 days prior to liner installation/construction. The Quality Control Plan shall include installation/construction personnel, all specifications and construction methods, and liner testing procedures and sampling frequency. The liner material proposed for use shall be completely described. Laying of the liner shall comply with specified standards that are fully defined in the Quality Control Plan. An acceptable method of testing for pinholes and method for removing or patching pinholes and defective areas shall be completely described. Sampling and testing shall be conducted in the field during construction and after completion by qualified personnel under the direction of the professional engineer in charge to assure the liner will meet the performance standards.



State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

# Interoffice Memorandum

TO: Kim Ford, P.E.

THROUGH: Robert Butera, P.E. II *10-27-92*

THROUGH: Diane Trommer, P.G. II *DT 10-27-92*

FROM: Mary Yeargan, E.S. III *may 10/27/92*

DATE: October 27, 1992

SUBJECT: Hardee County Regional Landfill  
Renewal of Class I Landfill Operating Permit  
Permit Application #S025-214306

.....  
The Groundwater Cleanup Section has reviewed the response to our June 26, 1992 comments on the Application for Permit to Operate Solid Waste Resource Recovery and Management Facility. We have the following comments:

- 1) This application should be a complete document that can stand alone. All information and items in Section 17-522.600, Florida Administrative Code (FAC) (formerly Section 17-28.700(6)(d), FAC), shall be provided. The geological information and analytical data should be updated, summarized and evaluated to determine whether the existing Groundwater Monitoring Plan (GWMP) is sufficient for this application.
- 2) Monitor well construction details and lithology logs should be provided for monitor wells MW-1, MW-2 and MW-3.
- 3) Water table maps for the wet and dry seasons were requested in our memo of June 26, 1992. It was noted in the recent response from Wade-Trim, Inc., on the groundwater elevation map, that the side liner and the drainage ditches restrict the interpretation and contouring of the groundwater table. The effect of the dewatering ditch and the side wall liner on the water table should be evaluated. Based on the groundwater elevations from monitor well MW-3, there is mounding and possibly an outward gradient from the dewatering ditch during the wet season.
- 4) In the March 20, 1987 report "Leachate Collection and Disposal System Hardee County Regional Sanitary Landfill,

*HAVE IT  
OR  
NOT*

*in or  
not*

Hardee County, Florida" it was recommended on page 10 that a monitoring program be used in the operation of the Land Application System. One of the recommendations was the use of a staff gage in the dewatering ditch. If the staff gage was installed, all data collected to date should be provided to the Department. If there is no staff gage, this should be required as a Specific Condition in the new permit.

- 5) Water level information (NGVD) was provided for the monitor wells. We requested that this data include top of casing elevations, depth to water measurements, corresponding water level elevations and monitoring interval length.

*in person  
spec cond  
just on forecast* 6) A summary of analytical data for leachate indicator parameters for all sampling periods, in tabular form, was requested, but not provided.

- 7) The only analytical parameter that has consistently exceeded maximum contaminant levels is iron. Other parameters that should be evaluated, especially for monitor wells MW-6 and MW-7, are conductivity, total dissolved solids, chlorides and sodium. There appears to be a trend towards higher values for these parameters for these wells. This may be significant since these monitor wells are adjacent to the leachate spray field.

*for future  
permit  
cond* 8) Groundwater monitoring parameters should be expanded to include additional parameters for permit renewal, annual parameters and quarterly parameters.

- 9) Section 17-4.050(3), F.A.C., states that where required by Chapter 471 or 492, Florida Statutes (F.S.), applicable portions of permit applications and documents which are submitted to the Department for public record shall be signed, sealed and dated by the professional(s) who prepared or approved them. Geological portions of documents and submittals should be signed, sealed and dated by a Florida registered professional geologist in accordance with Chapter 492, F.S., and engineering portions of documents and submittals should be signed, sealed and dated by a Florida registered professional engineer in accordance with Chapter 471, F.S.

*Det's  
company have  
cert of  
ASTM  
as do  
Geology in  
Florida*

Please have the applicant respond to the above items. If you have any questions, please call.

MEY

### ESTIMATED GROSS IRRIGATION REQUIREMENT

<u>Month</u>	<u>Inches</u>
January	1.04
February	0.73
March	1.71
April	3.61
May	5.85
June	3.55
July	3.37
August	3.01
September	2.11
October	3.01
November	2.63
December	1.23
	<u>31.80</u>

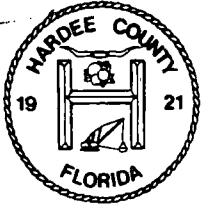
These values represent the average monthly irrigation quantities that the cover crop will accept during irrigation periods. Irrigation can occur whenever there is no surface water runoff. During drought periods gross irrigation requirements will be greater than these average values. Likewise, during extreme wet weather periods the gross irrigation requirements will be less than the average values.

The irrigation system should be designed to handle less than 1 to more than 6 inches per month based on the average monthly gross irrigation requirements. Considering the infiltration/percolation rates for the soils, the fact that irrigation cannot occur during surface water runoff periods, and the fact that close to 6 inches per month of irrigation may be deemed prudent during some months, the following design criteria for the irrigation system are provided:

- Maximum application rate is 0.1 inch per hour
- Maximum liquid loading is 1 to 2 inches per week
- Effluent is applied once every 7 days
- In the winter months, application rate may be as low as 0.2 inch/week
- In the summer months, application rate may be over 1 inch/week
- The average application rate should not exceed 0.61 inches per week on an average annual basis.

At the site, the lateral seepage from the irrigated area is expected to be toward the dewatering ditch south of the landfill. We recommend, however, that monitoring wells be installed south of the irrigated area to monitor flows potentially leaving the site in this direction.

The irrigation site should have a cover crop the entire year. Hay, coastal bermuda grass and winter rye grass are the anticipated cover crop. The rye grass needs to cover the land by mid November such that the cover crop will be functioning at the time of the first hard freeze in the fall. Young, healthy crops are optimum for nutrient and transpiration of water uptake.



**HARDEE COUNTY**  
**Department of Solid Waste & Recycling Center**  
P.O. Box 246  
Wauchula, Florida 33873

RECEIVED  
DEC 30 1992

December 29, 1992

Department of Environmental Regulation  
SOUTH WEST DISTRICT

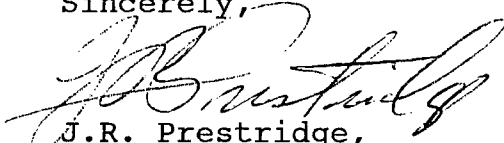
Department of Environmental Regulations  
Attention: Kim B. Ford, P.E.  
Solid Waste Section  
Division of Waste Management  
3804 Coconut Palm Drive  
Tampa, Florida 33619-8318

RE: Construction and Demolition Debris Disposal  
Pending Permit No.: SC25-212896

Dear Mr. Ford:

As per your request by phone on December 21, 1992, we have enclosed a revised drawing of the Construction and Demolition Debris Site to indicate the berm design to redirect offsite stormwater. We do apologize for the delay and should you have any further questions or comments please contact us.

Sincerely,

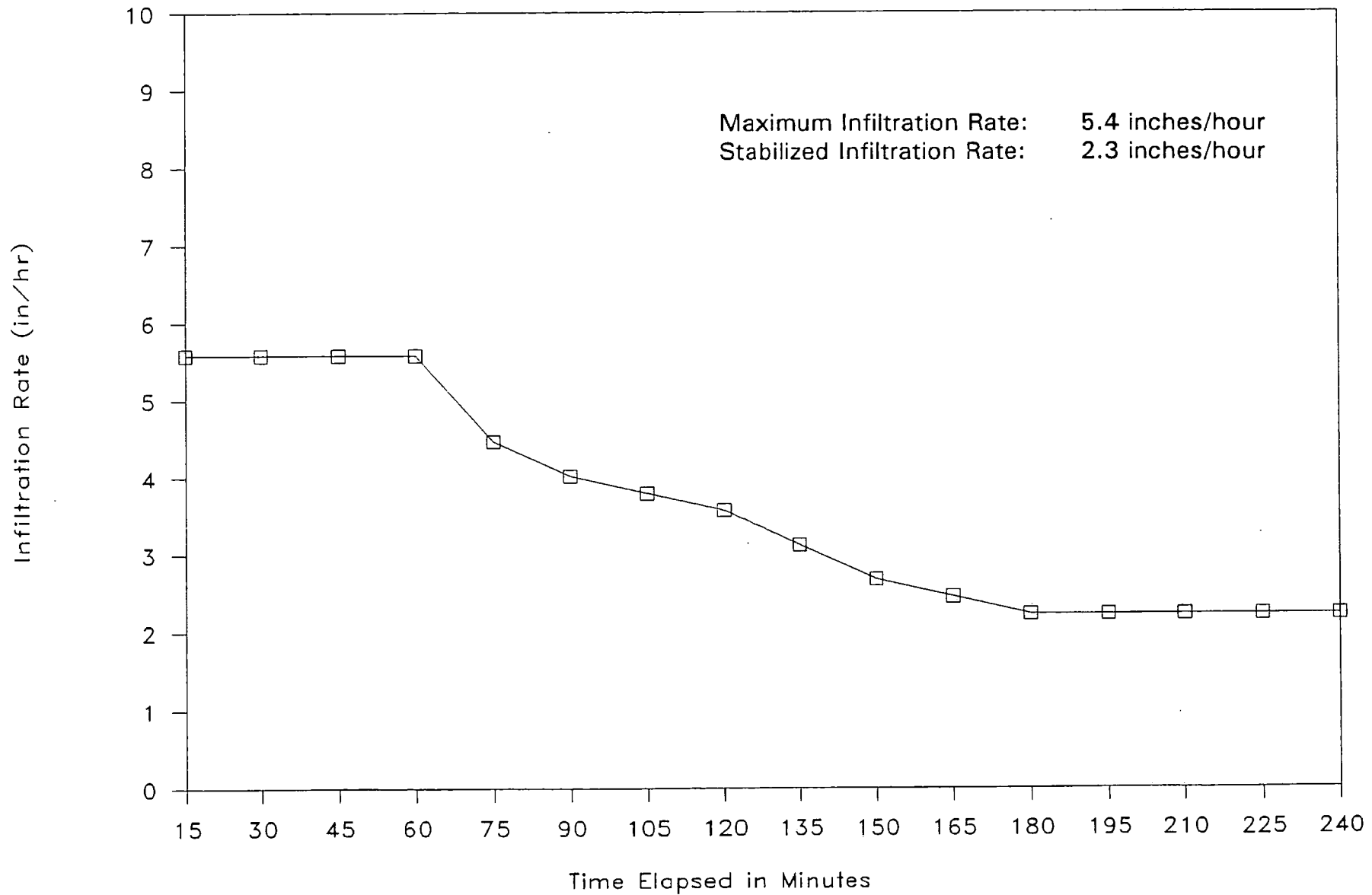
  
J.R. Prestridge,  
Solid Waste Superintendent

jw/Enclosure

# DOUBLE RING INFILTRATION TEST

Hardee Co Construction/Demolition Site

Maximum Infiltration Rate: 5.4 inches/hour  
Stabilized Infiltration Rate: 2.3 inches/hour





## OPERATIONS DESCRIPTION FOR SPOTTERS

### HARDEE COUNTY SANITARY LANDFILL

Upon entering the landfill, solid waste will be weighed and classified at the scale house. If the load appears to be suitable for disposal at the C&D Site, they will be directed to that area. However, if a load appears to be a mixture of C&D Debris with other non C&D material, it will be directed to the Class I Landfill Site and a Public Notice explaining what materials are excepted at the C&D Site will be given to the customer.

Should the load pass the visual inspection and be sent to the C&D Site, the Landfill Spotter will meet the customer at the site and inspect the load being dumped. If the Spotter finds only a small amount of unacceptable materials mixed in with the load, he directs the customer to place the unacceptable materials into a box located at the site. The contents of the box is removed daily and taken to the Class I Landfill. The Spotter will then hand out a Public Notice.

Should the Spotter find large amounts of unacceptable materials mixed in with the load, he advises the customer of the rules and regulations and ask that he stop dumping immediately and then the Spotter will issue a Public Notice to the customer and redirect the load to the Class I Landfill.

If unwanted materials are found at the C&D Site during the daily inspections, they will be removed and transferred to the Class I Landfill.

**PUBLIC NOTICE**

**TO: CONSTRUCTION AND DEMOLITION DEBRIS CUSTOMERS**

**FROM: HARDEE COUNTY SANITARY LANDFILL**

Florida Administrative Code Rule 17-701.020 (16) defines construction and demolition debris as materials generally considered to be not soluble and non-hazardous in nature including but not limited to steel, glass, brick, concrete, asphalt roofing material, piping, gypsum wallboard and lumber from the construction or destruction of a structure as part of a construction or demolition project or from the renovation or maintenance of a structure. The term includes rocks, soils, tree remains, trees, and other vegetative matter which normally results from land clearing or land development operations for a construction project. Mixing of construction and demolition debris with other types of solid waste, including material which is not from the actual construction or destruction of a structure, will cause it to be classified as other than construction and demolition debris.

Materials which may be the same type of waste but not originating from a construction or demolition project, such as lawn maintenance debris, rolls of carpeting, scrap lumber from the lumber yard, office paper, etc., cannot be disposed of at a C&D site. Materials originating from a construction or demolition project which were not an integral part of a structure, such as furniture, electronics, appliances, clothing, household waste, etc., also cannot be disposed of at a C&D site.

Materials which are an integral part of the construction of a structure, and are also soluble or hazardous in nature, such as paints, tars, adhesives, solvents, oils, or greases, or containers which held these materials shall not be disposed of at a C&D site.

Other items which will not be accepted into the C&D site include: used oil filters and containers, car parts, asbestos and tires.

Construction and Demolition Debris loads mixed with unacceptable materials will not be accepted at the C&D site. Mixed loads will be reclassified and sent to the Class I Landfill and will be assessed a charge of \$30.00 per ton.

## **JOB DESCRIPTION**

### **LANDFILL SPOTTER, LIGHT DUTY POSITION**

#### **PURPOSE:**

The purpose of this job is to prevent unacceptable materials from being disposed of at the wrong sites and to help educate the haulers of what materials are not acceptable to different sites at the landfill.

#### **ILLUSTRATIVE DUTIES:**

Work entails operation of light truck and requires the ability to drive, stand and walk around to visually check loads being dumped, for unacceptable materials. If unacceptable materials are found, spotter should report to the office for corrective action. Spotter should be able to inform the hauler of his responsibilities in proper segregation of waste loads. Spotter must have the ability to comprehend the classification of waste loads and to comprehend the Department of Environmental Regulations rules governing disposal of different types of waste. Spotter must also have the ability to be trained to operate the computerized scales system for backup purposes.



