SC Sme

BOARD OF COUNTY COMMISSIONERS
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION

P.O. Box 340, Lecanto, Florida 34460
(352) 527-7670 FAX (352) 527-7672

D.E.P.
JUL 2 6 2004
Southwest District Tampa

July 23, 2004

Susan J. Pelz, P.E. 7/27
Solid Waste Section
Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

Re: Citrus County Central Landfill
Permit No. 21375-004-SC Phase 2 Landfill Construction
Progress Report #9

Dear Ms. Pelz:

In accordance with Specific Condition 4 of the referenced permit, we are submitting the updated construction schedule for this project, as prepared by our construction contractor, Advance Construction Services, Inc.

Excavation is essentially complete. Placement of clay sub-base is well underway but is being impacted by rain. Therefore, we are unsure of the start date for liner installation. We will inform your office as soon as we have a date confirmed. The construction completion date is now projected to be after the end of September. The landfill capacity report prepared by SCS confirms that we have remaining disposal capacity until August 2005. An updated capacity report has been submitted to your office.

Please let me know if you have any questions.

Sincerely,

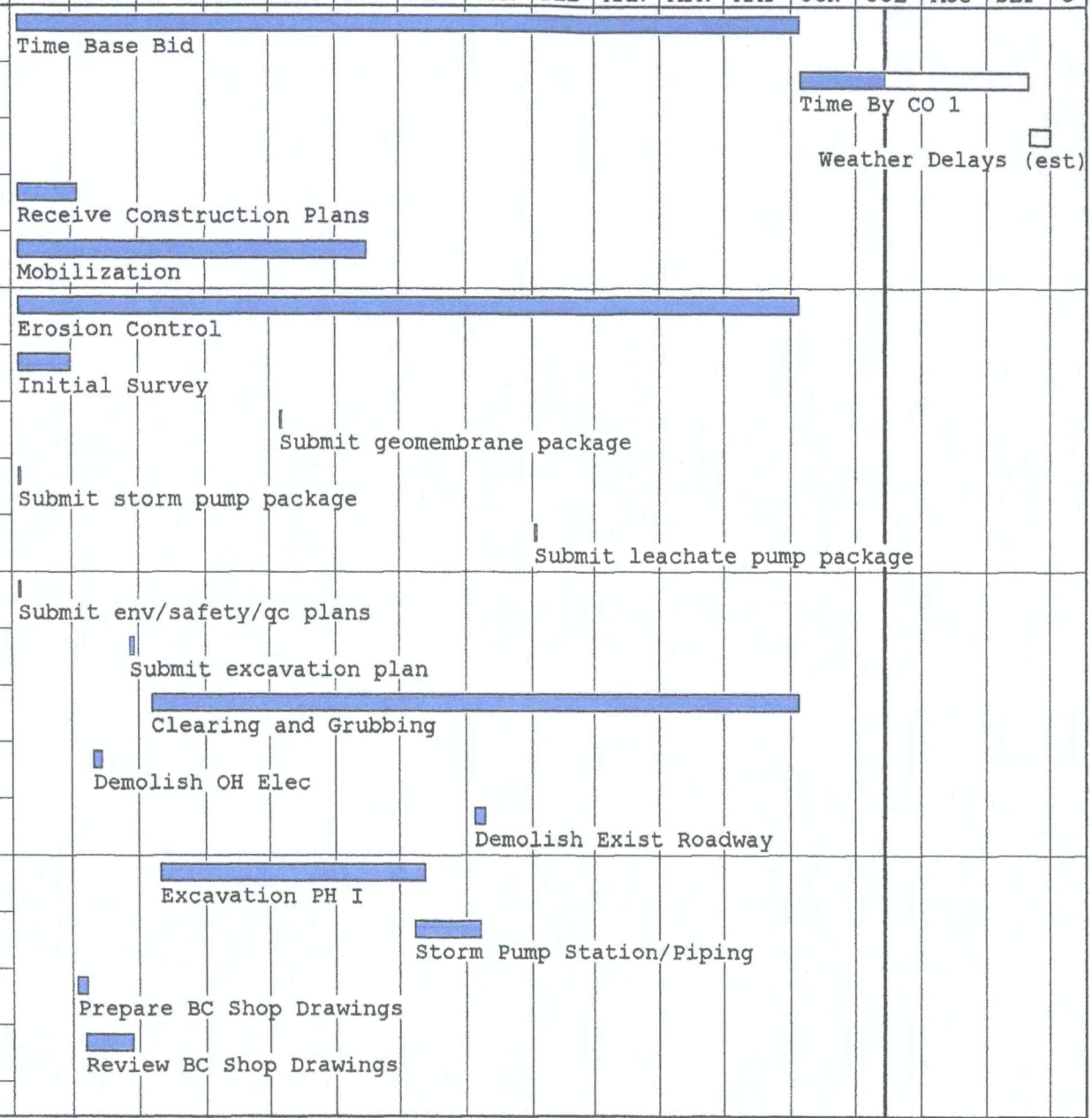
Susan J Metcalfe

Susan Metcalfe, P.G.
Director

Enclosures

CC: Tom Dick, Assistant Director, Public Works Department
John Banks, SCS Engineers
Ken Pitts, Advance Construction

ACTIVITY ID	EARLY START	EARLY FINISH	ORIG DUR	
1	6JUN03A	4JUN04A	365	Time Base Bid
2	5JUN04A	20SEP04	108	Time By CO 1
3	21SEP04	30SEP04	10	Weather Delays (est)
10	6JUN03A	3JUL03A	1	Receive Construction Plans
100	6JUN03A	15NOV03A	120	Mobilization
105	6JUN03A	4JUN04A	365	Erosion Control
110	6JUN03A	30JUN03A	15	Initial Survey
150	6OCT03A	6OCT03A	10	Submit geomembrane package
155	6JUN03A	6JUN03A	10	Submit storm pump package
160	2FEB04A	2FEB04A	10	Submit leachate pump package
165	6JUN03A	6JUN03A	10	Submit env/safety/qc plans
170	28JUL03A	29JUL03A	5	Submit excavation plan
200	7AUG03A	4JUN04A	110	Clearing and Grubbing
210	11JUL03A	14JUL03A	3	Demolish OH Elec
220	5JAN04A	9JAN04A	3	Demolish Exist Roadway
300	11AUG03A	12DEC03A	100	Excavation PH I
400	8DEC03A	7JAN04A	30	Storm Pump Station/Piping
500	3JUL03A	7JUL03A	5	Prepare BC Shop Drawings
510	7JUL03A	28JUL03A	10	Review BC Shop Drawings