# HARDEE COUNTY

## Department of Solid Waste & Recycling Center

P.O. Box 246

Wauchula, Florida 33873

December 17, 1992

Department of Environmental Regulations  
Attention: Kim B. Ford, P.E.  
Solid Waste Section  
Division of Waste management  
3804 Coconut Palm Drive  
Tampa, Florida 33619-8318

RECEIVED  
DEC 18 1992

Department of Environmental Regulation  
SOUTH WEST DISTRICT

Re: Construction and Demolition Debris Disposal  
Pending Permit No.: SC25-212896

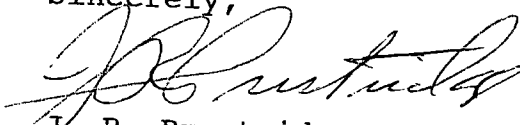
Dear Mr. Ford:

As per your request on October 9, 1992, we have enclosed the following:

- ✓ 1. Swale and berm design to redirect offsite stormwater.
- ✓ 2. Swale design for onsite runoff for treatment.
- ✓ 3. Percolation test data for swales used for treatment.
- ✓ 4. Updated stormwater calculations for treatment.
- ✓ 5. Operations description for spotters before and during dumping.

Should you have any further questions or comments please contact us.

Sincerely,

  
J. R. Prestridge,  
Solid Waste Superintendent

jw



## Professional Service Industries, Inc.

October 29, 1992

Hardee County  
Solid Waste Department  
PO Box 246  
Wauchula, Florida 33873  
Attention: JR Prestridge

Re: Double Ring Infiltrometer Test  
Hardee County Landfill  
Construction & Demolition Site  
Purchase Order No. 12278  
PSI Project No. 387-20236

Gentlemen:

Attached, please find a graph depicting results of the Double Ring Infiltrometer Test performed on October 28, 1992 at the Hardee County Landfill. Following is summary of relevant data:

TEST STANDARD:	ASTM D3385-75
SITE LOCATION:	Construction & Demolition Site
TEST LOCATION:	Northwest Corner of Proposed Storm Water Retention Swale and Firebreak
WEATHER:	Clear, Sunny, Warm
TEMPERATURE:	80°F - 85°F
WEATHER LAST 24 HOURS:	Sunny, No Rain
HEAD:	6"
36 INCH RING INSERTED 6 INCHES	
12 INCH RING INSERTED 2 INCHES	
WATER TABLE AT TIME OF TEST:	48"

HARDEE  
C&D

Photo made \_\_\_\_\_

Time \_\_\_\_\_

Location \_\_\_\_\_

\_\_\_\_\_

Photo Taken By \_\_\_\_\_



Hardee County  
October 29, 1992  
Project No. 387-20236  
Page Two

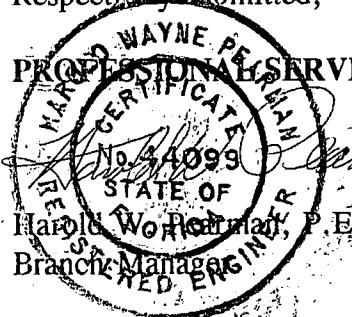
### VISUAL SOIL DESCRIPTION

Depth (In.)	Description
0 - 6	Gray Fine Sand, Trace Silt
6 - 12	Light Gray Fine Sand, Trace Silt
12 - 18	White Fine Sand, Trace Silt
18 - 24	White Fine Sand, Trace Silt
24 - 30	White and Brown Fine Sand, Trace Silt
30 - 36	White Fine Sand, Trace Silt
36 - 42	White Fine Sand, Trace Silt
42 - 48	Light Brown Fine Sand, Trace Silt
48 - 54	Light Brown Fine Sand, Trace Silt
54 - 60	Light Brown Fine Sand, Trace Silt
60 - 66	Light Brown Fine Sand, Trace Silt
66 - 72	Brown Fine Sand, Trace Silt

Should you have any questions concerning this report, please contact us at your earliest convenience.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.



HWP:tkf

Attachment





# Wade-Trim

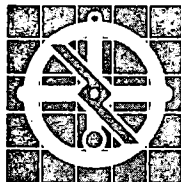
November 13, 1992

D.E.R.

Mr. Kim Ford  
Division of Waste Management  
Florida Department of Environmental Regulation  
3804 Coconut Palm Drive  
Tampa, FL 33619-8318

NOV 13 1992

SOUTHWEST DISTRICT TAMPA



**Re: Hardee County Landfill**  
**Permit No. 5025-214306 and SC2S-212896**

Dear Mr. Ford:

In response to your letter of October 13, 1992, regarding the permit application, we are submitting this request for a 90-day time extension until February 12, 1993 to submit all the required information. At the request of the County, we have requested proposals from Geotechnical Engineering firms to respond to the questions posed.

Group  
Services:  
  
Engineering  
Planning  
Sciences  
Landscape  
Architecture


In response to questions 1 and 3 of your letter, we are submitting the following:

1. Attached is estimate for closure and long term care as submitted in July 1992.
3. The final cover material will be excavated from an on-site location. The material is a grey green clay with an anticipated permeability of less than  $1.0 \times 10^{-7}$  cm/sec.

If you have any questions, please call.

Sincerely,

WADE-TRIM, INC.

  
Steven A. Dutch, PE  
Project Manager

SAD:br  
SAD1:SO25.LTR  
HAR2001.01  
Attachment

cc: J.R. Prestridge, Hardee County





**HARDEE COUNTY**  
**Department of Solid Waste & Recycling Center**  
P.O. Box 246  
Wauchula, Florida 33873

November 4, 1992

Department of Environmental Regulations  
Attention: Kim Ford  
3804 Coconut Palm  
Tampa, Florida 33619

RE: Construction and Demolition Debris Site Permit Application

Dear Mr. Ford:

This letter is to inform you that the Double Ring Infiltration Test done by Professional Service Industries, Inc. was completed on October 29, 1992. AIM Engineering and Surveying are presently working on new Stormwater Calculations based on these test results. They are also working on the other information requested which should be completed and submitted to you within two weeks from today's date (November 18, 1992).

Should you have any further questions please contact us.

Sincerely,

J.R. Prestridge,  
Solid Waste Superintendent

D.E.R.

NOV - 9 1992

SOUTHWEST DISTRICT  
TAMPA

jw



# Florida Department of Environmental Regulation

Southwest District

4520 Oak Fair Boulevard

Tampa, Florida 33610-7347

Lawton Chiles, Governor

813-620-6100

Carol M. Browner, Secretary

October 30, 1992

Mr. J.R. Prestridge  
Hardee County  
Department of Solid Waste  
Post Office Box 246  
Wauchula, FL 33873

Re: Hardee County Landfill  
Pending Permit No.: SO25-214306

Dear Mr. Prestridge:

Attached is a copy of Ms. Yeargan's October 27, 1992 memorandum that specifies additional information that is needed before the FDER can approve the county landfill groundwater monitoring plan. This information is requested to be submitted as part of your response to FDER's October 13, 1992 letter.

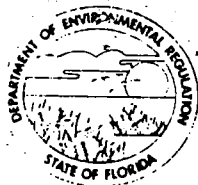
If you have any questions regarding Ms. Yeargan's memorandum, you may call her at (813) 744-6100, extension 376.

Sincerely,

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

KBF/ab  
Attachment

cc: Steven Dutch, P.E., WADE-TRIM  
Robert Butera, P.E., FDER Tampa  
Steve Morgan, FDER Tampa  
Mary Yeargan, P.G., FDER Tampa  
Kathy Anderson, FDER Tallahassee  
Fred Wick, FDER Tallahassee



State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

# Interoffice Memorandum

TO: Kim Ford, P.E.

THROUGH: Robert Butera, P.E. II *RB 10-27-92*

THROUGH: Diane Trommer, P.G. II *DT 10-27-92*

FROM: Mary Yeargan, E.S. III *may 10/27/92*

DATE: October 27, 1992

SUBJECT: Hardee County Regional Landfill  
Renewal of Class I Landfill Operating Permit  
Permit Application #S025-214306

.....

The Groundwater Cleanup Section has reviewed the response to our June 26, 1992 comments on the Application for Permit to Operate Solid Waste Resource Recovery and Management Facility. We have the following comments:

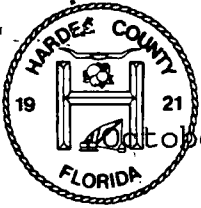
- 1) This application should be a complete document that can stand alone. All information and items in Section 17-522.600, Florida Administrative Code (FAC) (formerly Section 17-28.700(6)(d), FAC), shall be provided. The geological information and analytical data should be updated, summarized and evaluated to determine whether the existing Groundwater Monitoring Plan (GWMP) is sufficient for this application.
- 2) Monitor well construction details and lithology logs should be provided for monitor wells MW-1, MW-2 and MW-3.
- 3) Water table maps for the wet and dry seasons were requested in our memo of June 26, 1992. It was noted in the recent response from Wade-Trim, Inc., on the groundwater elevation map, that the side liner and the drainage ditches restrict the interpretation and contouring of the groundwater table. The effect of the dewatering ditch and the side wall liner on the water table should be evaluated. Based on the groundwater elevations from monitor well MW-3, there is mounding and possibly an outward gradient from the dewatering ditch during the wet season.
- 4) In the March 20, 1987 report "Leachate Collection and Disposal System Hardee County Regional Sanitary Landfill,

Hardee County, Florida" it was recommended on page 10 that a monitoring program be used in the operation of the Land Application System. One of the recommendations was the use of a staff gage in the dewatering ditch. If the staff gage was installed, all data collected to date should be provided to the Department. If there is no staff gage, this should be required as a Specific Condition in the new permit.

- 5) Water level information (NGVD) was provided for the monitor wells. We requested that this data include top of casing elevations, depth to water measurements, corresponding water level elevations and monitoring interval length.
- 6) A summary of analytical data for leachate indicator parameters for all sampling periods, in tabular form, was requested, but not provided.
- 7) The only analytical parameter that has consistently exceeded maximum contaminant levels is iron. Other parameters that should be evaluated, especially for monitor wells MW-6 and MW-7, are conductivity, total dissolved solids, chlorides and sodium. There appears to be a trend towards higher values for these parameters for these wells. This may be significant since these monitor wells are adjacent to the leachate spray field.
- 8) Groundwater monitoring parameters should be expanded to include additional parameters for permit renewal, annual parameters and quarterly parameters.
- 7) Section 17-4.050(3), F.A.C., states that where required by Chapter 471 or 492, Florida Statutes (F.S.), applicable portions of permit applications and documents which are submitted to the Department for public record shall be signed, sealed and dated by the professional(s) who prepared or approved them. Geological portions of documents and submittals should be signed, sealed and dated by a Florida registered professional geologist in accordance with Chapter 492, F.S., and engineering portions of documents and submittals should be signed, sealed and dated by a Florida registered professional engineer in accordance with Chapter 471, F.S.

Please have the applicant respond to the above items. If you have any questions, please call.

MEY



# HARDEE COUNTY

## Department of Solid Waste & Recycling Center

October 26, 1992

P.O. Box 246

Wauchula, Florida 33873

D. E. R.

Florida Department of Environmental Regulations

ATTENTION: Kim Ford, P.E.

Solid Waste Section

Division of Waste Management

3804 Coconut Palm Drive

Tampa, Florida 33619-8318

OCT 28 1992

SOUTHWEST DISTRICT  
TAMPA

Dear Mr. Ford:

As per your request on October 9, 1992, I have enclosed the records for the past 6 months to confirm the number of waste tires collected and processed. I have also enclosed the number of tires we have on site at present time.

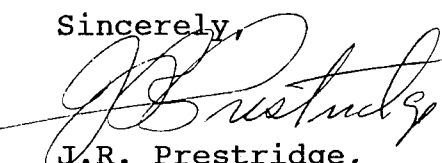
We would like to give an explanation as to why the number of waste tires stored and processed were so much higher than what the permit allowed. In the 1991-92 year, Hardee County Sanitary Landfill did not have the equipment or means to process waste tires. Also, due to the small volume of tires we were unable to secure a contract for an on site waste tire processor. We had planned to remove and ship the waste tires to Gilliard Brothers in Zolfo Springs, Florida however, due to his permit limitations he was unable to accept them.

With funds from the Waste Tire Grant, Hardee County Sanitary Landfill was able to purchase processing equipment for car tires. We began processing the back log of tires in May of 1992. We plan to ship the back log of truck and tractor tires to Gilliard Brothers, provided that his permit will allow.

Please note that the number of waste tires collected per month does not exceed the 500 per month processing limit, and now that the back log has been processed; Hardee County Sanitary Landfill will not process more than 500 tires per month.

We would very much appreciate your consideration in this matter and should you have any questions please feel free to contact us.

Sincerely,

  
J.R. Prestridge,  
Solid Waste Superintendent

jw

## WASTE TIRE RECORD 1993

[illegible]

Department of Environmental Regulation

# Routing and Transmittal Slip

To: (Name, Office, Location)

1. STEVEN DUTCH PE  
 2. WADE-TRIM  
 3. 201 E KENNEDY BLVD  
 4. SUITE 334

Remarks:

Tampa FL 33602

Your copy

From

Kim Fenn

Date

10/28/92

Phone

For Routing To Other Than The Addressee

Location:

Location:

Location:

Date:

Permit

.....  
 e response to our  
 ermit to Operate  
 cility. We have

ocument that can  
 in Section 17-  
 C) (formerly  
 provided. The  
 ata should be  
 ermine whether  
 (GWMP) is

ithology logs  
 1, MW-2 and MW-3.

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contouring of the groundwater table. The effect of the dewatering ditch and the side wall liner on the water table should be evaluated. Based on the groundwater elevations from monitor well MW-3, there is mounding and possibly an outward gradient from the dewatering ditch during the wet season.

- 4) In the March 20, 1987 report "Leachate Collection and Disposal System Hardee County Regional Sanitary Landfill,



Department of Environmental Regulation  
**Routing and Transmittal Slip**

To: (Name, Office, Location)

1.	JR DRESTRIDGE
2.	HARDEE COUNTY
3.	
4.	

Remarks:

THIS MEMO SHALL  
 REPLACE MANY YEARS AGO  
 JUNE 26, 1992  
 MEMO, AND ALL  
 THE INFORMATION  
 HEREIN SHALL BE  
 PROVIDED.

CC STEVEN DUTZ

From

Kim Fowd

Date

10/2/92

Phone

For Routing To Other Than The Addressee

To: _____	Location: _____
To: _____	Location: _____
To: _____	Location: _____
From: _____	Date: _____

n

12

ting Permit

d the response to our  
 or Permit to Operate  
 t Facility. We have

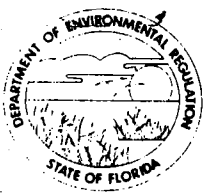
the document that can  
 ems in Section 17-  
 (FAC) (formerly  
 be provided. The  
 al data should be  
 determine whether  
 Plan (GWMP) is

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 MW-1, MW-2 and MW-3.

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 Inc., on the  
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contouring of the groundwater table. The effect of the  
 dewatering ditch and the side wall liner on the water  
 table should be evaluated. Based on the groundwater  
 elevations from monitor well MW-3, there is mounding and  
 possibly an outward gradient from the dewatering ditch  
 during the wet season.

- 4) In the March 20, 1987 report "Leachate Collection and Disposal System Hardee County Regional Sanitary Landfill,



State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

# Interoffice Memorandum

TO: Kim Ford, P.E.

THROUGH: Robert Butera, P.E. II *RB 10-27-92*

THROUGH: Diane Trommer, P.G. II *DT 10-27-92*

FROM: Mary Yeargan, E.S. III *my 10/27/92*

DATE: October 27, 1992

SUBJECT: Hardee County Regional Landfill  
Renewal of Class I Landfill Operating Permit  
Permit Application #SO25-214306

.....

The Groundwater Cleanup Section has reviewed the response to our June 26, 1992 comments on the Application for Permit to Operate Solid Waste Resource Recovery and Management Facility. We have the following comments:

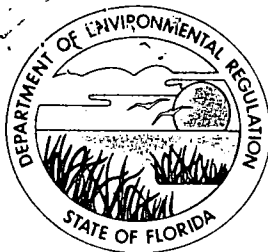
- 1) This application should be a complete document that can stand alone. All information and items in Section 17-522.600, Florida Administrative Code (FAC) (formerly Section 17-28.700(6)(d), FAC), shall be provided. The geological information and analytical data should be updated, summarized and evaluated to determine whether the existing Groundwater Monitoring Plan (GWMP) is sufficient for this application.
- 2) Monitor well construction details and lithology logs should be provided for monitor wells MW-1, MW-2 and MW-3.
- 3) Water table maps for the wet and dry seasons were requested in our memo of June 26, 1992. It was noted in the recent response from Wade-Trim, Inc., on the groundwater elevation map, that the side liner and the drainage ditches restrict the interpretation and contouring of the groundwater table. The effect of the dewatering ditch and the side wall liner on the water table should be evaluated. Based on the groundwater elevations from monitor well MW-3, there is mounding and possibly an outward gradient from the dewatering ditch during the wet season.
- 4) In the March 20, 1987 report "Leachate Collection and Disposal System Hardee County Regional Sanitary Landfill,

Hardee County, Florida" it was recommended on page 10 that a monitoring program be used in the operation of the Land Application System. One of the recommendations was the use of a staff gage in the dewatering ditch. If the staff gage was installed, all data collected to date should be provided to the Department. If there is no staff gage, this should be required as a Specific Condition in the new permit.

- 5) Water level information (NGVD) was provided for the monitor wells. We requested that this data include top of casing elevations, depth to water measurements, corresponding water level elevations and monitoring interval length.
- 6) A summary of analytical data for leachate indicator parameters for all sampling periods, in tabular form, was requested, but not provided.
- 7) The only analytical parameter that has consistently exceeded maximum contaminant levels is iron. Other parameters that should be evaluated, especially for monitor wells MW-6 and MW-7, are conductivity, total dissolved solids, chlorides and sodium. There appears to be a trend towards higher values for these parameters for these wells. This may be significant since these monitor wells are adjacent to the leachate spray field.
- 8) Groundwater monitoring parameters should be expanded to include additional parameters for permit renewal, annual parameters and quarterly parameters.
- 7) Section 17-4.050(3), F.A.C., states that where required by Chapter 471 or 492, Florida Statutes (F.S.), applicable portions of permit applications and documents which are submitted to the Department for public record shall be signed, sealed and dated by the professional(s) who prepared or approved them. Geological portions of documents and submittals should be signed, sealed and dated by a Florida registered professional geologist in accordance with Chapter 492, F.S., and engineering portions of documents and submittals should be signed, sealed and dated by a Florida registered professional engineer in accordance with Chapter 471, F.S.

Please have the applicant respond to the above items. If you have any questions, please call.

MEY



# Florida Department of Environmental Regulation

Southwest District

4520 Oak Fair Boulevard

Tampa, Florida 33610-7347

Lawton Chiles, Governor

813-620-6100

Carol M. Browner, Secretary

October 13, 1992

Mr. J.R. Prestridge  
Hardee County  
Department of Solid Waste  
Post Office Box 246  
Wauchula, FL 33873

Re: Hardee County Landfill  
Pending Permit No.: S025-214306  
Hardee County

Dear Mr. Prestridge:

This is to acknowledge receipt of your applications for landfill operation.

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

Your applications for 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 applications [Chapters 17-701 and 17-711, Florida Administrative Code (F.A.C.)]:

1. In order to approve the financial responsibility cost estimates for closure and long-term care, please indicate the source of clay on the plans and provide the permeability of the clay to be used for final cover. In the estimate for leachate management, include the cost of monitoring the spray irrigation system. Cost estimates must be signed and sealed by a professional engineer. Approved cost estimates will be forwarded to Mr. Fred Wick of the Solid Waste Section in Tallahassee. You are requested to work directly with him to obtain approval of Hardee County's financial responsibility documents.
2. Cross-sections showing both original and proposed fill elevations are required. Proposed fill cross-sections should show the final elevations at the landfill, sequence of filling and lift heights. Plans showing the 1997 final contours cannot be found. Please submit 2 sets of updated plans, signed and sealed by a professional engineer.

3. Source location, quantity, and characteristics of final cover material.
4. A evaluation in report form of the condition and effectiveness of the existing leachate control and removal system performance, spray field including water balance calculations, and the surface water management system. The report shall contain professional conclusions and recommendations and shall be signed and sealed by a professional engineer.

The leachate levels inside the landfill shall remain below the water levels outside the landfill. Provide reasonable assurance to show that an inward gradient will be maintained continuously since this is the basis of FDER's previous approval of the landfill containment and leachate removal system, including the sprayfield.

All monitoring wells and piezometers must be shown on plans. The site evaluation report shall provide conclusions and recommendations regarding the possible need for additional wells and piezometers for the landfill and sprayfield. A water table contour map shall be provided for the wet and dry seasons for the past 12 months. Record drawings of the leachate collection and removal system are requested.

5. Provide the HELP or similar model data that shows the monthly quantity of leachate generated and the monthly quantity of other drainage and seepage expected to reach the dewatering ditch. The total quantity sprayed should be in gallons and include seepage from the landfill, sprayfield, and runoff from the unclosed portions of the landfill.

To confirm the quantity and quality of leachate to be sprayed, provide the past 12 months of data from the monitoring program specified on page 10 of Ardaman's March 20, 1987 report and the past 12 months of data from permit S025-096551 specific condition #9 (see attachments).

6. Information found in previous reports from the FDER's files indicate Hardee County has been allowed to spray up to 2 inches of leachate in one day, based on spraying only once per week. This application rate equates to 250,000 gallons of leachate sprayed in one day which is not acceptable. For more recent projects a maximum application of .2 inches in one day was used to prevent runoff of "treated effluent".

Please provide the HELP or similar model data that shows the maximum daily rate of spray irrigation included with rainfall to determine how many days runoff would be expected and how many days of storage would be required for the leachate dewatering ditch/holding pond. The model should consider the slope and characteristics of the final cover and the soil and runoff characteristics of the sprayfield. Explain how runoff will not occur from spray irrigation based on the following condition:

This permit allows spray irrigation of a maximum 5,000 gallons per day (24 hours) at an application rate of .20 inches per day of leachate from the associated dewatering ditch. Under no circumstances shall leachate be allowed to discharge as runoff to adjacent stormwater systems or conveyance ditches. Spraying shall take place only when runoff into the onsite retention areas downgradient from the spray areas has terminated for 24 hours. The aforementioned is based on daily inspections of the influent point to retention area, or as follows, whichever is more restrictive:

- a. at least 4 hours after a rainfall of 1/4" or less, or
- b. at least 24 hours after a day or rainfall of 1/4" or 1", or
- c. at least 48 hours after a day or rainfall of 1" or greater

The ... "maximum 5,000 gallons per day (24 hours) at an application rate of .20 inches per day" ... is used as an example and may be revised to fit actual site conditions. All other parts of this permit condition will remain unchanged. A berm/swale system may be required along the south border of the sprayfield to allow runoff to be more easily detected. Plans shall show the location of all sprayheads and the spraying pattern of each. An operations manual for the spray irrigation system is requested.

7. Your response to Mary Yeargan's June 26, 1992 attached memorandum. Ms. Yeargan may be contacted at (813) 744-6100, extension 376.

"NOTICE! Pursuant to the provisions of Section 120.600, F.S. and Chapter 17-12.070(5), F.A.C., if the Department does not receive a response to this request for information within 30 days of the date of this letter, the Department may issue a final order denying your application. If the response will require longer than 30 days to develop, you should develop a specific time table

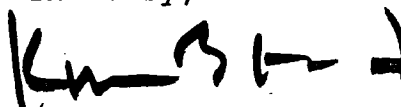
Mr. J.R. Prestridge  
Hardee County Department of  
Solid Waste

October 13, 1992  
Page Four

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 a 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."

If there are points which must be discussed and/or resolved, please contact me at (813) 744-6100, extension 382.

Sincerely,



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

KBF/ab

cc: Steven Dutch, P.E., WADE-TRIM  
Robert Butera, P.E., FDER Tampa  
Steve Morgan, FDER Tampa  
Mary Yeargan, P.G., FDER Tampa  
Kathy Anderson, FDER Tallahassee  
Fred Wick, FDER Tallahassee

PERMITTEE:

Samuel L. Rauls, Chairman      PERMIT NO.: SO25-096551  
Hardee County Class I Sanitary Landfill

SPECIFIC CONDITIONS (con't):

7. (con't):

- D. Data from each of the above sampling efforts shall be submitted to the Southwest District Office, C/O Solid Waste Section, within 30 days after collection.

8. The permittee shall ensure that neither ponding nor run-off from the spray site occurs as a result of the spray irrigation. The Department considers ponding to be any residual which remains on the surface sufficient time to contaminate stormwater runoff or otherwise be environmentally objectionable due to odor or public health criteria. Vegetation on the spray site shall be cropped regularly. Spray nozzles are to be regularly inspected for proper operation.

9. The spray irrigation system for leachate disposal shall be sampled initially and quarterly thereafter for the following parameters. Results shall be submitted along with results from the groundwater monitoring well samples. Leachate shall not be spray irrigated on unlined areas if violations of standards for Class III surface water bodies occur. This shall include the standards outlined in Chapter 17-3.051, along with

Quantity	Total Organic Carbon
Dissolved Oxygen	Iron
pH	Turbidity
Specific Conductance	Lead
Total Coliform	

10. Evidence of methane gas buildup or migration may necessitate installation of measures to control such buildup and/or migration in addition to those proposed.

11. An adequate Quality Control Plan shall be submitted to the Department, C/O Solid Waste Section, Southwest District Office, 30 days prior to liner installation/construction. The Quality Control Plan shall include installation/construction personnel, all specifications and construction methods, and liner testing procedures and sampling frequency. The liner material proposed for use shall be completely described. Laying of the liner shall comply with specified standards that are fully defined in the Quality Control Plan. An acceptable method of testing for pinholes and method for removing or patching pinholes and defective areas shall be completely described. Sampling and testing shall be conducted in the field during construction and after completion by qualified personnel under the direction of the professional engineer in charge to assure the liner will meet the performance standards.



*Ardaman*

### Leachate Collection System

A leachate collection system is required at the site to collect and convey the leachate to the dewatering ditch and to prevent leachate from building up within the landfill and from exiting the above ground landfill side walls in the future. In addition, the leachate collection system will lower the hydraulic head necessary for recharge into the underlying aquifer.

We recommend a peripheral leachate collection underdrain on the west, north and east sides of the landfill. The underdrains should be a minimum of 4 feet below natural ground and should slope toward the dewatering ditch. Figure 6 illustrates two alternative leachate collection underdrain design concepts.

The first alternative consists of a minimum 14-inch wide trench and an 8-inch diameter corrugated, slotted HDPE pipe completely surrounded by at least 3 inches of clean filter aggregates. Though the anticipated steady-state leachate flow of approximately 0.004 gpm per lineal feet of pipe can be handled by a 6-inch diameter pipe, we recommend using a minimum 8-inch inside diameter underdrain pipe for clean out purposes.

The second alternative consists of a minimum 24-inch wide trench and an 8-inch diameter corrugated slotted HDPE pipe completely surrounded by at least 3 inches of locally available coarse concrete aggregates which in turn is completely wrapped in a filter fabric as shown in Figure 6.

The underdrain pipe should meet ASTM F-667 specifications for corrugated heavy duty polyethylene tubing and fittings.

The filter aggregate or concrete aggregate that surrounds the slotted pipe should be clean, non-calcareous, and should not be susceptible to attack from acids and alkalis with a pH of 3 to 11 and must be sized to prevent the backfill above the filter aggregate from entering the filter system and to prevent the filter aggregate or concrete aggregate from entering the slotted pipe.

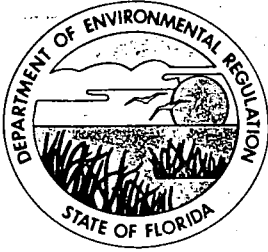
The specifications for the leachate collection system are provided in Appendix 7.

### Monitoring Program

A monitoring program is proposed for the LAS. The following monitoring program will serve to aid in operation of the system:

- Flow meter to monitor leachate generation
- Raingage at spray irrigation site
- Water table monitoring wells
- Staff gage in holding pond (i.e., dewatering ditch)
- Flow meter on irrigated water

The flow into the dewatering ditch will be documented by the raingage and the flow meter. The change in storage level in the ditch will be documented by the staff gage in the pond. The flow meter on the irrigated water and site raingage



## Florida Department of Environmental Regulation

Southwest District • 4520 Oak Fair Boulevard • Tampa, Florida 33610-7347

Lawton Chiles, Governor

813-620-6100

Carol M. Browner, Secretary

October 9, 1992

Mr. J.R. Prestridge  
Hardee County  
Department of Solid Waste  
Post Office Box 246  
Wauchula, FL 33873

Re: Construction and Demolition Debris Disposal and  
Waste Tire Processing Facility  
Pending Permit No.: SC25-212896 and WT25-209268  
Hardee County

Dear Mr. Prestridge:

This is to acknowledge receipt of your additional information.

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

Your applications for permits remain 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 applications [Chapters 17-701 and 17-711, Florida Administrative Code (F.A.C.)]:

- ✓ 1. Provide the information needed in support of the construction and demolition debris site as follows:
  - a. Swale and berm design to redirect offsite stormwater.
  - b. Swale design for onsite runoff for treatment.
  - c. Percolation test data for swales used for treatment.
  - d. Update stormwater calculations for treatment.
  - e. Operations description for spotters before and during dumping.