Plot Date 19JUL04
Data Date 15JUL04
Project Start 6JUN03
Project Finish 5OCT04

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT12

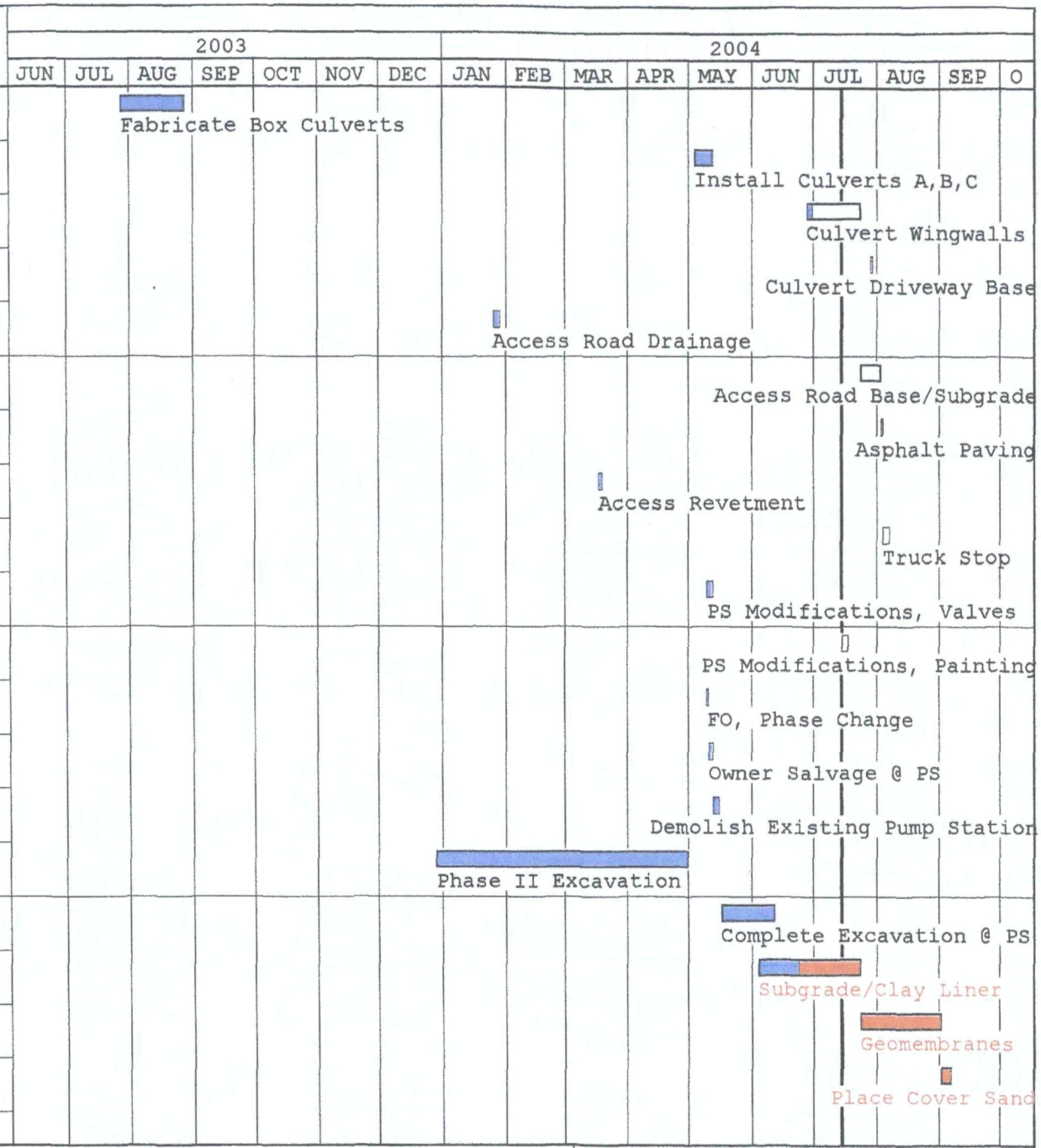
Sheet 1 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 6/1/03

Date	Revision	Checked	Approved

ACTIVITY ID	EARLY START	EARLY FINISH	ORIG DUR	
520	28JUL03A	27AUG03A	21	Fabricate Box Culverts
600	4MAY04A	12MAY04A	7	Install Culverts A,B,C
605	28JUN04A	23JUL04	10	Culvert Wingwalls
610	29JUL04	29JUL04	1	Culvert Driveway Base
800	26JAN04A	28JAN04A	3	Access Road Drainage
810	24JUL04	2AUG04	10	Access Road Base/Subgrade
820	3AUG04	3AUG04	1	Asphalt Paving
830	18MAR04A	19MAR04A	2	Access Revetment
840	4AUG04	6AUG04	3	Truck Stop
850	10MAY04A	12MAY04A	3	PS Modifications, Valves
855	15JUL04	17JUL04	3	PS Modifications, Painting
858	10MAY04A	10MAY04A	1	FO, Phase Change
859	11MAY04A	12MAY04A	2	Owner Salvage @ PS
900	13MAY04A	15MAY04A	3	Demolish Existing Pump Station
1000	29DEC03A	30APR04A	42	Phase II Excavation
1001	17MAY04A	11JUN04A	16	Complete Excavation @ PS
1100	4JUN04A	23JUL04	15	Subgrade/Clay Liner
1200	24JUL04	1SEP04	40	Geomembranes
1250	2SEP04	6SEP04	5	Place Cover Sand



Plot Date 19JUL04
Data Date 15JUL04
Project Start 6JUN03
Project Finish 5OCT04

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT12

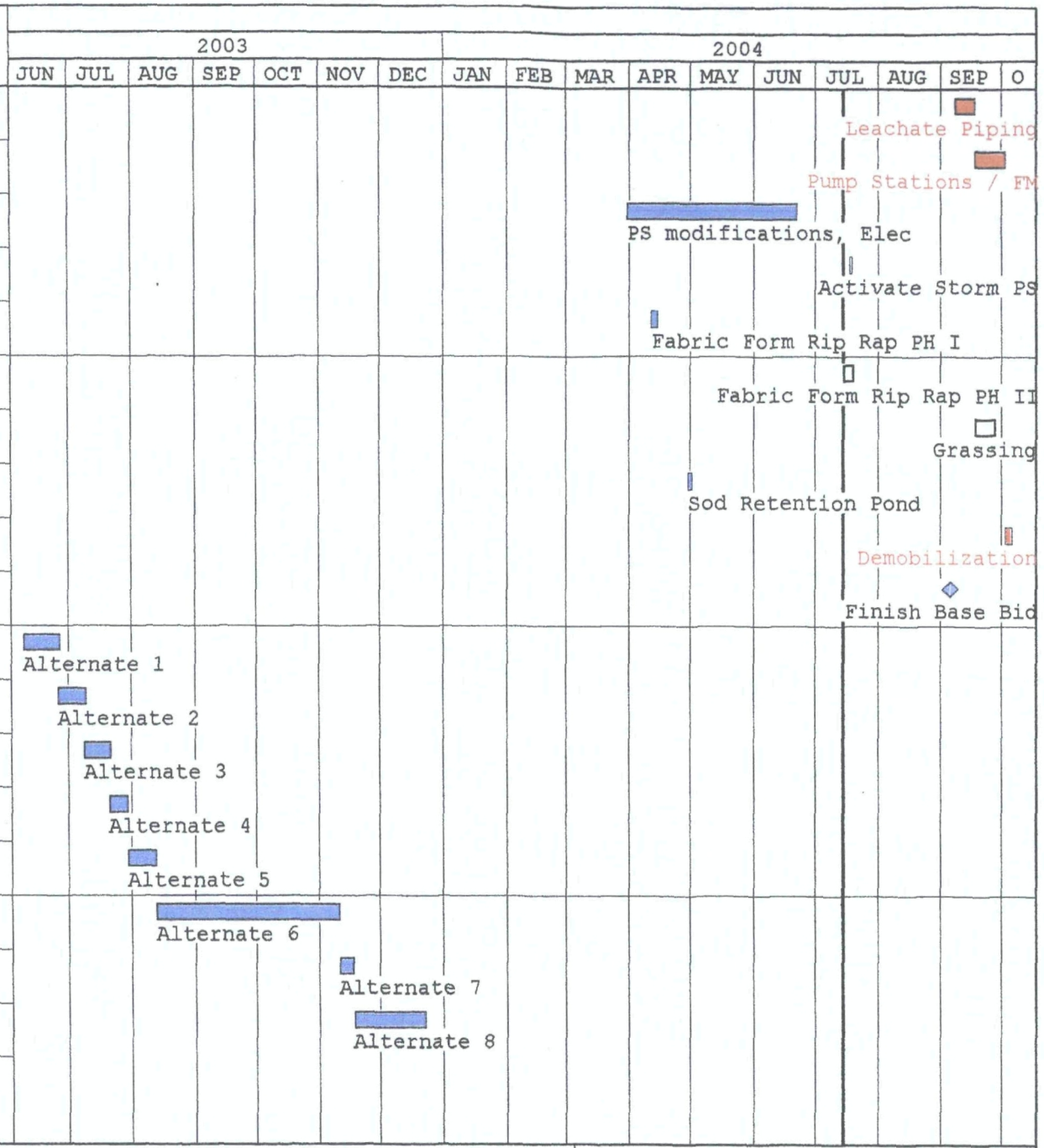
Sheet 2 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 6/1/03

Date	Revision	Checked	Approved

ACTIVITY ID	EARLY START	EARLY FINISH	ORIG DUR
1300	8SEP04	17SEP04	10
1400	18SEP04	2OCT04	15
1500	31MAR04A	21JUN04A	49
1505	18JUL04	18JUL04	1
1600	12APR04A	14APR04A	5
1605	15JUL04	19JUL04	5
1700	18SEP04	27SEP04	10
1701	30APR04A	1MAY04A	2
1800	3OCT04	5OCT04	3
4999		5SEP04A	0
5010	9JUN03A	26JUN03A	60
5020	26JUN03A	9JUL03A	60
5030	9JUL03A	21JUL03A	60
5040	21JUL03A	29JUL03A	60
5050	30JUL03A	12AUG03A	60
5060	13AUG03A	10NOV03A	60
5070	11NOV03A	17NOV03A	60
5080	18NOV03A	22DEC03A	60