Mr. J.R. Prestridge  
Hardee County Department of  
Solid Waste

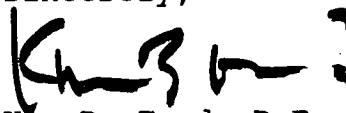
October 9, 1992  
Page Two

- ✓ 2. Please provide the records for the past 6 months to confirm the number of waste tires collected, stored, and processed each month, and the date the processor was on site shredding the waste tires. Please provide a copy of the contract with the processor to verify that he agrees to shred no more than 500 waste tires per month. If this requested information shows that more than 500 waste tires have been processed or more than 1000 waste tires have been stored in any month, the general permit is not applicable.

"NOTICE! Pursuant to the provisions of Section 120.600, F.S. and Chapter 17-12.070(5), F.A.C., if the Department does not receive a response to this request for information within 30 days of the date of this letter, the Department may issue a final order denying your application. 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 a 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."

If there are points which must be discussed and/or resolved, please contact me at (813) 744-6100, extension 382.

Sincerely,



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

KBF/ab

cc: Robert Butera, P.E., FDER Tampa



DATE: 10/5/92

TO: FDER  
3804 Coconut Palm Drive ATTN: Kim Ford  
Tampa FL 33619  
RE: Hardlee County Landfill 5025-24306 PROJ NO.:

TRANSMITTED ☒ HEREWITH VIA: \_\_\_\_\_  
☐ UNDER SEPARATE COVER VIA: \_\_\_\_\_ ARE:

☐ PRINTS    ☐ TRACINGS    ☐ SPECIFICATIONS    ☐ SHOP DRAWINGS    ☐ SAMPLES  
☐ COPY OF LETTER    ☐

PREPARED BY: \_\_\_\_\_

COPIES	DESCRIPTION
1	Well permits issued by SWFWMD within 1 mile of Landfill
	D.E.R.
	OCT - 7 1992
	SOUTHWEST DISTRICT TALUKA

FOR: ☐ YOUR ACTION ☐ YOUR RECORDS ☐ REVIEW & COMMENT ☐ CONSTRUCTION

☐ APPROVED ☐ APPROVED AS NOTED ☐ REJECTED (RESUBMIT) ☐ \_\_\_\_\_

REMARKS \_\_\_\_\_  
This was inadvertently left out of the 9/30/92  
submittal (item 9.7)

COPY TO: \_\_\_\_\_

BY: [Signature]

IF TRANSMITTED ITEMS ARE NOT AS NOTED, PLEASE NOTIFY WRITER IMMEDIATELY

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***** SELECTED PARAMETER DATA *****  
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COUNTY: NONE SELECTED

D. E. R.  
OCT - 7 1992  
SOUTHWEST DISTRICT  
TAMPA

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**                               HJPM01U                               **
**                                     **
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WELL PERMITS ISSUED REPORT

COUNTY: HARDEE		ISSUE DATE RANGE: 01/01/70 THRU 09/30/92									
WCP NUMBER	OWNER ID	OWNER INFORMATION	WELL DIAMETER	LOCATION S-T-R	USE CD DESCRIPTION	CONTRACTOR ID	PRIMARY DEPTH	TELESCOPE FROM	TO	LINER FROM	WELL TO DEPTH
384054.01	039454	HARDEE CO REGIONAL SANATARY LNFL AIRPORT ROAD WAUCHULA, FL PHONE:(000) 000-0000 ZIP:33873-	4.00	35-33-25	OBSERVATION OR MONIT	002050	12				15
384055.01	039454	HARDEE CO REGIONAL SANATARY LNFL AIRPORT ROAD WAUCHULA, FL PHONE:(000) 000-0000 ZIP:33873-	4.00	35-33-25	OBSERVATION OR MONIT	002050	8				11
384056.01	039454	HARDEE CO REGIONAL SANATARY LNFL AIRPORT ROAD WAUCHULA, FL PHONE:(000) 000-0000 ZIP:33873-	4.00	35-33-25	OBSERVATION OR MONIT	002050	8				11
384468.01	039759	HARDEE CO REGIONAL SAN LANDFILL AIRPORT RD WAUCHULA, FL PHONE:(000) 000-0000 ZIP:33873-	4.00	35-33-25	INDUSTRIAL	002050	54				200
435610.01	112703	HARDEE COUNTY AIRPORT ROAD WAUCHULA, FL PHONE:(000) 000-0000 ZIP:33873-	2.00	35-33-25	OBSERVATION OR MONIT	002825	10				20
435611.01	112703	HARDEE COUNTY AIRPORT ROAD WAUCHULA, FL PHONE:(000) 000-0000 ZIP:33873-	2.00	35-33-25	OBSERVATION OR MONIT	002825	8				18
435612.01	112703	HARDEE COUNTY AIRPORT ROAD WAUCHULA, FL PHONE:(000) 000-0000 ZIP:33873-	2.00	35-33-25	OBSERVATION OR MONIT	002825	11				21
435613.01	112703	HARDEE COUNTY AIRPORT ROAD WAUCHULA, FL PHONE:(000) 000-0000 ZIP:33873-	2.00	35-33-25	OBSERVATION OR MONIT	002825	11				21
510327.01	155891	HARDEE COUNTY LANDFILL AIRPORT ROAD WAUCHULA, FL PHONE:(000) 000-0000 ZIP:33873-	4.00	35-33-25	PUBLIC SUPPLY	002050	63				197
309968.01	075848	NO NAME NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	PUBLIC SUPPLY	999998	48				198



WELL PERMITS ISSUED REPORT

COUNTY: HARDEE			ISSUE DATE RANGE: 01/01/70 THRU 09/30/92							
WCP NUMBER	OWNER ID	OWNER INFORMATION	WELL DIAMETER	LOCATION S-T-R	USE CD DESCRIPTION	CONTRACTOR ID	PRIMARY DEPTH	TELESCOPE FROM	LINER TO FROM	WELL TO DEPTH
312355.01	078233	W B GILL NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	999998	66			188.
312795.01	078673	R J LOWE JR NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	999998	107			190
313254.01	079132	CATALINA CO NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	999998	61			168
315440.01	081317	ED R BRAUN NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	6.00	36-33-25	PUBLIC SUPPLY	999998	75			400
315821.01	081698	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	999998	40			197
316335.01	082211	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	999998	42			165
316336.01	082212	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	999998	42			165
322299.01	088169	R GILLARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001065	50			158
324600.01	090468	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001065	50			160
324601.01	090469	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001065	52			170

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT  
WELL CONSTRUCTION PERMITTING09-30-92  
PAGE 4

## WELL PERMITS ISSUED REPORT

COUNTY: HARDEE		ISSUE DATE RANGE: 01/01/70 THRU 09/30/92								
WCP NUMBER	OWNER ID	OWNER INFORMATION	WELL DIAMETER	LOCATION S-T-R	USE CD DESCRIPTION	CONTRACTOR ID	PRIMARY DEPTH	TELESCOPE FROM	LINER TO FROM	WELL TO DEPTH
324603.01	090471	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001065	50			175
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324605.01	090473	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001065	50			160
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324607.01	090475	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001065	42			160
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325342.01	091208	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	999998	52			170
325343.01	091209	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001052	48			155
325555.01	091421	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001052	54			170
326451.01	092317	R GIFFIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001052	57			175



## WELL PERMITS ISSUED REPORT

COUNTY: HARDEE		ISSUE DATE RANGE: 01/01/70 THRU 09/30/92								
WCP NUMBER	OWNER ID	OWNER INFORMATION	WELL DIAMETER	LOCATION S-T-R	USE CD DESCRIPTION	CONTRACTOR ID	PRIMARY DEPTH	TELESCOPE FROM	LINER TO FROM	WELL TO DEPTH
326454.01	092320	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001052	52			170
326455.01	092321	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001052	53			185
326456.01	092322	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001052	53			175
326457.01	092323	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001052	60			185
326458.01	092324	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001052	55			185
326459.01	092325	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001052	57			180
326460.01	092326	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001052	63			132
326489.01	092355	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001065	57			145
326490.01	092356	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001065	60			160
326491.01	092357	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001065	55			175

## WELL PERMITS ISSUED REPORT

COUNTY: HARDEE

ISSUE DATE RANGE: 01/01/70 THRU 09/30/92

WCP NUMBER	OWNER ID	OWNER INFORMATION	WELL DIAMETER	LOCATION S-T-R	USE CD DESCRIPTION	CONTRACTOR ID	PRIMARY DEPTH	TELESCOPE FROM	LINER TO FROM	WELL TO DEPTH
326594.01	092460	R GIFFIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001052	56			175
326595.01	092461	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001052	53			180
326596.01	092462	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001052	68			185
328565.01	094429	W SMITH NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001087	50			205
329744.01	095606	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	DOMESTIC	001065	57			175
335994.01	101829	DOUGIAS D NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	36-33-25	IRRIGATION	001789	60			240
361828.01	021580	ROSENBERGER, SAM DANSBY RD WAUCHULA, FL PHONE:(000) 000-0000 ZIP:33873-	4.00	36-33-25	DOMESTIC	002050	52			208
361829.01	021580	ROSENBERGER, SAM DANSBY RD WAUCHULA, FL PHONE:(000) 000-0000 ZIP:33873-	4.00	36-33-25	DOMESTIC	002050	53			204
366380.01	025022	HINES, HOWARD RT 2 LOT 09 WAUCHULA, FL PHONE:(000) 000-0000 ZIP:33873-	4.00	36-33-25	DOMESTIC	002025	52			210
377003.01	033809	PARKER, J. B. RT 1, BOX 200 BOWLING GREEN, FL PHONE:(000) 000-0000 ZIP:33834-	4.00	36-33-25	DOMESTIC	001087	63			200

WELL PERMITS ISSUED REPORT

COUNTY: HARDEE

ISSUE DATE RANGE: 01/01/70 THRU 09/30/92

WCP NUMBER	OWNER ID	OWNER INFORMATION	WELL DIAMETER	LOCATION S-T-R	USE CD DESCRIPTION	CONTRACTOR ID	PRIMARY DEPTH	TELESCOPE FROM	LINER TO FROM	WELL TO DEPTH
408523.01	056767	DRAKE, GEORGE W BOX 1182 WAUCHULA, FL PHONE:(000) 000-0000 ZIP:33873-	4.00	36-33-25	DOMESTIC	002050	84			180
412499.01	059251	DRAKE, GEORGE W 11214 NORTH SUMMER ROAD WAUCHULA, FL PHONE:(000) 000-0000 ZIP:33841-	4.00	36-33-25	DOMESTIC	001299				
414023.01	060377	DRAKE, GEORGE 1342 HWY S 17 WAUCHULA, FL PHONE:(000) 000-0000 ZIP:33873-	4.00	36-33-25	DOMESTIC	002050	70			220
418987.01	062791	BURNETT, HENRY P RT 2 WAUCHULA, FL PHONE:(000) 000-0000 ZIP:33873-	4.00	36-33-25	DOMESTIC	002033	107			235





## WELL PERMITS ISSUED REPORT

COUNTY: HARDEE

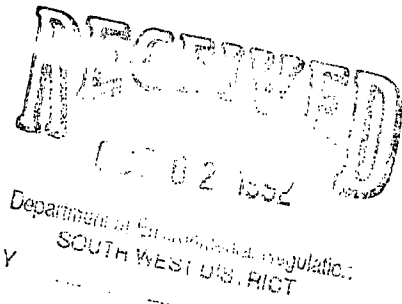
ISSUE DATE RANGE: 01/01/70 THRU 09/30/92

WCP NUMBER	OWNER ID	OWNER INFORMATION	WELL DIAMETER	LOCATION S-T-R	USE CD DESCRIPTION	CONTRACTOR ID	PRIMARY DEPTH	TELESCOPE FROM	LINER TO FROM	WELL TO DEPTH
309778.01	075658	NO NAME NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	25-33-25	IRRIGATION	999998	20			45
318121.01	083995	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	25-33-25	DOMESTIC	999998	42			170
318122.01	083996	R GILLIARD NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	25-33-25	DOMESTIC	999998	42			170
401180.01	052033	MILLIGAN, SHIRLEY 152 AIRPORT ROAD WAUCHULA, FL PHONE:(000) 000-0000 ZIP:33873-	4.00	25-33-25	DOMESTIC	002381	50			175
323891.01	089759	L ROBERTS NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	26-33-25	DOMESTIC	999998	51			124
330631.01	096488	K CONLEY NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	26-33-25	DOMESTIC	001065	72			138
331735.01	097582	H O WILLIS NO ADDRESS NO CITY, FL PHONE:(000) 000-0000 ZIP: -	4.00	26-33-25	DOMESTIC	999998	18			42
347802.01	010897	B.T. PRESTRIDGE ROUTE 2, BOX 32 WAUCHULA, FL PHONE:(000) 000-0000 ZIP:33873-	2.00	26-33-25	DOMESTIC	002025	30			125

# Wade-Trim

September 30, 1992

Ms. Kim Ford  
Division of Solid Waste  
Florida Department of Environmental Protection  
4520 Oak Fair Boulevard  
Tampa, Florida 33610-7347



**Re: Hardee County Land Fill  
Permit No. SO-25-24306 and SC25-212896**

Dear Ms. Ford:

In response to your letter of June 30, 1992, we are submitting the remaining information required to complete the application, supplementing our letter of July 24, 1992.

Group  
Services:  
Engineering  
Planning  
Sciences  
Landscape  
Architecture

- ✓ 2. Provide CQAP for sampling and analysis.

Response: Copy of approval page of the CQAP for Envirolab by FDER on August 20, 1992 is attached. A full copy of the report is available upon request.

6. Provide an evaluation report for the effectiveness of the Leachate Spray System.

Response: A evaluation report of the Leachate Spray System is attached.

9. Response to Mary Yeargum's memo of June 26, 1992.

Response: The following responses are provided:

9.1 Attached are the following:

- a. Monitoring well installation report prepared by Seaburn and Robertson December 1987.
- b. Geologic cross-sections prepared by Envisors in 1987 as Record Drawings of the landfill construction.

9.2 Attached are potentiometric maps of the Florida Acquirer from the July, 1992 SWFWMD Hydrologic Conditions Report.



- 9.3 Attached are table contour maps for the wet and dry seasons based on recent well readings.
- 9.4 Attached is water level data for 1990-1992 from the onsite monitorings wells.
- 9.5 Attached is summary of analytical data for all available sampling periods and graphical trends.
- 9.6 Attached is approval page of CQAP for Envirolab by FDER dated August 20, 1992.
- 9.7 Attached is well construction data from SWFWMD for surrounding area. Aerial photography was completed in 1988 and is most current available for the area.
- 9.8 No response required.
- 9.9 No response required.

This information should complete the application. If you have any questions or request additional clarifications, please call.

Sincerely,

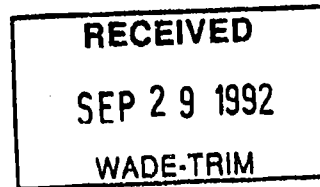
WADE-TRIM

  
Steven A. Dutch, P.E.  
Project Manager

SAD:ram  
SAD1:FFORD.LTR  
HAR2001.01

cc: J.R. Prestridge





## COMPREHENSIVE QUALITY ASSURANCE PLAN

FOR

ENVIROLAB, INC.  
1030 U.S. 1 NORTH  
ORMOND BEACH, FLORIDA 32174  
(904) 672-5668

PREPARED BY

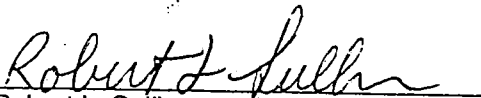
ENVIROLAB, INC.  
1030 U.S. 1 NORTH  
ORMOND BEACH, FLORIDA 32174  
(904) 672-5668

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7728  
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Acosta

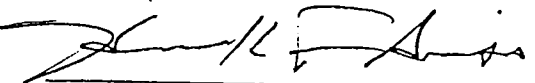
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OCT 21 1991

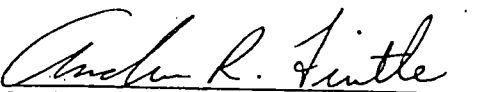
Dept. of Environmental Regulation  
Quality Assurance Section

  
Robert L. Sullivan  
Vice President

10/18/91  
Date

  
Harold F. Acosta  
QA/QC Officer

10/18/91  
Date

  
for Sylvia Labie  
DER QA Officer

8/20/92  
Date

APPROVED



## **EVALUATION OF LEACHATE CONTROL SYSTEM HARDEE COUNTY LANDFILL**

The evaluation of the leachate control system was conducted to determine the effectiveness of the system and the removal performance.

### **System Description**

The Hardee County landfill was constructed with a PVC sidewall liner tied into natural clay on the west, north and east sides. The configuration isolates the outside groundwater, therefore leachate generated will result from groundwater within the landfill and infiltrating precipitation.

The leachate generated is contained by the liner and clay layer. Under drains located just inside the liner collect and transport leachate to a dewatering ditch on the south side of the landfill. The collected leachate is sprayed on an 11 acre site just south of the dewatering ditch. The spray area is also contained within a sidewall liner on the east and west sides. Monitoring wells are located on the south side of the area.

Soil conditions in the area were determined during the design and construction of the original facility by Envisors, Inc. According to Envisors, Inc. (1982), the superficial aquifer is separated from the deeper Floridan aquifer by a continuous confining clay layer which varies in thickness from 14 feet to 35 feet with an average thickness of about 25 feet. Based upon the results of field and laboratory programs by Ardaman & Associates (1986) and that presented by Envisors, Inc. a surficial aquifer permeability of 1.4 feet/day and  $2.83 \times 10$  feet/day was determined.

### **Water Balance**

Ardaman Associates prepared a water balance analysis of the landfill spray field and dewatering ditch as part of the design of the leachate spray system. (See attached letter dated January 16, 1987.) Review of the data contained in this analysis indicates that since the system was generally designed as recommended, this analysis is still valid.

### **Side Liner**

The side liner was installed in accordance with the plans and the installation was inspected and certified by Ardaman & Associates. (See attached letter dated June 9, 1988).



## System Operation

The system is operated in general as designed and recommended. The pump station for the spray system was relocated south of the ditch for ease in operation and access. The pumps are operated once per week.

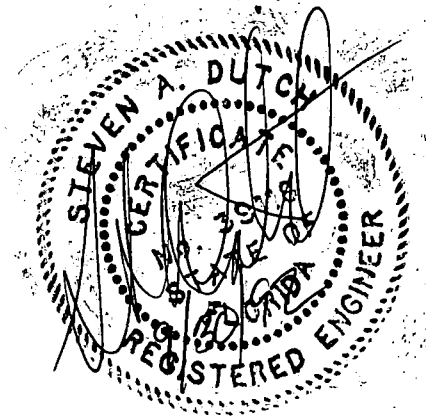
Operation is by timer set to operate at the times set forth in Briley-Wild & Associates letter of March 5, 1987 (copy attached). As outlined in the letter, the water levels are maintained and the low level cut off is set at 72.0.

## Recommendations

Based on observations by Wade-Trim staff, it is recommended that the leachate control system continue being operated and maintained with the following exception:

- The dewatering ditch is currently overgrown with vegetation. The vegetation should be removed and the ditch cleaned. Upon completion of the initial clearing, vegetation should be removed regularly to enhance the performance and prevent potential clogging of the system.

SAD1:EVALUATION





## Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,  
Foundations and Materials Testing

January 16, 1987  
File Number 86-166

Briley, Wild & Associates, Inc.  
1042 U.S. Highway 1, North  
Ormond Beach, Florida 32074

Attention: Mr. John Cumming, P.E.

Subject: Analyses and Recommendations, Hardee County Regional Sanitary  
Landfill, Leachate Collection and Disposal System, Hardee  
County, Florida

Gentlemen:

As requested and authorized by Mr. Cumming, we have completed a geotechnical evaluation of the proposed leachate collection and disposal system for the Hardee County Regional Landfill site. This report summarizes the results of our analyses and recommendations.

Our scope of work included performing 4 Standard Penetration Test (SPT) borings, installing 3 piezometers and performing in situ permeability tests, performing water balance analyses to determine leachate quantities, providing design recommendations for the leachate collection system, and determining the requirements for leachate storage and disposal areas.

The results of our field and laboratory programs have indicated that the subject site is underlain by an average 12-foot thick surficial aquifer consisting mainly of fine sand to slightly clayey fine sand (see Figures 1 and 2). These results are in general agreement with the site soil conditions reported by Envisors, Inc. in 1982. According to Envisors, Inc. (1982), the surficial aquifer is separated from the deeper Floridan aquifer by a continuous confining clay layer which varies in thickness from 14 feet to 35 feet with an average thickness of about 25 feet. Based upon the results of our field and laboratory programs and that presented by Envisors, Inc., a surficial aquifer permeability of 1.4 feet/day was used in the analyses. A confining bed permeability of  $2.83 \times 10^{-4}$  feet/day ( $10^{-7}$  cm/sec) was conservatively used in the analyses.

### Water Balance

Water balance analyses were performed utilizing the "Hydrologic Evaluation of Landfill Performance (HELP)" computer model developed by the U.S. Army Engineer Waterways Experiment Station in Vicksburg, Mississippi. This program models on a daily basis the effects of all of the hydrologic processes, including precipitation, surface storage, runoff, infiltration, percolation, evapotranspiration, soil moisture storage, and lateral drainage, that enter the water balance equation. Daily rainfall and temperature data from 1974 to 1978 for West Palm Beach, Florida (default data in the model) were used in the

analyses. These data appeared to be closer to reported average values at the site than the 1974-78 data for Tampa. It is our opinion that the West Palm Beach data are sufficiently representative of site conditions to be used in the water balance calculations required for this project.

The conceptual hydrologic cycle in the landfill area is illustrated in Figure 3. Table 1 presents a summary of water balance analyses for the various design conditions. As can be seen, the maximum amount of leachate will be generated when the refuse is at the original ground surface elevation with 12 inches of intermediate cover. For the purpose of disposal area design, we recommend a leachate generation rate of 11.9 inches per year. For an 11-acre landfill, this rate corresponds to 0.03 acre-feet per day.

### Spray Irrigation

Based upon a percolation rate of 3.9 in/year (see Table 1), approximately 10 acres of land south of the dewatering ditch is estimated to contribute lateral seepage to the dewatering ditch (i.e., approximately 10 acres of land immediately south of the dewatering ditch is available for spray irrigation of leachate). Using a gross irrigation rate of 31.8 inches per year (for pasture grasses) as recommended by the SCS for the Tampa area, the area required for irrigation is calculated to be about 5.4 acres as follows:

Inflow to                      = (10 acres x 3.9 in + 11 acres x 11.9 in)/year  
Dewatering Ditch       = 170 acre-in per year

Area required                = 170 acre-in per year/31.8 in per year  
                                     = 5.34 acres which is less than the 10 acres available

We recommend using either coastal bermudagrass or pangolagrass as a summer crop (March to November) and overseeding the summer crop with ryegrass for winter production (December to April). The estimated monthly gross irrigation requirement is as follows:

<u>Month</u>	<u>Inches</u>
January	1.04
February	0.73
March	1.71
April	3.61
May	5.85
June	3.55
July	3.37
August	3.01
September	2.11
October	3.01
November	2.63
December	1.23

The following design criteria for the irrigation system are provided:

- Maximum application rate is 0.1 inch per hour
- Maximum liquid loading is 1 to 2 inches per week
- Effluent is applied once every 7 days
- In the winter months, the application rate may be as low as 0.2 inch/week
- In the summer months, the application rate may be over 1 inch/week
- The average application rate should not exceed 0.61 inches per week on an average annual basis.

#### **Leachate Storage Area**

The existing 800-ft long dewatering ditch has top and bottom widths of 100 feet and 50 feet, respectively. The average depth to the ditch bottom is approximately 11.4 feet. The maximum storage available in the ditch is 14 acre-feet.

Using average monthly water balance calculations with the monthly distribution of leachate production calculated by the HELP model and the monthly gross irrigation requirement as recommended by the SCS, the maximum storage required is approximately 3.1 acre-feet which corresponds to 3.2 feet of leachate in the ditch. The maximum storage is expected to occur in the month of March. The monthly water balance calculations are provided in Table 2.

#### **Leachate Collection System**

We recommend a peripheral leachate collection underdrain on the west, north and east sides of the landfill. The underdrains should be a minimum 4 feet below natural ground and should slope toward the dewatering ditch. Figure 4 illustrates two alternative leachate collection underdrain design concepts.

#### **Side Liner**

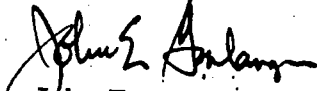
In the previous sections, it was shown that 5.4 acres of sprayfield is required to dispose of the leachate generated from the landfill. Using a rectangular spray irrigation plot (adjacent to the dewatering ditch) with a length of 700 feet parallel to the ditch, a 335-foot extension of the side liner will be required to force all seepage to the ditch. We recommend extending the east and west wall side liners to a minimum distance of 400 feet south from the south edge of the ditch.

We trust that this report meets your immediate requirements. The final report including the results of our field and laboratory programs will be forthcoming. If you have any questions regarding this report, please do not hesitate to contact us.

Very truly yours,  
ARDAMAN & ASSOCIATES, INC.



Rajendra K. Shrestha, P.E.  
Project Engineer



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

RKS:ed

cc: J. R. Prestridge (Hardee County)

Table 1

**SUMMARY OF WATER BALANCE ANALYSES**

	<u>Thickness of Cover (inches)</u>	<u>Surface Condition</u>	<u>SCS Curve No. Used</u>	<u>Annual Rainfall (inches)</u>	<u>Annual Runoff (inches)</u>	<u>Annual ET (inches)</u>	<u>Annual Percolation (inches)</u>	<u>Annual Recharge (inches)</u>
<u>Worst Case:</u> Landfill refuse at original ground surface elevation	12	Bare	80 (85.6)*	56.9 56.9	5.3 (8.4)	32.4 (32.0)	11.9 (9.7)	1.6 (1.6)
Final Cover Scenario**	24	Good Grass	73	56.9	4.3	37.5	8.3	1.6
Proposed sprayfield area south of dewatering ditch	Natural Ground	Poor Grass	85	56.9	11.8	33.4	3.9	1.6

NOTES

- ET Evapotranspiration
- \* Curve number generated by the HELP model
- \*\* Permeability of cover = 0.28 feet/day  $= 0.28 \times 10^{-3} \text{ cm/sec} = 2.8 \times 10^{-4} \text{ cm/sec}$
- The analyses for the landfill consider a peripheral leachate collection underdrain around landfill boundary.