Plot Date 19JUL04
Data Date 15JUL04
Project Start 6JUN03
Project Finish 5OCT04

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT12

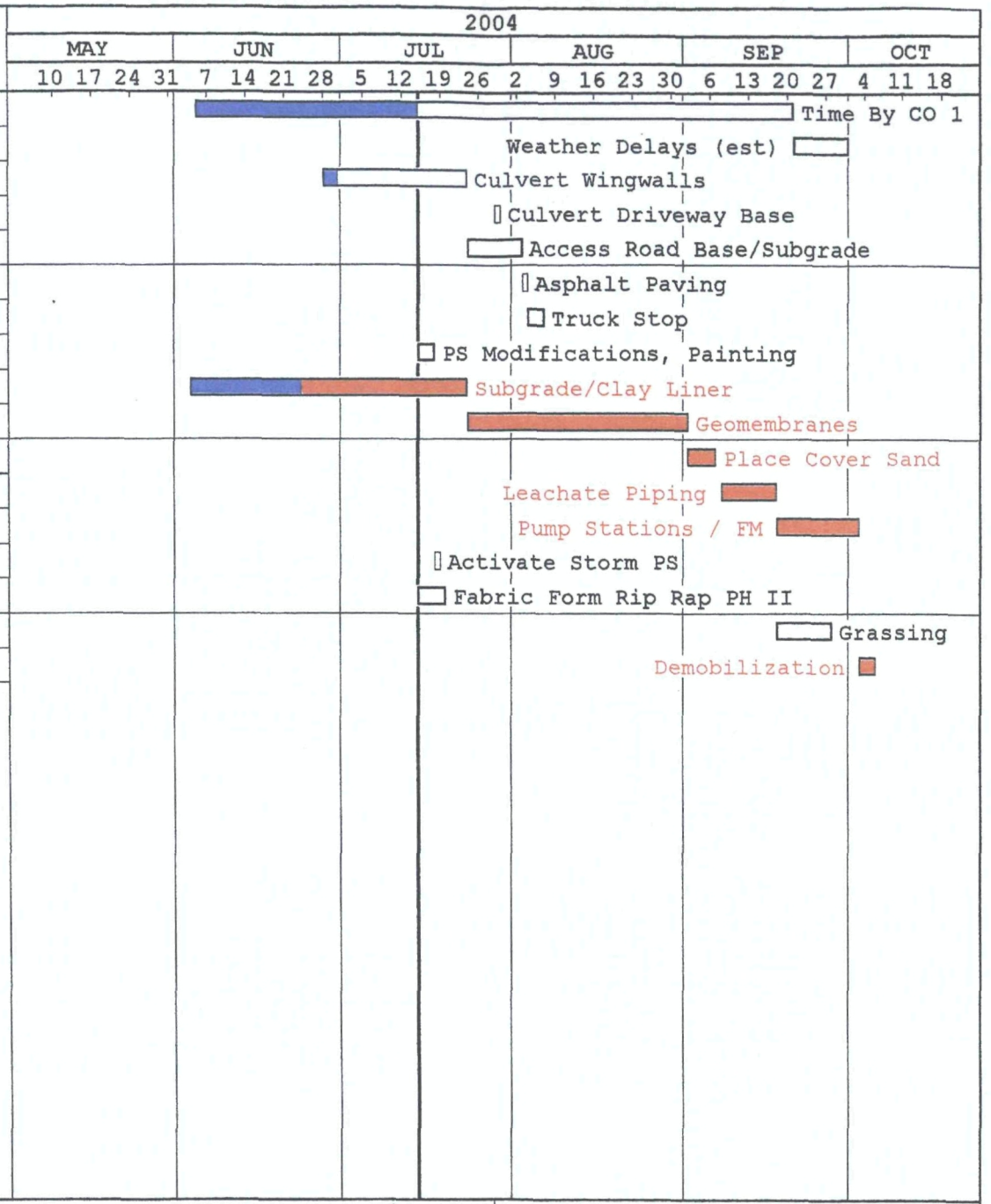
Sheet 3 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 6/1/03

Date	Revision	Checked	Approved

ACTIVITY ID	EARLY START	EARLY FINISH	REM DUR	TOTL FLT
2	5JUN04A	20SEP04	68	5
3	21SEP04	30SEP04	10	5
605	28JUN04A	23JUL04	9	61
610	29JUL04	29JUL04	1	61
810	24JUL04	2AUG04	10	57
820	3AUG04	3AUG04	1	57
840	4AUG04	6AUG04	3	57
855	15JUL04	17JUL04	3	5
1100	4JUN04A	23JUL04	9	0
1200	24JUL04	1SEP04	40	0
1250	2SEP04	6SEP04	5	0
1300	8SEP04	17SEP04	10	0
1400	18SEP04	2OCT04	15	0
1505	18JUL04	18JUL04	1	5
1605	15JUL04	19JUL04	5	65
1700	18SEP04	27SEP04	10	5
1800	3OCT04	5OCT04	3	0



Plot Date 19JUL04
Data Date 15JUL04
Project Start 6JUN03
Project Finish 5OCT04

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT12

Sheet 1 of 1

Advance Construction Services, Inc.
Citrus County Landfill PH II
REMAINING WORK

Date	Revision	Checked	Approved

SMC SMC
Citrus Central
Class RCR
permit file

BOARD OF COUNTY COMMISSIONERS
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION

P.O. Box 340, Lecanto, Florida 34460
(352) 527-7670 FAX (352) 527-7672

D.E.P.
MAY 24 2004
Southwest District Tampa

May 20, 2004

Susan J. Pelz, P.E. 6/3
Solid Waste Section
Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

Re: Citrus County Central Landfill
Permit No. 21375-004-SC Phase 2 Landfill Construction
Progress Report #7

Dear Ms. Pelz:

In accordance with Specific Condition 4 of the referenced permit, we are submitting the updated construction schedule for this project, as prepared by our construction contractor, Advance Construction Services, Inc.

Progress on excavation is not yet complete, but is projected to be finished by the end of this month. Lining activities are expected to take place in June and July. The construction completion date is now projected to be the end of August. We expect to have sufficient fill space in the Phase 1/1A area to accommodate this delay. The landfill capacity report prepared by SCS that confirms this information will be delivered under separate cover to you next week.

We are looking forward to your site visit on June 3 to view construction progress and discuss other items.

Please let me know if you have any questions.