Table 2

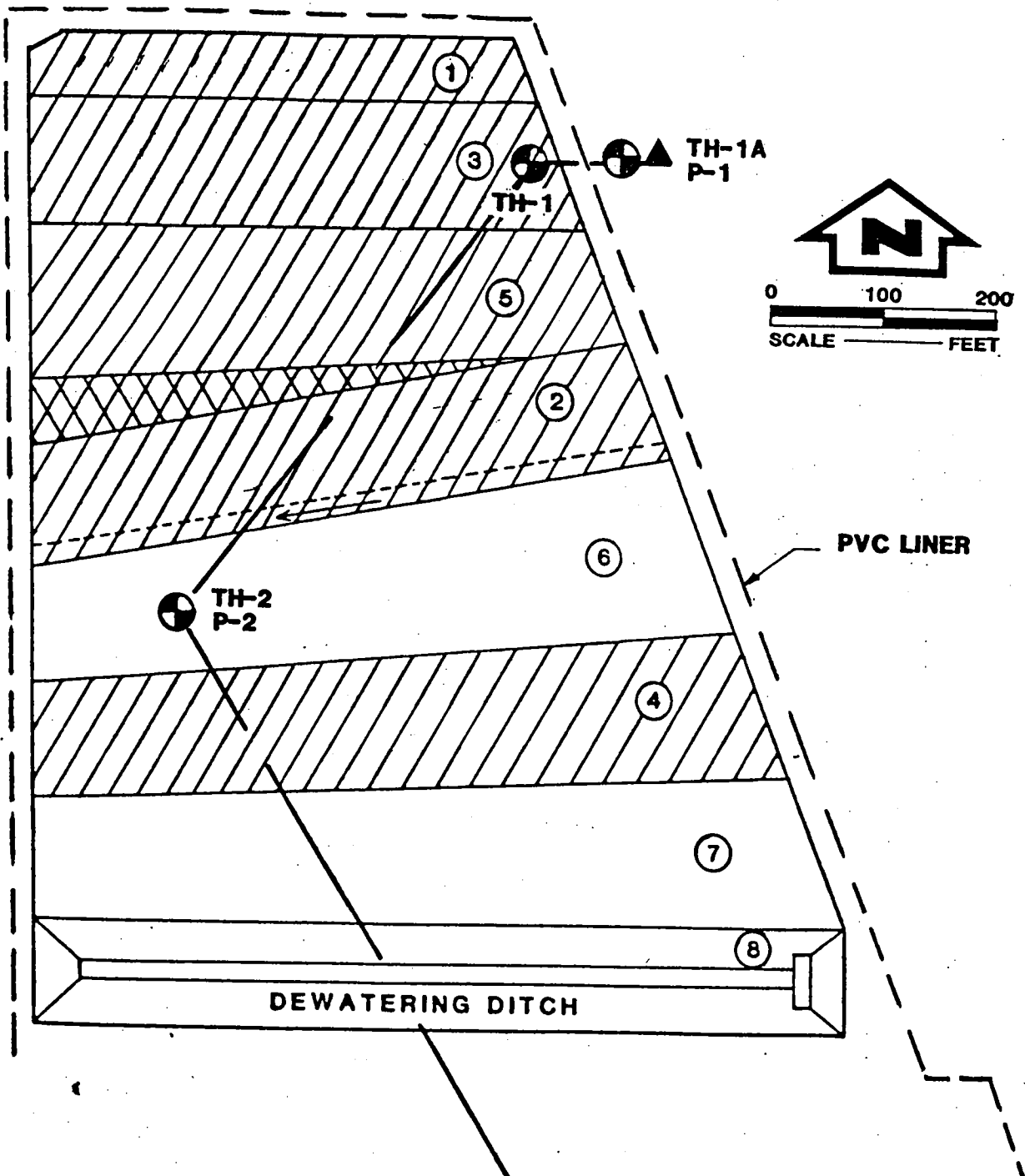
**MAXIMUM STORAGE REQUIREMENT**

Month	Wauchula PPT	WPB PPT (in)	① Leachate (in)	② Leachate Volume (acre-in) ①x11 ac.	③ Spray Irrigation (in) (USDA)	④ Volume Irrigation (acre-in) ③x5.5 ac.	⑤ Drainage to Ditch (in)	⑥ Volume Drain (acre-in) ⑤x10 ac.	⑦ Change in Storage (acre-in) ②+⑥-④	Cumulative Storage (acre-in)
Jan	2.40	3.33	0.922	10.142	1.04	5.72	.295	2.95	7.37	27.46
Feb	3.01	1.81	0.769	8.459	0.73	4.02	.265	2.65	7.09	34.55
Mar	3.02	1.70	0.820	9.020	1.71	9.41	.290	2.90	2.51	37.06
Apr	2.46	1.16	0.723	7.953	3.61	19.86	.269	2.69	-9.22	27.84
May	4.94	8.66	0.765	8.415	5.85	32.18	.297	2.97	-20.80	7.04
Jun	8.33	6.28	0.928	10.208	3.55	19.53	.305	3.05	-6.27	0.77
Jul	8.50	5.22	0.997	10.967	3.37	18.54	.330	3.30	-4.27	0
Aug	6.87	5.13	0.972	10.692	3.01	16.56	.333	3.33	-2.54	0
Sep	7.03	8.73	1.084	11.924	2.11	11.61	.339	3.39	3.70	3.70
Oct	2.88	5.69	1.248	13.728	3.01	16.56	.386	3.86	1.03	4.73
Nov	1.76	5.31	1.275	14.025	2.63	14.47	.378	3.78	3.34	8.07
Dec	1.89	3.90	1.355	14.905	1.23	6.77	.388	3.88	12.02	20.09
Total	53.09	11.857			31.8		3.874			






**NOTES**

- PPT (precipitation) used are for W. Palm Beach
- Leachate quantities are 5-yr. average values 74-78
- Naturally occurring drainage to dewatering ditch from approximately 10 acres.
- Spray Area =  $(\text{Area LF} \times 11.857 + 10 \times 3.874) / 31.8 = 5.32 \text{ ac}$ , say 5.5 acres.


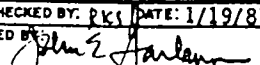




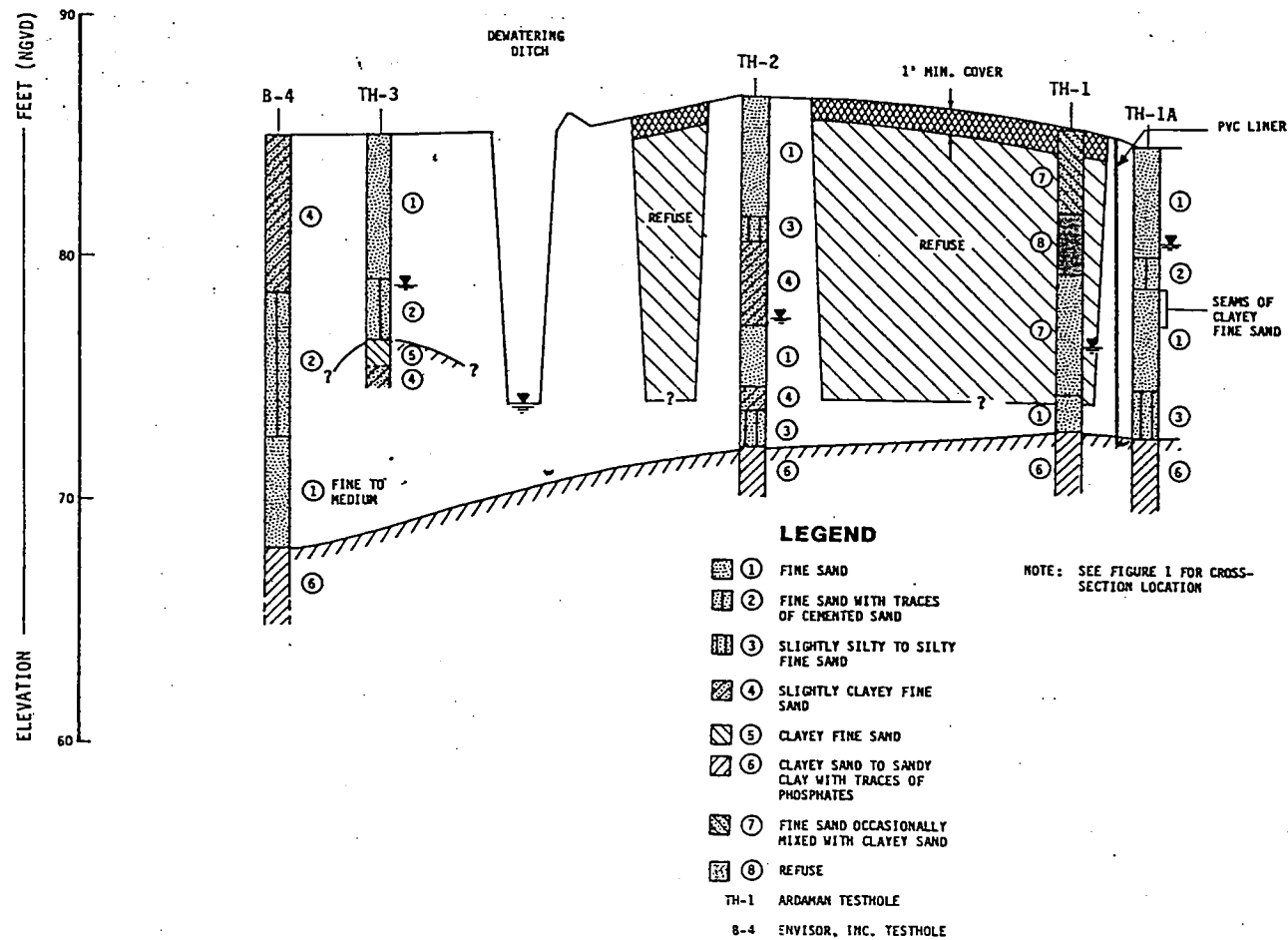
### LEGEND

-  COMPLETED CELLS
-  AREA NOT IN ANY CELL DUE TO DRAGLINE LIMITATIONS
-  CELL NUMBERS
-  SPT BORING BY ARDAMAN & ASSOCIATES, INC. IN 1986
-  SPT BORING BY ENVISORS, INC. IN 1982

### SITE AND BORING LOCATION PLAN

 <b>Ardaman &amp; Associates, Inc.</b> Consulting Engineers in Soil Mechanics, Foundations, and Material Testing		
<b>HARDEE COUNTY REGIONAL          SANITARY LANDFILL          HARDEE COUNTY, FLORIDA</b>		
DRAWN BY: S.E.F. FILE NO. 86-116	CHECKED BY: PKJ APPROVED BY: 	DATE: 1/19/87

# NORTH-SOUTH CROSS SECTION



**Ardaman & Associates, Inc.**  
Consulting Engineers in Soil Mechanics,  
Foundations, and Materials Testing

**HARDEE COUNTY REGIONAL  
SANITARY LANDFILL  
HARDEE COUNTY, FLORIDA**

DESIGNED BY: S.E.F. (CONSULTING) DATE: 1/19/77  
FILE NO.: 86-116  
APPROVED BY: [Signature]

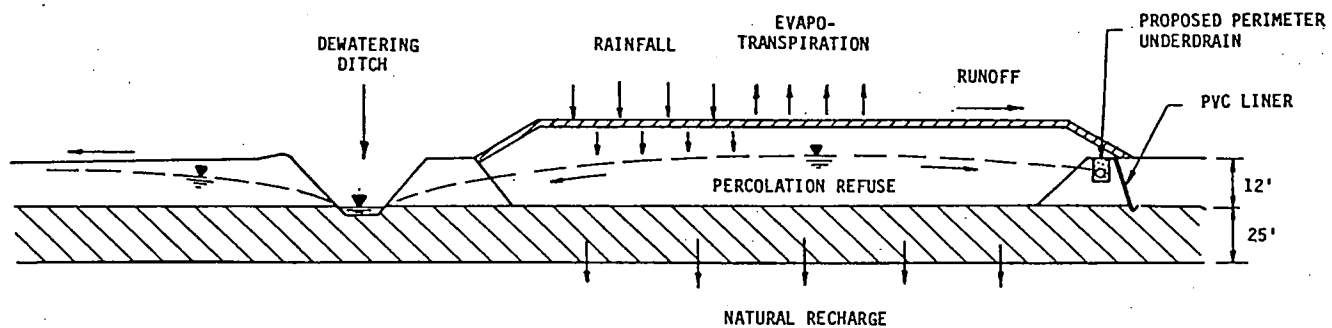
FIGURE 2

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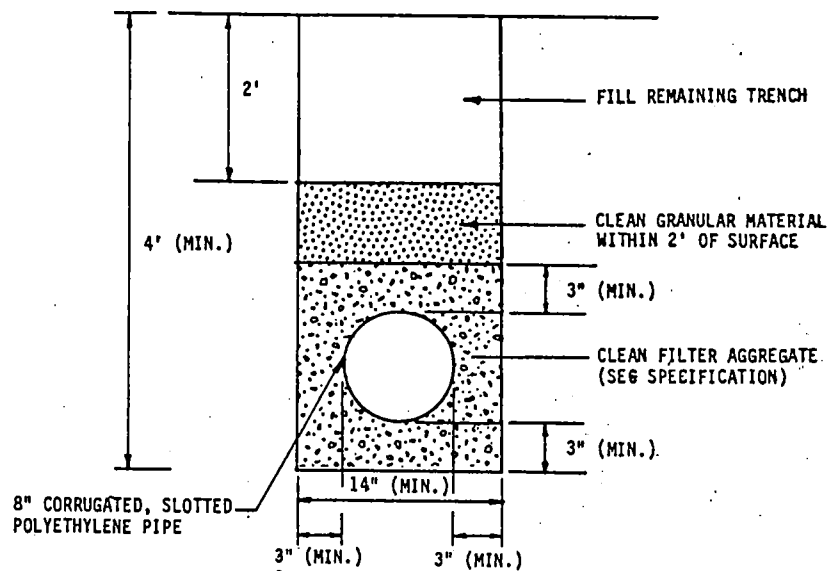
FIGURE 3



## CONCEPTUAL HYDROLOGIC CYCLE

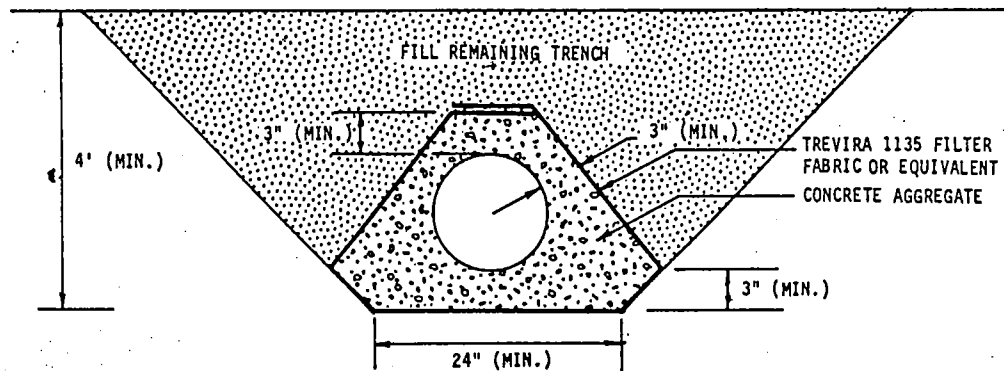
<b>Ardaman &amp; Associates, Inc.</b> Consulting Engineers in Soil Mechanics, Foundations, and Material Testing	
HARDEE COUNTY REGIONAL SANITARY LANDFILL HARDEE COUNTY, FLORIDA	
ORDER BY: S.E.F. FILE NO. 86-116	CHECKED BY: R.C. APPROVED BY: <i>[Signature]</i> DATE: 1/19/87

### ALTERNATIVE 1




U.S. SIEVE	PERCENT PASSING
3"	MAX. SIZE
3/8"	80-100
NO. 4	60-90
NO. 10	30-70
NO. 20	0-40
NO. 40	0-15

### ALTERNATIVE 2



### LEACHATE COLLECTION SYSTEM

 <b>Ardaman &amp; Associates, Inc.</b> Consulting Engineers in Soil Mechanics, Foundations, and Material Testing	
<b>HARDEE COUNTY REGIONAL          SANITARY LANDFILL          HARDEE COUNTY, FLORIDA</b>	
DRAWN BY: S.E.F. FILE NO.: 86-116	CHECKED BY: R.Y. APPROVED BY: <i>John E. Ardaman</i>
DATE: 1/19/87	

K&E 19-1353

FIGURE 4



Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,  
Foundations and Materials Testing

REC. 6-10-88  
PM  
June 9, 1988  
File Number 86-166

Briley, Wild & Associates  
Post Office Box 607  
Ormond Beach, Florida 32074-0607

Attention: Mr. John Cumming, P.E.

Subject: Side Liner Installation, Hardee County Sanitary Landfill

Gentlemen:

As requested and authorized by Briley, Wild & Associates, Inc., Ardaman & Associates, Inc. has provided professional and quality control inspection services during installation of the synthetic liner at the Hardee County Sanitary Landfill site along the alignments and in accordance with the configuration shown in Figure 1. Based on our review of factory and prefabrication quality control reports, our full time inspection of installation operations, and the results of independent laboratory testing of field seams, it is our opinion that the synthetic liner, as installed, meets the intent of the plans and the Quality Control Plan for the subject project.

The permitted liner for the subject landfill is a 60-mil high density polyethylene (HDPE) synthetic liner with welded seams. It consists of prefabricated rolls of 60-mil HDPE liner material manufactured and factory seamed by National Seal Company (NSC) of Galesburg, Illinois. It was installed and field seamed by Diversified Tech, Inc. of Deltona, Florida. The liner installation started on January 20, 1988 and completed on February 27, 1988.