Sincerely,

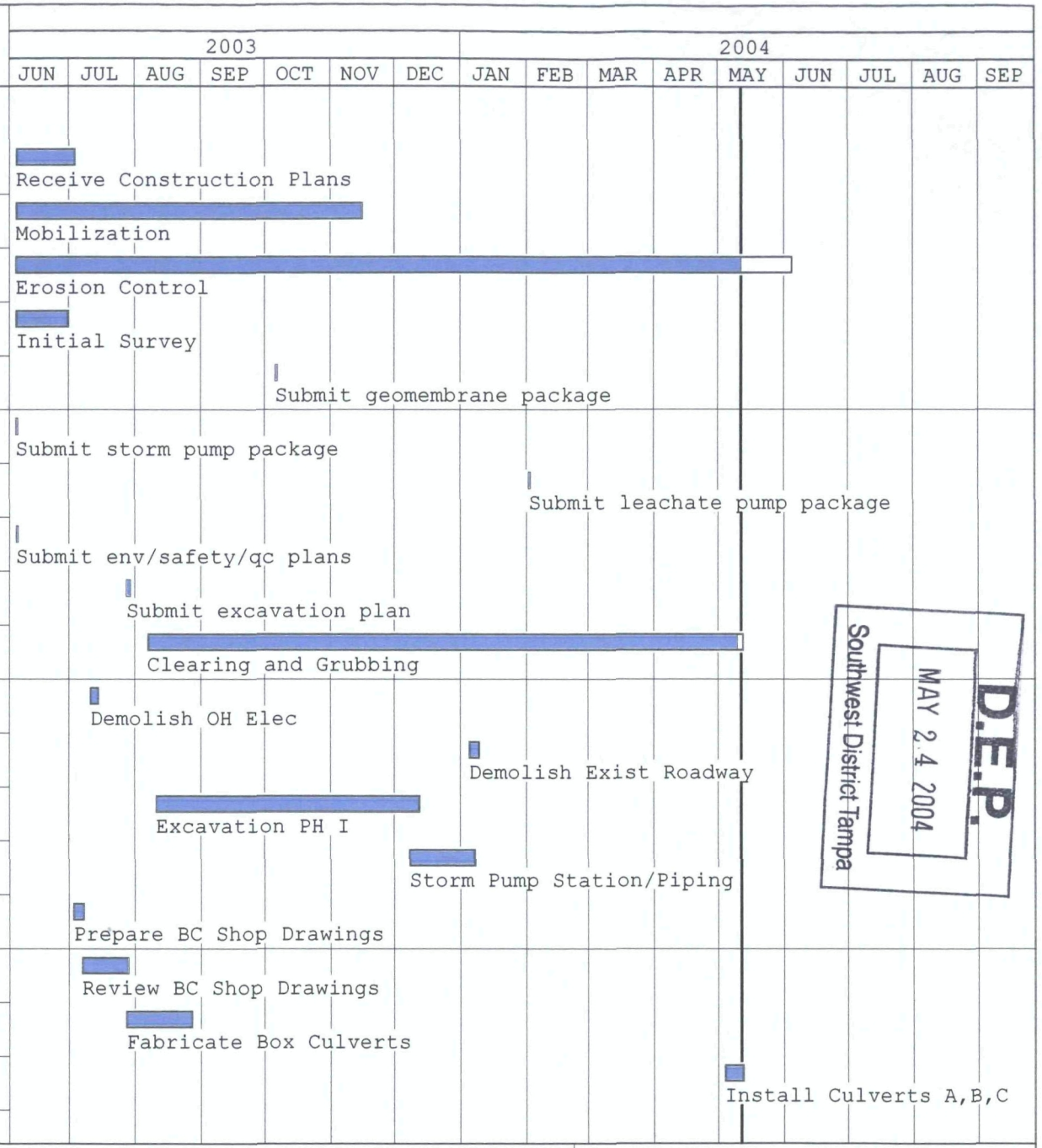
Susan J. Metcalfe

Susan Metcalfe, P.G.
Director

Enclosures

CC: Tom Dick, Assistant Director, Public Works Department
John Banks, SCS Engineers
Ken Pitts, Advance Construction

ACTIVITY ID	EARLY START	EARLY FINISH	ORIG DUR	
10	6JUN03A	3JUL03A	1	Receive Construction Plans
100	6JUN03A	15NOV03A	120	Mobilization
105	6JUN03A	4JUN04	365	Erosion Control
110	6JUN03A	30JUN03A	15	Initial Survey
150	6OCT03A	6OCT03A	10	Submit geomembrane package
155	6JUN03A	6JUN03A	10	Submit storm pump package
160	2FEB04A	2FEB04A	10	Submit leachate pump package
165	6JUN03A	6JUN03A	10	Submit env/safety/qc plans
170	28JUL03A	29JUL03A	5	Submit excavation plan
200	7AUG03A	12MAY04	110	Clearing and Grubbing
210	11JUL03A	14JUL03A	3	Demolish OH Elec
220	5JAN04A	9JAN04A	3	Demolish Exist Roadway
300	11AUG03A	12DEC03A	100	Excavation PH I
400	8DEC03A	7JAN04A	30	Storm Pump Station/Piping
500	3JUL03A	7JUL03A	5	Prepare BC Shop Drawings
510	7JUL03A	28JUL03A	10	Review BC Shop Drawings
520	28JUL03A	27AUG03A	21	Fabricate Box Culverts
600	4MAY04A	12MAY04A	7	Install Culverts A,B,C



Plot Date 13MAY04
Data Date 12MAY04
Project Start 6JUN03
Project Finish 31AUG04

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT10

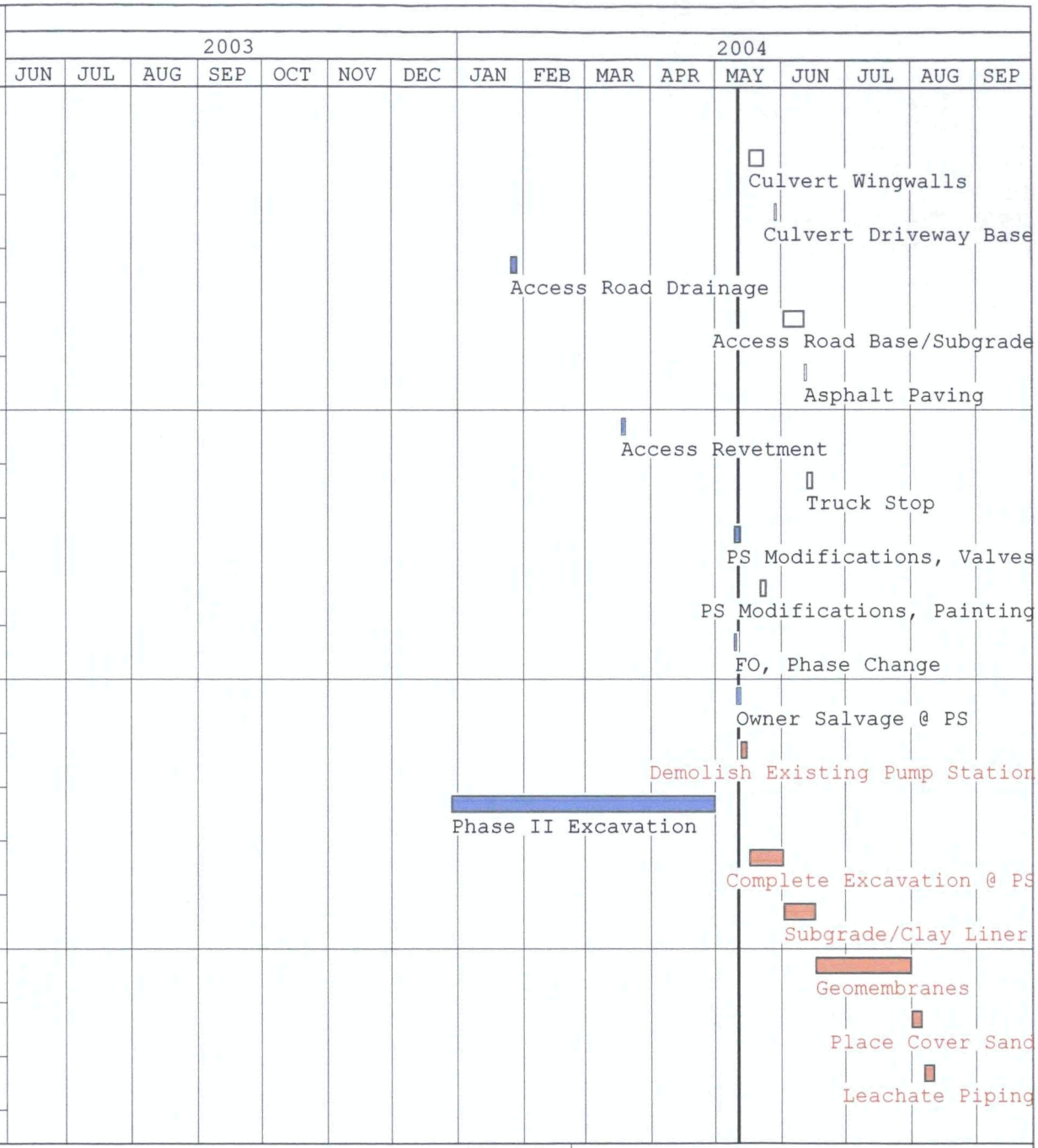
Sheet 1 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 5/12/03

Date	Revision	Checked	Approved

ACTIVITY ID	EARLY START	EARLY FINISH	ORIG DUR
605	17MAY04	23MAY04	7
610	29MAY04	29MAY04	1
800	26JAN04A	28JAN04A	3
810	2JUN04	11JUN04	10
820	12JUN04	12JUN04	1
830	18MAR04A	19MAR04A	2
840	13JUN04	15JUN04	3
850	10MAY04A	12MAY04A	3
855	22MAY04	24MAY04	3
858	10MAY04A	10MAY04A	1
859	11MAY04A	12MAY04A	2
900	13MAY04	15MAY04	3
1000	29DEC03A	30APR04A	42
1001	17MAY04	1JUN04	16
1100	2JUN04	16JUN04	15
1200	17JUN04	31JUL04	45
1250	1AUG04	5AUG04	5
1300	7AUG04	11AUG04	5



Plot Date 13MAY04
Data Date 12MAY04
Project Start 6JUN03
Project Finish 31AUG04

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT10

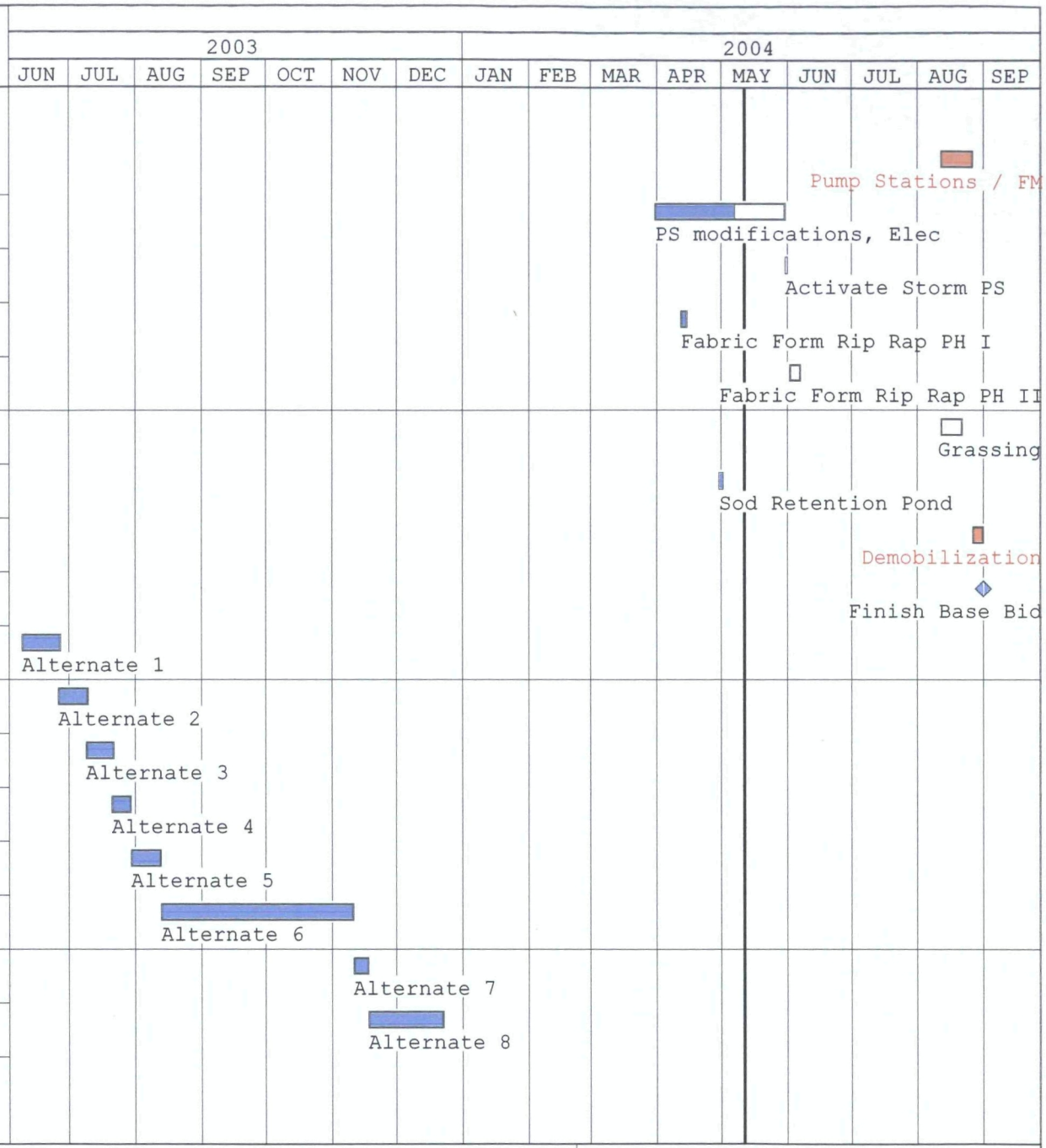
Sheet 2 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 5/12/03

Date	Revision	Checked	Approved

ACTIVITY ID	EARLY START	EARLY FINISH	ORIG DUR
1400	12AUG04	26AUG04	15
1500	31MAR04A	30MAY04	49
1505	31MAY04	31MAY04	1
1600	12APR04A	14APR04A	5
1605	2JUN04	6JUN04	5
1700	12AUG04	21AUG04	10
1701	30APR04A	1MAY04A	2
1800	27AUG04	31AUG04	5
4999		31AUG04A	0
5010	9JUN03A	26JUN03A	60
5020	26JUN03A	9JUL03A	60
5030	9JUL03A	21JUL03A	60
5040	21JUL03A	29JUL03A	60
5050	30JUL03A	12AUG03A	60
5060	13AUG03A	10NOV03A	60
5070	11NOV03A	17NOV03A	60
5080	18NOV03A	22DEC03A	60



Plot Date 13MAY04
Data Date 12MAY04
Project Start 6JUN03
Project Finish 31AUG04

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT10

Sheet 3 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 5/12/03

Date	Revision	Checked	Approved

BOARD OF COUNTY COMMISSIONERS
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION
P.O. Box 340, Lecanto, Florida 34460
(352) 527-7670 FAX (352) 527-7672

JS 5/21/04
SMC

March 30, 2004

D.E.P.
APR 01 2004
Southwest District Tampa

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

Re: Citrus County Central Landfill
Permit No. 21375-004-SC Phase 2 Landfill Construction
Progress Report #6

Dear Mr. Ford:

In accordance with Specific Condition 4 of the referenced permit, we are submitting the updated construction schedule for this project, as prepared by our construction contractor, Advance Construction Services, Inc.

Progress on excavation has slowed somewhat and is not expected to be complete until late April. Lining activities are expected to take place in April, May and June. The construction completion date is now projected to be the end of July, about two months delayed. We expect to have sufficient fill space in the Phase 1/1A area to accommodate this delay.

Please let me know if you have any questions.

Sincerely,

Susan J Metcalfe

Susan Metcalfe, P.G.
Director

CC: Tom Dick, Assistant Director, Public Works Department
John Banks, SCS Engineers
Ken Pitts, Advance Construction

Advance Construction Services, Inc.

400 Neal Road • Cantonment, Florida 32533 • Phone: (850) 937-1013 • Fax: (850) 937-1019

March 19, 2004

Mr. John Banks
Project Director
3012 US Highway 301
Suite 700
Tampa, FL 33619

Re: Citrus County Landfill Phase II Expansion
Schedule Update

Dear Mr. Banks:

Please find attached for your review an updated project schedule bar chart reflecting progress as of 3/15/04. Phase II excavation is underway and continuing. All stockpile alternate excavation has been completed. Field order number 6 was received on March 17, finalizing changes to the box culvert design and storm water pump station piping, and these changes will be implemented upon receipt of materials and issuance of subcontract modifications. The proposed electrical changes are not yet incorporated into the project.

The schedule assumes 30 days to procure materials and complete the modified electrical for the storm pump station. The existing pump station cannot be demolished until the electrical is completed and the new station is activated. The east end of the proposed cell excavation and grading cannot be completed until the existing station is demolished, such that the revised electrical construction is critical to the excavation and remaining work in the cell.

The schedule is preliminary based upon issuance of a NTP for the electrical revisions and the assumption for procurement and duration, and may change. The schedule will be reevaluated when that information is more definitely known. Based on the above assumptions, all work should be completed by 7/31/04.

If I can provide any additional information, please call at your convenience.

Sincerely,
Advance Construction Services, Inc.