Ardaman & Associates, Inc. performed full time monitoring of the liner installation and testing performed by Diversified Tech, Inc. This included monitoring the test extrusion welds and pressure fusing welds which were done at least once per day and monitoring layout and field seaming. All of the seam and leak testing was monitored by our senior field technician. The field seaming of new liner panels was performed using heat and pressure fusing method. The new liner was welded with the existing 40-mil polyethylene liner using extrusion weld method. Six seam coupon samples were taken and sent to Precision Laboratory of California for independent laboratory testing. Six coupon samples consisted of three coupons from the field seams, two coupons from the factory seams and one field seam used to weld the new liner with the old liner on the east side of the landfill. The test results are presented in Appendix A.


Copies of the material analyses and certification letter from NSC and the factory seam quality control test results were reviewed by Ardaman & Associates, Inc. We have also reviewed field monitoring reports prepared by our senior technician at the site.

SWC

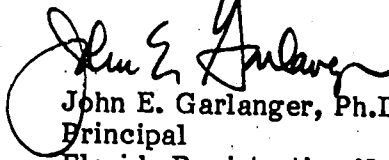
Based on our review of the laboratory test data, field test results and field monitoring reports prepared by our field technician, it is our opinion that the installed liner meets the intent of the Quality Control Plan.

We appreciate the opportunity of assisting you on this project and we look forward to a continuing relationship. If you have any questions or when you need further assistance, please do not hesitate to call us.

Very truly yours,  
ARDAMAN & ASSOCIATES, INC.



Rajendra K. Shrestha, P.E.  
Project Engineer



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

RKS:ed





Appendix A

**LABORATORY TEST RESULTS**



# Precision Laboratories

11834 Western Avenue, P.O. Box 915, Garden Grove, California 92642-0915 (714) 891-7832

March 9, 1988

## VERIFICATION OF MATERIAL PROPERTIES

Polyethylene Seam Samples

For: Ardaman & Associates, Inc.

(Precision Reference: 87548)

### INTRODUCTION

Precision Laboratories performed physical testing on six (6) polyethylene seam sample for Ardaman & Associates, Inc. of Bartow, Florida. The samples were identified and delivered as follows:

1/22/88	FIELD SAMPLE #1 STA 4+00 (60-mil)
	FACTORY PANEL #2 STA 3+00 (60-mil)
	FACTORY PANEL #3 STA 5+00 (60-mil)
1/25/88	FIELD SEAM STA 2+00 (60-mil)
	FIELD SEAM STA 2+26 (60-mil)
2/12/88	FIELD SEAM East side to existing liner (40-mil top sheet 60-mil bottom sheet)

All samples were delivered to the laboratory by United Parcel Service with the exception of *FIELD SEAM East side to existing liner* which was delivered by Federal Express.

### TEST PROCEDURES

The samples were tested for seam peel adhesion and bonded seam strength. Seam peel adhesion testing was conducted in accordance with ASTM D413 as modified by the National Sanitation Foundation (NSF) Standard 54 using one inch wide specimens, an initial gage of 2 inches and a strain rate of 2 inches per minute. Bonded seam strength was determined in accordance with ASTM D3083 as modified by the National Sanitation Foundation (NSF) Standard 54 using one inch wide specimens, an initial gage of 4 inches plus the width of the seam and a strain rate of 20 inches per minute.

Page 2.  
For: Ardaman & Associates, Inc.  
March 9, 1988  
(Precision Reference: 87548)

TEST RESULTS

The test results are reported on tables 1 through 3, attached. The units in which the data are reported are included on the tables. The break types are described as either film tearing bond (FTB) or peel (PEEL).

PRECISION LABORATORIES

A handwritten signature in cursive script, reading "Lance S. Reed". The signature is written in dark ink and is positioned above the printed name and title.

Lance S. Reed  
Assistant Laboratory Manager

TABLE 1. MATERIAL PROPERTIES  
Polyethylene Seam Sample  
For: Ardaman & Associates, Inc.  
(Precision Reference: 87548)

FIELD SAMPLE #1 STA 4+00

BONDED SEAM STRENGTH (lbs/inch-width)	BREAK TYPE	SEAM PEEL ADHESION (lbs/inch-width)	BREAK TYPE
217	FTB		
210	FTB	128	FTB
210	FTB	128	FTB
205	FTB	120	FTB
207	FTB	115	FTB
		123	FTB
Avg: 210		123	
SD: 5		6	

FACTORY PANEL #2 STA 3+00

BONDED SEAM STRENGTH (lbs/inch-width)	BREAK TYPE	SEAM PEEL ADHESION (lbs/inch-width)	BREAK TYPE
216	FTB		
218	FTB	136	FTB
214	FTB	122	FTB
217	FTB	126	FTB
212	FTB	118	FTB
		121	FTB
Avg: 215		125	
SD: 2		7	

**TABLE 2. MATERIAL PROPERTIES**  
Polyethylene Seam Sample  
For: Ardaman & Associates, Inc.  
(Precision Reference: 87548)

**FACTORY PANEL #3 STA 5+00**

BONDED SEAM STRENGTH (lbs/inch-width)		BREAK TYPE	SEAM PEEL ADHESION (lbs/inch-width)	BREAK TYPE
	201	FTB		
	206	FTB	131	FTB
	206	FTB	132	FTB
	206	FTB	122	FTB
	204	FTB	118	FTB
		FTB	124	FTB
Avg:	205		125	
SD:	2		6	

**FIELD SEAM STA 2+00**

BONDED SEAM STRENGTH (lbs/inch-width)		BREAK TYPE	SEAM PEEL ADHESION (lbs/inch-width)	BREAK TYPE
	204	FTB		
	212	FTB	131	FTB
	205	FTB	130	FTB
	201	FTB	134	FTB
	212	FTB	132	FTB
		FTB	127	FTB
Avg:	207		131	
SD:	5		3	

**TABLE 3. MATERIAL PROPERTIES**  
**Polyethylene Seam Sample**  
**For: Ardaman & Associates, Inc.**  
(Precision Reference: 87548)

**FIELD SEAM STA 2+26**

BONDED SEAM STRENGTH (lbs/inch-width)		BREAK TYPE	SEAM PEEL ADHESION (lbs/inch-width)	BREAK TYPE
	205	FTB	160	FTB
	212	FTB	151	FTB
	211	FTB	140	FTB
	210	FTB	*	
	206	FTB	*	
Avg:	209		150	
SD:	3		10	

**FIELD SEAM East side to existing liner**

BONDED SEAM STRENGTH (lbs/inch-width)		BREAK TYPE	SEAM PEEL ADHESION (lbs/inch-width)	BREAK TYPE
	118	FTB	96	PEEL
	* 115	FTB	84	FTB
	105	FTB	101	FTB
	119	FTB	104	FTB
	113	FTB	77	PEEL
Avg:	114		92	
SD:	6		12	

---

\* Not tested due to insufficient material



RECEIVED MAR 9 1987  
briley, wild & associates, inc.  
CONSULTING ENGINEERS AND PLANNERS

HA86073-6E

March 5, 1987

Mr. J. R. Prestridge  
Solid Waste Superintendent  
412 West Orange Street  
Wauchula, FL 33873

Re: Sanitary Landfill  
Irrigation System Operation

Dear Mr. Prestridge:

In John Garlanger's letter of January 16, 1987, he presented estimates of the monthly rainfall, runoff to the dewatering ditch, leachate production, and irrigation requirements of the irrigation spray field cover crop.

Based on those estimates, I have calculated the number of hours of pumping that would be required on a monthly basis. During the Winter months the irrigation needs are low and water from surface runoff and the leachate collection system will cause the water level in the dewatering ditch to rise. In the Spring, irrigation requirements are greater than inflow to the ditch and the water levels in the ditch will go back down.

Enclosed is a table based on Dr. Garlanger's calculations showing the hours per month of pumping required, based on irrigating one day per week.

It should be pointed out that the calculations are based on projected averages. The actual rainfall, crop growth, and leachate production in any given month could be substantially different. Although useful for design, the numbers in the table are not a very precise basis for operation.

I recommend that the basis of operation be as follows:

1. The pumps should be operated one day a week, preferably near the beginning of the the week. If it is raining, irrigation should be post-poned until later in the week.
2. The number of hours to pump should be based on the irrigation needs of the cover crop. Until actual operating data is collected the enclosed table may be used as a guide.


Mr. J. R. Prestridge  
Solid Waste Superintendent  
March 5, 1987  
Page Two

3. If the spray field appears to be saturated, the number of hours of irrigation for that month should be cut back.
4. It is expected that water levels in the dewatering ditch will fluctuate. They should not be allowed to go above 77.4 and by July or August should be lowered to 74.2. The low level cut off for the pumps is anticipated to be set at 72.0.

If there is anything else you need at this time please let me know.

Very truly yours,

BRILEY, WILD & ASSOCIATES, INC.  
CONSULTING ENGINEERS AND PLANNERS

  
Lee A. Powell, P.E.  
Project Engineer

LAP/hmh  
Enclosure



# PROJECTED PUMP RUNNING TIMES FOR IRRIGATION

	Monthly Irrigation Requirement In Inches	Monthly Irrigation In Gallons	Pump Operating Hours per Month	Water Level In Ditch
JANUARY	1.04	152,500	6.9	
FEBRUARY	0.73	107,000	4.8	
MARCH	1.71	250,800	11.3	77.4
APRIL	3.61	529,400	23.8	
MAY	5.85	857,900	38.6	
JUNE	3.55	520,600	23.5	
JULY	3.37	494,200	22.3	74.2
AUGUST	3.01	441,400	19.9	
SEPTEMBER	2.11	309,400	13.9	
OCTOBER	3.01	441,400	19.9	
NOVEMBER	2.63	385,700	17.4	
DECEMBER	1.23	180,400	8.1	
TOTAL	31.85	4,670,700	210.4	

*water  
level is  
drainage  
ditch*



# Southwest Florida Water Management District

2379 Broad Street (U.S. 41 South) Brooksville, Florida 34609-6899  
Phone (904) 796-7211 or 1-800-423-1476 SUNCOM 628-4150

D. E. R.

September 21, 1992

SEP 30 1992

SOUTHWEST DISTRICT  
TAMPA

Charles A. Black  
Chairman, Crystal River  
Roy G. Harrell, Jr.  
Vice Chairman, St. Petersburg  
Sally Thompson  
Secretary, Tampa  
Joe L. Davis, Jr.  
Treasurer, Wauchula  
Ramon F. Campo  
Brandon  
James L. Cox  
Lakeland  
John T. Hamner  
Bradenton  
Curtis L. Law  
Land O' Lakes  
James E. Martin  
St. Petersburg  
Margaret W. Sistrunk  
Odessa

Peter G. Hubbell  
Executive Director  
Mark D. Farrell  
Assistant Executive Director

Mr. Steven A. Dutch, P.E.  
Wade-Trim, Inc.  
201 E. Kennedy Blvd., Suite 334  
Tampa, FL 33602

Subject: PERMIT INQUIRY  
Project Name: Hardee County Landfill (Class I)  
Sec/Twn/Rge: 35/33S/25E  
County: Hardee

Dear Mr. Dutch:

After further review of the information received at the District on June 30, 1992, it appears that no stormwater management permitting, in accordance with Chapter 40D-4, Florida Administrative Code (F.A.C.), will be required. The information submitted to date indicates that all necessary approvals to begin construction and operation of this facility were obtained and that a FDER permit to address water quality requirements was issued per Chapter 17-3, 17-4 and 17-25, F.A.C.

In closing, I apologize for the gross amount of time it has taken me to respond to your inquiry. In the future, you are directed to contact the appropriate FDER office first for any inquiries relative to solid waste facilities.

Sincerely,

*William A. Hartmann*

William A. Hartmann, P.E.  
Surface Water Permitting Supervisor  
Bartow Permitting Department  
Resource Regulation

WAH/baa917

cc: Mr. Bob Butera, P.E., Florida Department of Environmental Regulation,  
3804 Coconut Palm Drive, Tampa, FL 33619-8318  
J.R. Prestridge, Hardee County Board of Commissioners, 74 Hanchey  
Road, Wauchula, FL 33873  
R. Viertel  
H. Knight  
S. Stokes

Excellence  
Through  
Quality  
Service

# Wade-Trim, Inc.

July 24, 1992

Mr. Kim Ford  
Division of Waste Management  
FDER  
4520 Oak Fair Blvd.  
Tampa, Florida 33610-7347

D. E. R.

JUL 28 1992

SOUTHWEST DISTRICT  
TAMPA



**Re: Hardee County Landfill**  
**Permit No. S025-214306 and SC25-Z1Z896**

Dear Mr. Ford:

In accordance with the timetables set forth in Chapter 17-12.070 (5), FAC, we are responding on behalf of Hardee County, to your letter of June 30, 1992 with initial responses to your comments as follows:

Group  
Services:

Engineering  
Planning  
Sciences  
Landscape  
Architecture

- ✓ 1. Provide proof of publication of notice of application:  
Response: Copy of affidavit of publication attached. Original of affidavit submitted directly to you on July 14, 1992.
- 10/2/92 ✓ 2. Provide CQAP for sampling and analysis:  
Response: CQAP is being obtained from Envirolab, Inc., Ormond Beach, FL, and will be submitted when obtained.
- ③ 3. Provide updated financial responsibility cost estimates for closure:  
Response: Financial Responsibility checklist and backup is attached.
- ④ 4. Provide cross-section showing original and proposed fill elevations:  
Response: Attached are revised cross-sections showing the existing grades, the expected grades in 1997 and the proposed final grades at the end of the life of the landfill. Also shown is planned sequence of filling.
- ✓ 5. Provide the source and characteristics of the cover material.  
Response: The interim cover material is excavated from the south west corner of the property near the construction debris area. The cover material is a grey green sandy clay/sand mix.



6. Provide an evaluation report for the effectiveness of the leachate spray system.

Response: An evaluation is being under taken and will be submitted when complete.

7. Provide responsible representative and emergency phone numbers:

Response: The person responsible for operation at landfill is:

J.R. Prestridge  
Solid Waste Superintendent  
74 Hanchey Road  
Wauchula, FL 33873  
Tele (813) 773-5089

In the event of an emergency the Hardee County Sherriff's Department can be contacted at (813) 773-4144.

8. Provide information regarding construction debris disposal.

Response: The construction debris area is the subject of another permit application which is currently being prepared.

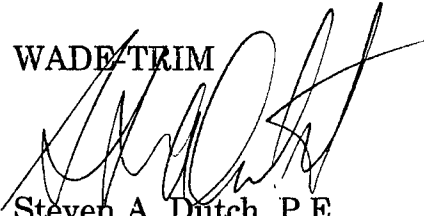
9. Respond to Mary Yeargan's memo of June 26, 1992:

Response: A response is currently being prepared.

The response to the unresolved questionS will be submitted as soon as all responses are complete. It is anticipated the response will be submitted in early September. If you have any questions, please call.