Kenneth W. Pitts, P.E.
Project Manager

:TIVITY ID	EARLY START	EARLY FINISH	PCT	
10	6JUN03A	3JUL03A	100	Receive Construction Plans
100	6JUN03A	15NOV03A	100	Mobilization
105	6JUN03A	5JUN04	77	Erosion Control
110	6JUN03A	30JUN03A	100	Initial Survey
150	6OCT03A	6OCT03A	100	Submit geomembrane package
155	6JUN03A	6JUN03A	100	Submit storm pump package
160	15MAR04	15MAR04	90	Submit leachate pump package
165	6JUN03A	6JUN03A	100	Submit env/safety/qc plans
170	28JUL03A	29JUL03A	100	Submit excavation plan
200	7AUG03A	19MAR04	96	Clearing and Grubbing
210	11JUL03A	14JUL03A	100	Demolish OH Elec
220	5JAN04A	9JAN04A	100	Demolish Exist Roadway
300	11AUG03A	12DEC03A	100	Excavation PH I
400	8DEC03A	7JAN04A	100	Storm Pump Station/Piping
500	3JUL03A	7JUL03A	100	Prepare BC Shop Drawings
510	7JUL03A	28JUL03A	100	Review BC Shop Drawings
520	28JUL03A	27AUG03A	100	Fabricate Box Culverts
600	15MAR04	19MAR04	0	Install Box Culverts

:t Date 19MAR04
:a Date 15MAR04
:ject Start 6JUN03
:ject Finish 31JUL04

Primavera Systems, Inc.

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT09

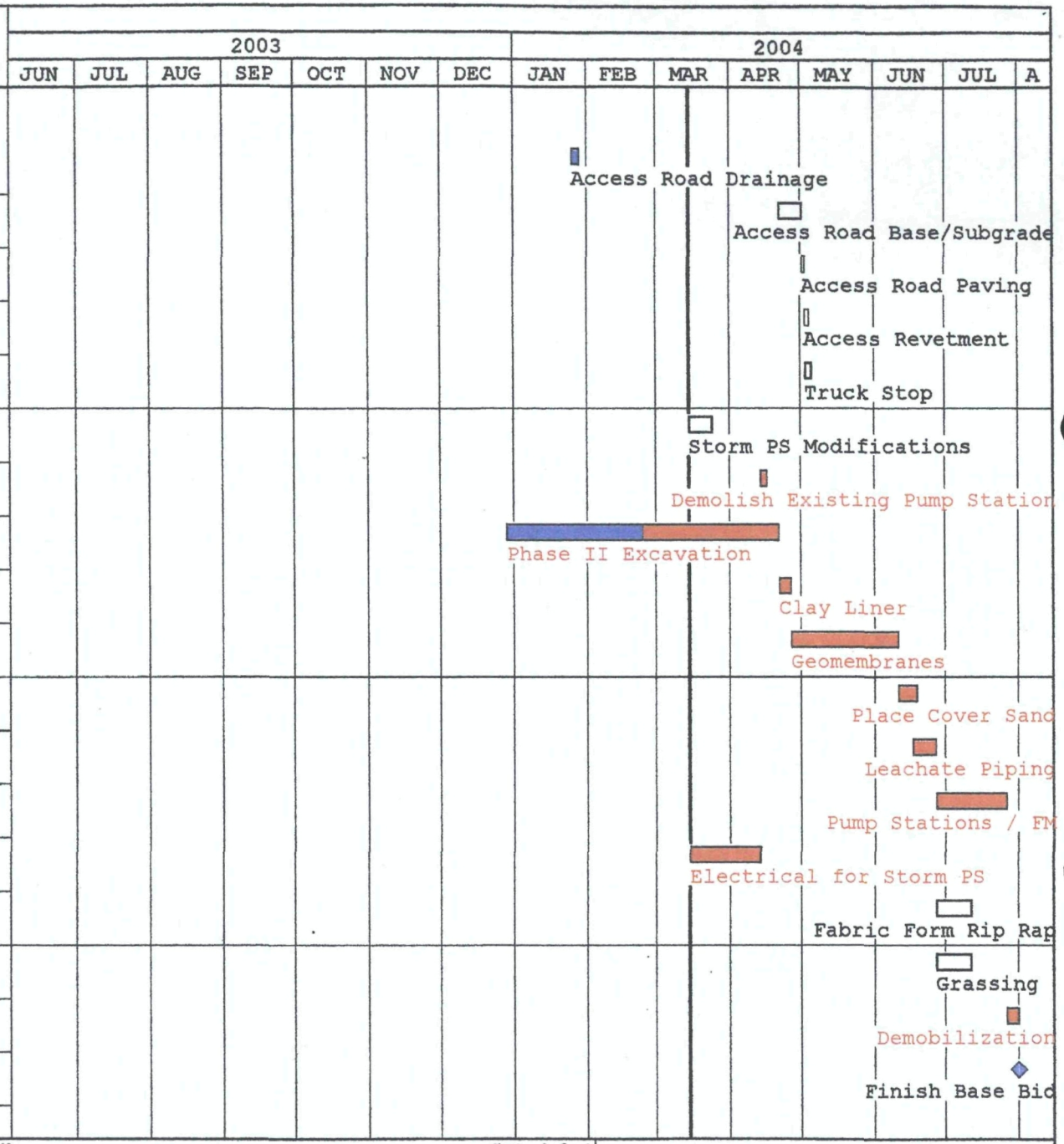
Sheet 1 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 10/31/03

Date	Revision	Checked	Approved

TIVITY ID	EARLY START	EARLY FINISH	PCT
800	26JAN04A	28JAN04A	100
810	22APR04	1MAY04	0
820	2MAY04	2MAY04	0
830	3MAY04	4MAY04	0
840	3MAY04	5MAY04	0
850	15MAR04	24MAR04	0
900	14APR04	16APR04	0
1000	29DEC03A	21APR04	50
1100	22APR04	26APR04	0
1200	27APR04	10JUN04	0
1250	11JUN04	18JUN04	0
1300	17JUN04	26JUN04	0
1400	27JUN04	26JUL04	0
1500	15MAR04	13APR04	0
1600	27JUN04	11JUL04	0
1700	27JUN04	11JUL04	0
1800	27JUL04	31JUL04	0
4999		31JUL04A	100



t Date 19MAR04
a Date 15MAR04
ject Start 6JUN03
ject Finish 31JUL04

Primavera Systems, Inc.

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT09

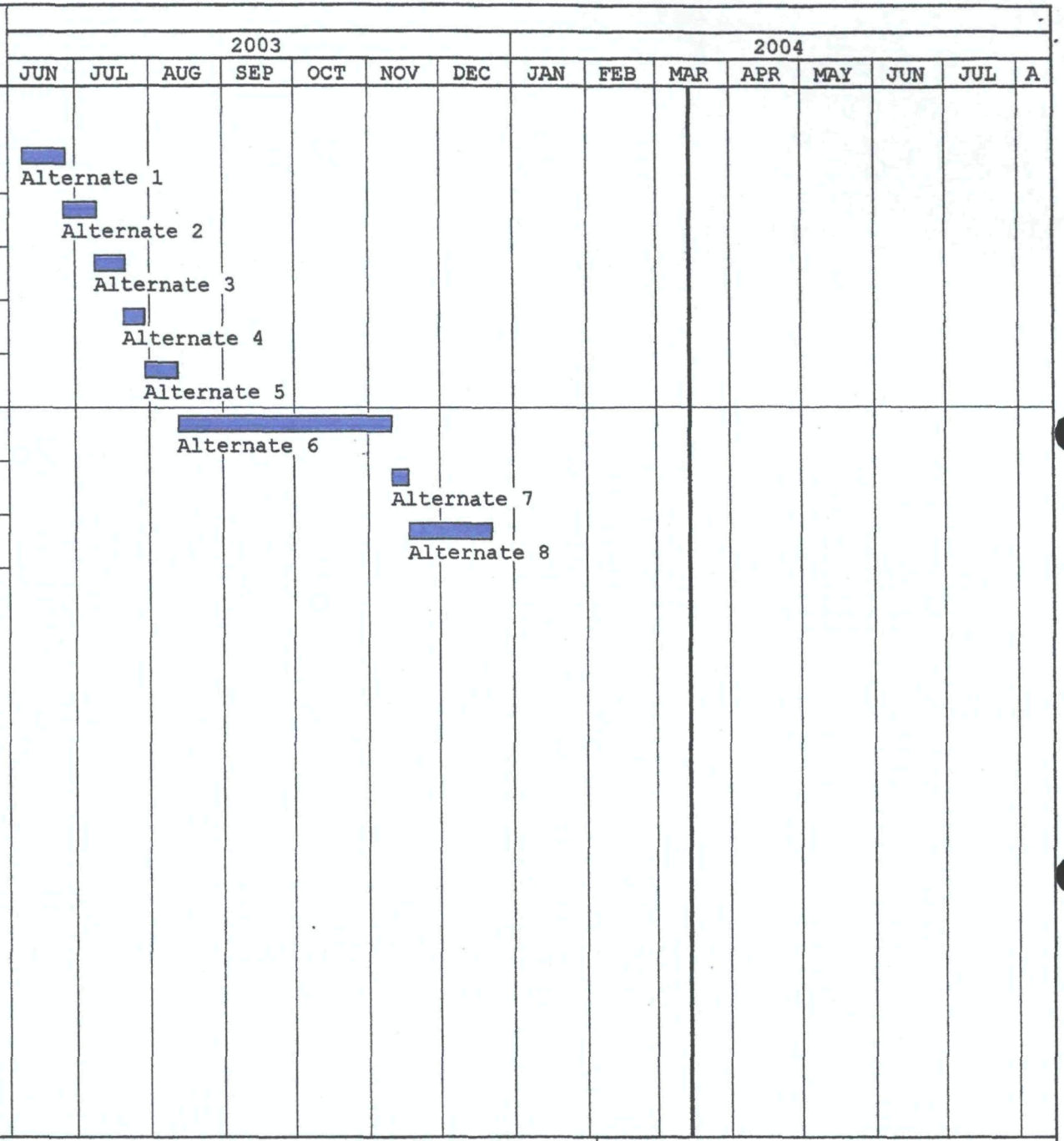
Sheet 2 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 10/31/03

Date	Revision	Checked	Approved

CTIVITY ID	EARLY START	EARLY FINISH	PCT
5010	9JUN03A	26JUN03A	100
5020	26JUN03A	9JUL03A	100
5030	9JUL03A	21JUL03A	100
5040	21JUL03A	29JUL03A	100
5050	30JUL03A	12AUG03A	100
5060	13AUG03A	10NOV03A	100
5070	11NOV03A	17NOV03A	100
5080	18NOV03A	22DEC03A	100



ot Date 19MAR04
ta Date 15MAR04
oject Start 6JUN03
oject Finish 31JUL04

) Primavera Systems, Inc.

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT09

Sheet 3 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 10/31/03

Date	Revision	Checked	Approved

(At facility)

MEETING AGENDA
CITRUS COUNTY LANDFILL
June 3, 2004

10:00A

1. Phase 2 Construction Progress and Current Schedule

2. Review of Phase 2 Design Features

   a) New Stormwater Area

   b) Alternate Procedure Approval for Side Slopes

3. Operations Permit Renewal

4. Remaining Capacity in Phases 1 and 1A

5. Landfill Gas Migration Investigation

   a) Historical Data

   b) Recent Methane Detections

   c) Results of Preliminary Investigation

   d) Additional Investigation

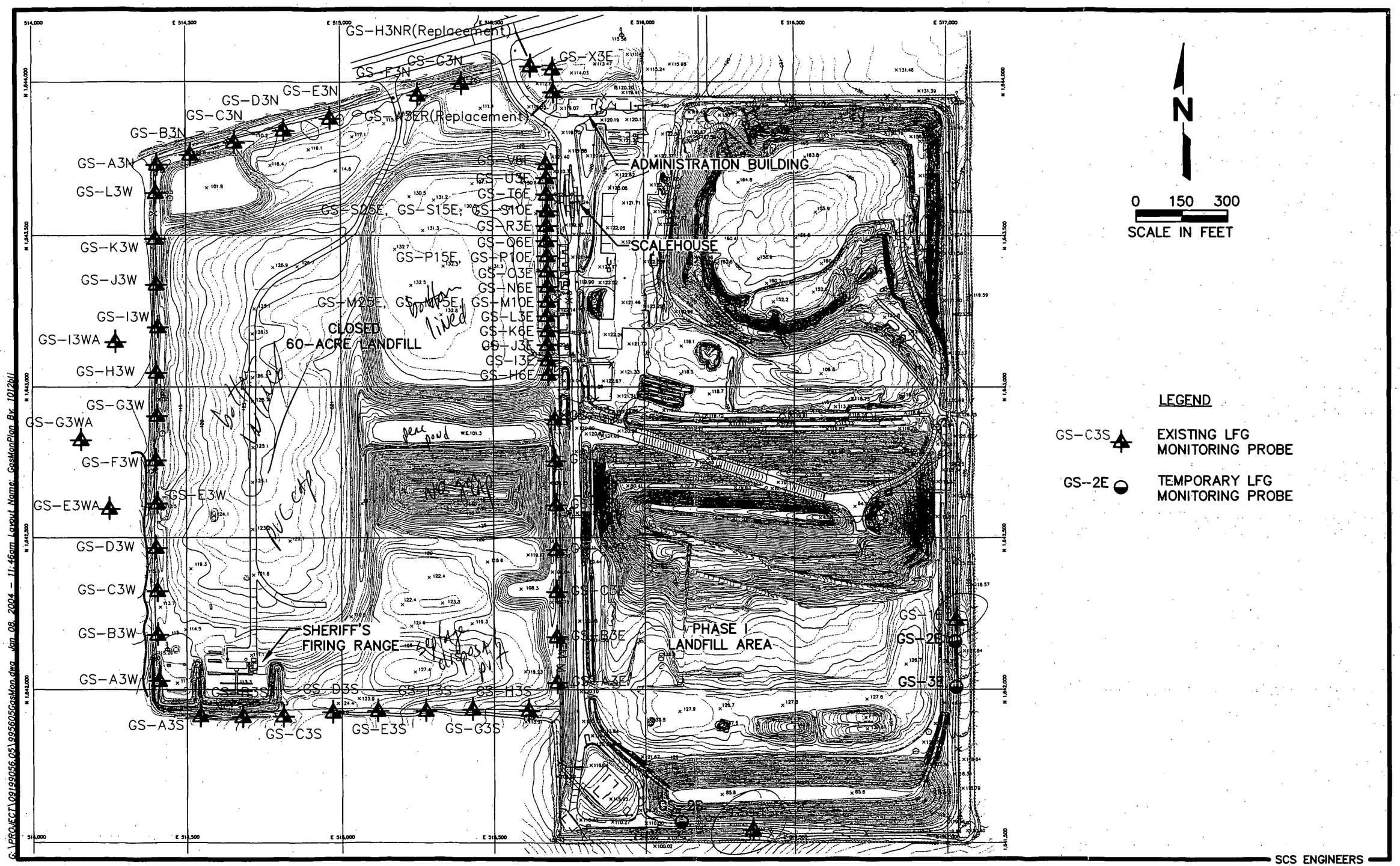


Figure 1. Landfill Gas Monitoring Probe Locations, Central Landfill, Citrus County, Florida