Sincerely,

WADE TRIM

  
Steven A. Dutch, P.E.  
Project Manager

cc: J. R. Prestridge

SAD:pgh  
SAD1:FORD.LTR  
HAR2001.01



AFFIDAVIT OF PUBLICATION  
**The Herald-Advocate**

Published Weekly at Wauchula, Florida

STATE OF FLORIDA,  
COUNTY OF HARDEE

Before the undersigned authority personally appeared James R. Kelly  
who on oath says he is the Editor of The Herald-Advocate, a news  
paper published at Wauchula, in Hardee County, Florida; that the attached copy of  
advertisement, being a notice of application  
in the matter of permit operations of landfill  
in the \_\_\_\_\_ Court, was published in said newspaper in  
the issues of 7/9/92

Affiant further says that the said Herald-Advocate is a newspaper published  
at Wauchula, in said Hardee County, Florida, and that the said newspaper has hereto-  
fore been continuously published in said Hardee County, Florida, each week and has  
been entered as second class mail matter at the post office in Wauchula, in said Har-  
dee County, Florida, for a period of one year next preceding the publication of the  
attached copy of advertisement; and affiant further says that he 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.

ANNETTE P MISLEVY

NOTARY PUBLIC STATE OF FLORIDA  
COMMISSION NO. CC202536

MY COMMISSION EXP. JUNE 14, 1996

Sworn to and subscribed before me this 10<sup>th</sup> day of July

A. D. 19 92.

Annette P. Mislevy  
Annette P. Mislevy Notary Public

My Commission Expires June 14, 19 96.

State of Florida  
Department of Environmental Regulation  
Notice of Application

The Department announces receipt of  
an application for permit from Mr. J.R.  
Prestridge of the Hardee County Solid  
Waste Department for operation of the  
Hardee County Landfill (approximately  
10 acres) subject to the Department  
rules, located on Airport Road off of S.R.  
636 northeast of Wauchula, Hardee  
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, ex-  
cept legal holidays, at the Department of  
Environmental Regulation, Southwest  
District Office, 4520 Oak Fair Boule-  
vard, Tampa, Florida 33610-7347.

7:9c

D. E. R.

JUL 28 1992

SOUTHWEST DISTRICT  
TAMPA

## ID NO.

ITEM	UNIT COST	TOTAL ANNUAL COST	SOURCE OF ESTIMATE
1. GROUNDWATER MONITORING Quality Sampling	\$3,300/sample	\$13,200.00	(Third Party Work) See Attached
2. GAS MONITORING		\$0.00	
3. MAINTENANCE OF LEACHATE COLLECTION SYSTEM GROUNDWATER MONITORING WELLS		\$500.00	
4. COLLECTION AND DISPOSAL/ TREATMENT OF LEACHATE		\$1,000.00	
5. BENCHMARK MAINTENANCE		0	
6. LANDSCAPE MAINTENANCE Mowing Fertilizing Sprinkling		\$500.00 - -	
7. MAINTENANCE OF COVER INTEGRITY AND SURFACE WATER CONTROLS		\$500.00	
8. REMEDIAL ACTION	15%	\$2,000.00	
TOTAL ANNUAL COST OF LONG TERM CARE		\$17,700.00	

B. General Solid Waste Landfill Estimated Itemized Closure Cost for the Time Period in the Landfill Operation when the extent and Manner of its Operation Makes Most Expensive

<u>ITEM</u>	<u>UNIT COST</u>	<u>TOTAL ANNUAL COST</u>	<u>SOURCE OF ESTIMATE</u> (Third Party Work)
1. MONITORING WELLS			
Borehole Excavation	-	\$0.00	See Attached
Backfill			
Gravel Pack			
Slotted Screen			
Casing			
Cap			
2. SLOPE AND FILL			
Excavation	-	\$4,000.00	
Placement/Spreading			
Compaction			
Delivery of Off Site Material			
3. COVER MATERIAL			
Clay Admixture			
Synthetic Material			
On-site Clay/Soil	2.25/CU	\$103,140.00	
Off Site Clay/Soil			
4. TOP SOIL COVER			
Purchase			
Delivery	2.25/CU	\$25,787.00	
Spreading			
Compaction			
5. CONTOUR GRADING AND SURFACE WATER DIVERSION (STORMWATER CONTROL)			
Excavation, Grading and Recontouring		\$2,000.00	
Diversion Ditch and Berm Construction			
6. GAS MIGRATION CONTROL			
Passive Type		\$0.00	
Active Type			
Sprinkling			
7. REVEGETATION			
Spreader			
Soil Preparation/Grading			
Seeding		\$500.00	
Fertilizer			
Mulch			
Sprinkling			
8. SECURITY SYSTEM			
Fencing		\$0.00	
Gate(s)			
Sign(s)			
9. BENCHMARK INSTALLATION		\$0.00	
10. CERTIFICATION OF CLOSURE		\$20,000.00	
TOTAL CLOSURE COST		\$155,427.00	
PROJECT CONTINGENCY		\$38,853.00	
TOTAL		\$194,280.00	

Hardee County Regional Landfill

Permit No. SO25-096551

Basis of Closure and Post Closure Costs

Costs are based on estimated 1992 construction costs

**CLOSURE COSTS**

**MONITORING WELLS:**

Ground water sampling and monitoring will continue as required by the Permit. No new monitoring wells should be required for closure.

Estimated Cost: \$0.00

**BACKFILL:**

It is expected that the disposal site can be readily placed into an acceptable closure condition; 3:1 slopes and appropriate top grades by suing on site equipment and clay materials.

Estimated Cost: \$4,000.00

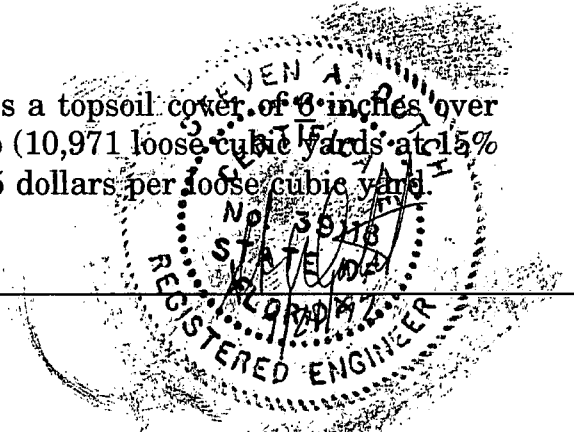
7 **CLAY CAP:**

The site will be capped by (2) feet for compacted clay, utilizing on site clay material. This will require: 38,200 cubic yards, 45,850 loose cubic yards at 20% swell over the 11.82 acre site, which will require soil cover. The estimate unit cost is \$2.25/CY.

Estimated Cost: \$103,140.00

**TOPSOIL:**

The site development plan requires a topsoil cover of 3 inches over the two (2) feet compacted clay cap (10,971 loose cubic yards at 15% swell). The estimated cost is \$2.25 dollars per loose cubic yard.





Estimated Costs: \$25,785.00

#### CONTOUR GRADING/SURFACE WATER:

Placement of the site into a closure configuration and appropriate final cover, requires contour grading to insure surface water drainage. This is accomplished as the material are being places. The site will require finish grading.

Estimated Cost: \$2,000.00

#### GAS MIGRATION CONTROL:

The synthetic liner should prevent any gas migration off site. The leachate collection system should serve the purpose of gas control.

Estimated Cost: \$0.00

#### BENCH MARKS:

The property in which Phase I of the Hardee County Sanitary Landfill is located, has survey markers already in place.

Estimated Cost: \$0.00

#### LANDSCAPING:

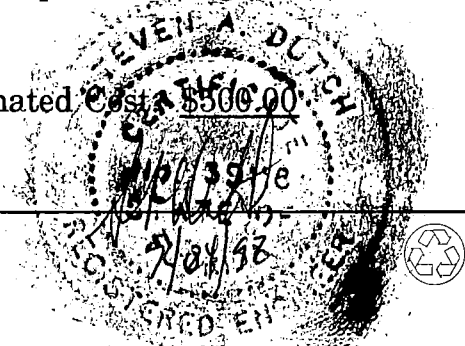
The Hardee County facility will be landscaped using sand and clay found within the property boundaries. These soils readily support native vegetation. It is expected that fertilizing will not be required on a regular basis.

Estimated Cost: \$0.00

#### REVEGETATION:

After placing of final cover, seeding of site will be done to provide a quick cover for erosion control and to provide a permanent grass cover to blend in with the surrounding area.

Estimated Cost: \$500.00



## SECURITY SYSTEM:

The in place fencing, gates, and attendants should provide ample security to the closed site.

Estimated Cost: \$0.00

## POST CLOSURE COSTS

### SAMPLING:

The monitor wells will be sampled quarterly, the first three (3) years. Upon satisfactory results from this program, the sampling will be reduced to a semi-annual frequency for the next seventeen (17) years. Labor, equipment and expenses for each of these events is estimated at \$1,500.00

Year 1 thru 3 - Estimated Cost: \$6,000.00/yr  
Year 4 thru 20 - Estimated Cost: \$3,000.00/yr

### CHEMICAL ANALYSIS:

The analytical chemistry cost per sample will be \$300.00. The facility utilizes six (6) groundwater monitoring wells. The total cost for chemical analysis will be (\$300.00/sample) (6 samples/sampling events) (46 events).

Year 1 thru 3 - Estimated Cost: \$7,200.00/yr  
Year 4 thru 20 - Estimated Cost: \$3,600.00/yr

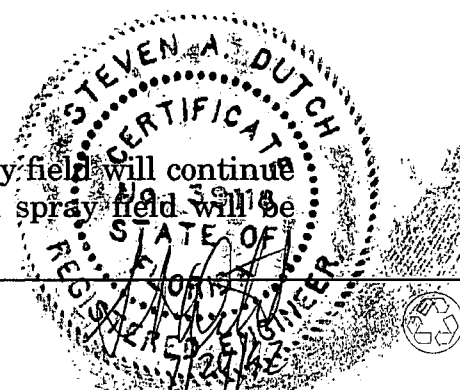
### GAS MONITORING:

Gas monitoring is not anticipated as being required at this time.

Estimated Cost: \$0.00/yr

### LEACHATE COLLECTION

The operation of the leachate collection and spray field will continue after closure of the landfill. Pump station and spray field will be



maintained.

Estimated Cost: \$1,500.00/yr

#### LANDSCAPE MAINTENANCE

landscape maintenance will consist of mowing as needed to control natural vegetation.

Estimated Cost: \$500.00/yr

#### COVER MAINTENANCE

Maintenance of the cover will consist of repair of depressions and erosion area.

Estimated Cost: \$500.00/yr

#### REMEDIAL ACTIONS

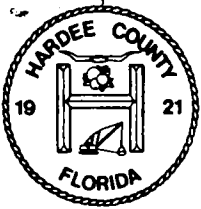
A  $\pm$  15% contingency will be set aside for remedial action if necessary.

Estimated Cost: \$2,000.00/yr



Wade-Trim





**HARDEE COUNTY**  
**Department of Solid Waste & Recycling Center**  
P.O. Box 246  
Wauchula, Florida 33873

D. E. R.

JUL 17 1992

SOUTHWEST DISTRICT  
TAMPA

July 14, 1992

Florida Department of Environmental Regulation  
Southwest District  
4520 Oak Fair Blvd.  
Tampa, FL 33610-7347  
**ATTENTION:** Kim Ford

Dear Mr. Ford:

Enclosed is the affidavit of publication on the receipt of the  
Class I Landfill application to the DER.

If you should have any questions, please contact us.

Sincerely,

J.R. Prestridge,  
Solid Waste Superintendent

jw/Enclosure

D.E.R.

AFFIDAVIT OF PUBLICATION  
**The Herald-Advocate** JUL 17 1992  
Published Weekly at Wauchula, Florida

STATE OF FLORIDA,  
COUNTY OF HARDEE

Before the undersigned authority personally appeared James R. Kelly  
who on oath says he is the Editor of The Herald-Advocate, a news  
paper published at Wauchula, in Hardee County, Florida; that the attached copy of  
advertisement, being a notice of application  
in the matter of permit operations of landfill  
in the \_\_\_\_\_ Court, was published in said newspaper in  
the issues of 7/9/92

Affiant further says that the said Herald-Advocate is a newspaper published  
at Wauchula, in said Hardee County, Florida, and that the said newspaper has hereto-  
fore been continuously published in said Hardee County, Florida, each week and has  
been entered as second class mail matter at the post office in Wauchula, in said Har-  
dee County, Florida, for a period of one year next preceding the publication of the  
attached copy of advertisement; and affiant further says that he has neither paid nor  
promised any person, firm or corporation any discount, rebate, commission or refund  
for the publication of this advertisement for publication in the said newspaper.

ANNETTE P MISLEVY

NOTARY PUBLIC STATE OF FLORIDA  
COMMISSION NO. CC20534  
MY COMMISSION EXP. JUNE 14, 1996

Sworn to and subscribed before me this 10<sup>th</sup> day of July  
A. D. 19 92.

Annette P. Mislevy  
Notary Public

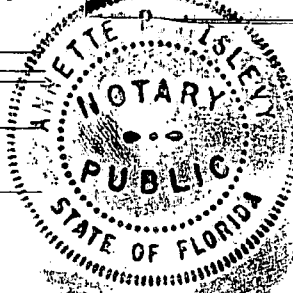
My Commission Expires June 14, 19 96.

State of Florida  
Department of Environmental Regulation  
Notice of Application

The Department announces receipt of  
an application for permit from Mr. J.R.  
Prestridge of the Hardee County Solid  
Waste Department for operation of the  
Hardee County Landfill (approximately  
10 acres) subject to the Department  
rules, located on Airport Road off of S.R.  
636 northeast of Wauchula, Hardee  
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, ex-  
cept legal holidays, at the Department of  
Environmental Regulation, Southwest  
District Office, 4520 Oak Fair Boul-  
eard, Tampa, Florida 33610-7347.

7:9c





**HARDEE COUNTY**  
**Department of Solid Waste & Recycling Center**  
P.O. Box 246  
Wauchula, Florida 33873

D. E. R.

July 6, 1992

JUL 08 1992

SOUTHWEST DISTRICT  
TAMPA

Kim Ford  
Department of Environmental Regulation  
Southwest District  
4520 Oak Fair Blvd.  
Tampa, FL 33601-7347

RE: Hardee County Sanitary Landfill, Comprehensive Quality Assurance Plan for Sampling and Analysis of the above referenced facility.

Dear Mr. Ford:

I checked with Sylvia Labie of the Quality Assurance Section in Tallahassee on Monday, July 6, 1992 (904-488-2796). She confirmed that Envirolab of Ormond Beach, Florida was a Quality Assurance Approved Lab for sampling these types of facilities. However, she could not be positive of their status until the specific sampling parameters are established.

We will check again after the sampling parameters are established for the renewal permit.

Sincerely,

J.R. Prestridge,  
Solid Waste Superintendent

jw/c.c. Wade-Trim, Steve Dutch, P.E.