ACTIVITY ID	EARLY START	EARLY FINISH	ORIG DUR	
10	6JUN03A	3JUL03A	1	Receive Construction Plans
100	6JUN03A	15NOV03A	120	Mobilization
105	6JUN03A	4JUN04	365	Erosion Control
110	6JUN03A	30JUN03A	15	Initial Survey
150	6OCT03A	6OCT03A	10	Submit geomembrane package
155	6JUN03A	6JUN03A	10	Submit storm pump package
160	2FEB04A	2FEB04A	10	Submit leachate pump package
165	6JUN03A	6JUN03A	10	Submit env/safety/qc plans
170	28JUL03A	29JUL03A	5	Submit excavation plan
200	7AUG03A	12MAY04	110	Clearing and Grubbing
210	11JUL03A	14JUL03A	3	Demolish OH Elec
220	5JAN04A	9JAN04A	3	Demolish Exist Roadway
300	11AUG03A	12DEC03A	100	Excavation PH I
400	8DEC03A	7JAN04A	30	Storm Pump Station/Piping
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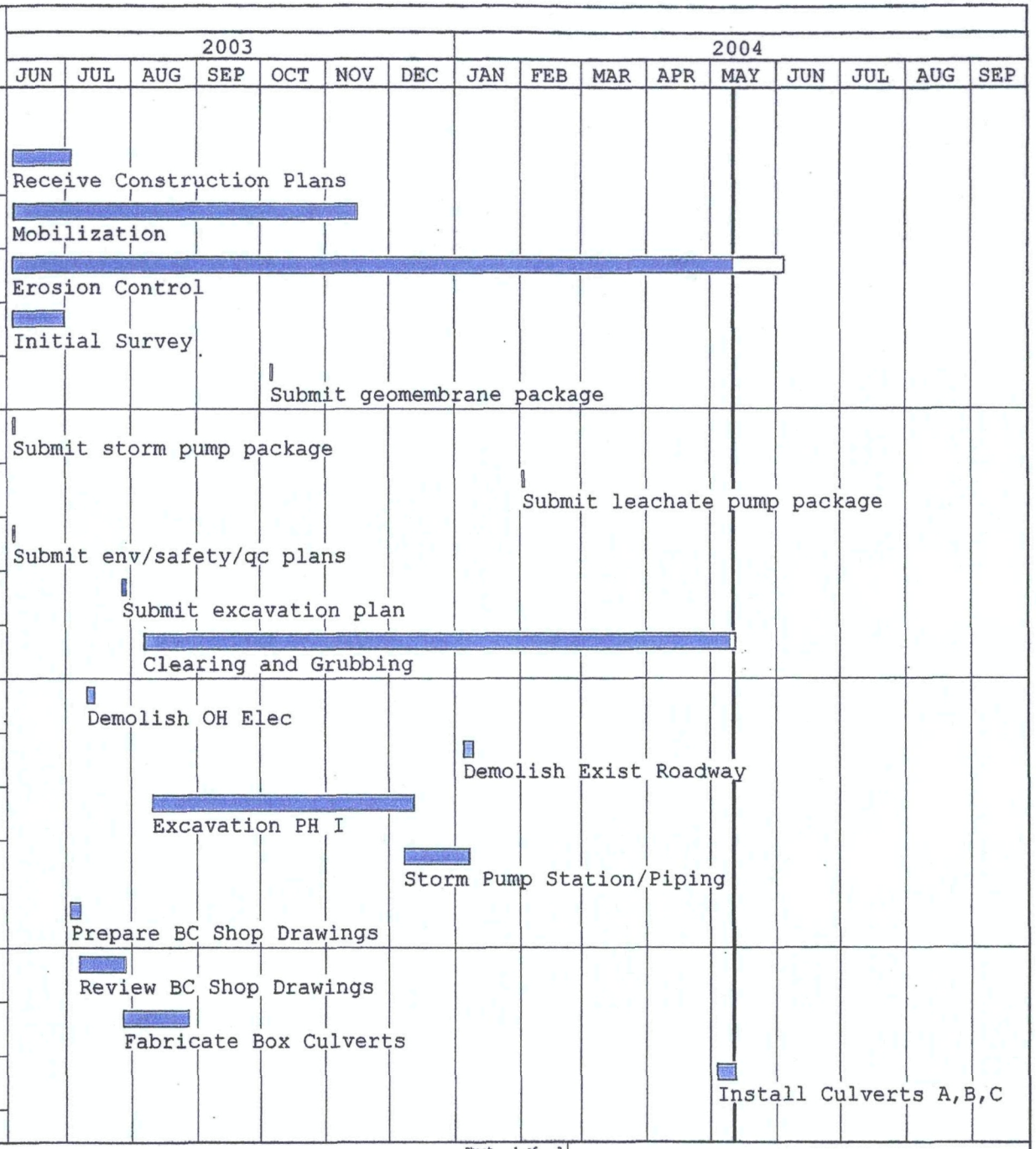
510	7JUL03A	28JUL03A	10	Review BC Shop Drawings
520	28JUL03A	27AUG03A	21	Fabricate Box Culverts
600	4MAY04A	12MAY04A	7	Install Culverts A,B,C



Plot Date 13MAY04
Data Date 12MAY04
Project Start 6JUN03
Project Finish 31AUG04

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT10

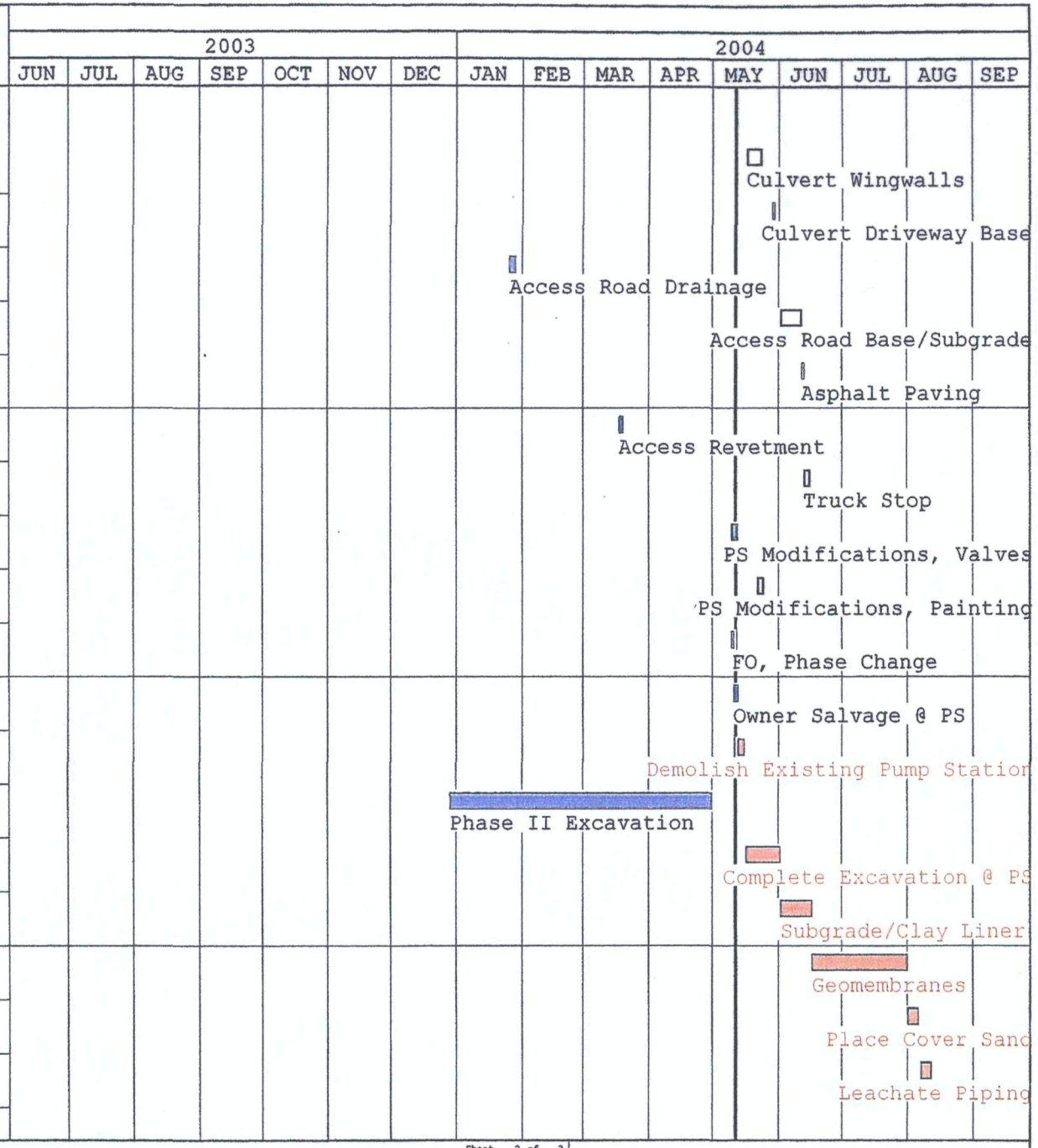
Sheet 1 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 5/12/03

Date	Revision	Checked	Approved

ACTIVITY ID	EARLY START	EARLY FINISH	ORIG DUR
605	17MAY04	23MAY04	7
610	29MAY04	29MAY04	1
800	26JAN04A	28JAN04A	3
810	2JUN04	11JUN04	10
820	12JUN04	12JUN04	1
830	18MAR04A	19MAR04A	2
840	13JUN04	15JUN04	3
850	10MAY04A	12MAY04A	3
855	22MAY04	24MAY04	3
858	10MAY04A	10MAY04A	1
859	11MAY04A	12MAY04A	2
900	13MAY04	15MAY04	3
1000	29DEC03A	30APR04A	42
1001	17MAY04	1JUN04	16
1100	2JUN04	16JUN04	15
1200	17JUN04	31JUL04	45
1250	1AUG04	5AUG04	5
1300	7AUG04	11AUG04	5



Plot Date 13MAY04
Data Date 12MAY04
Project Start 6JUN03
Project Finish 31AUG04

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT10

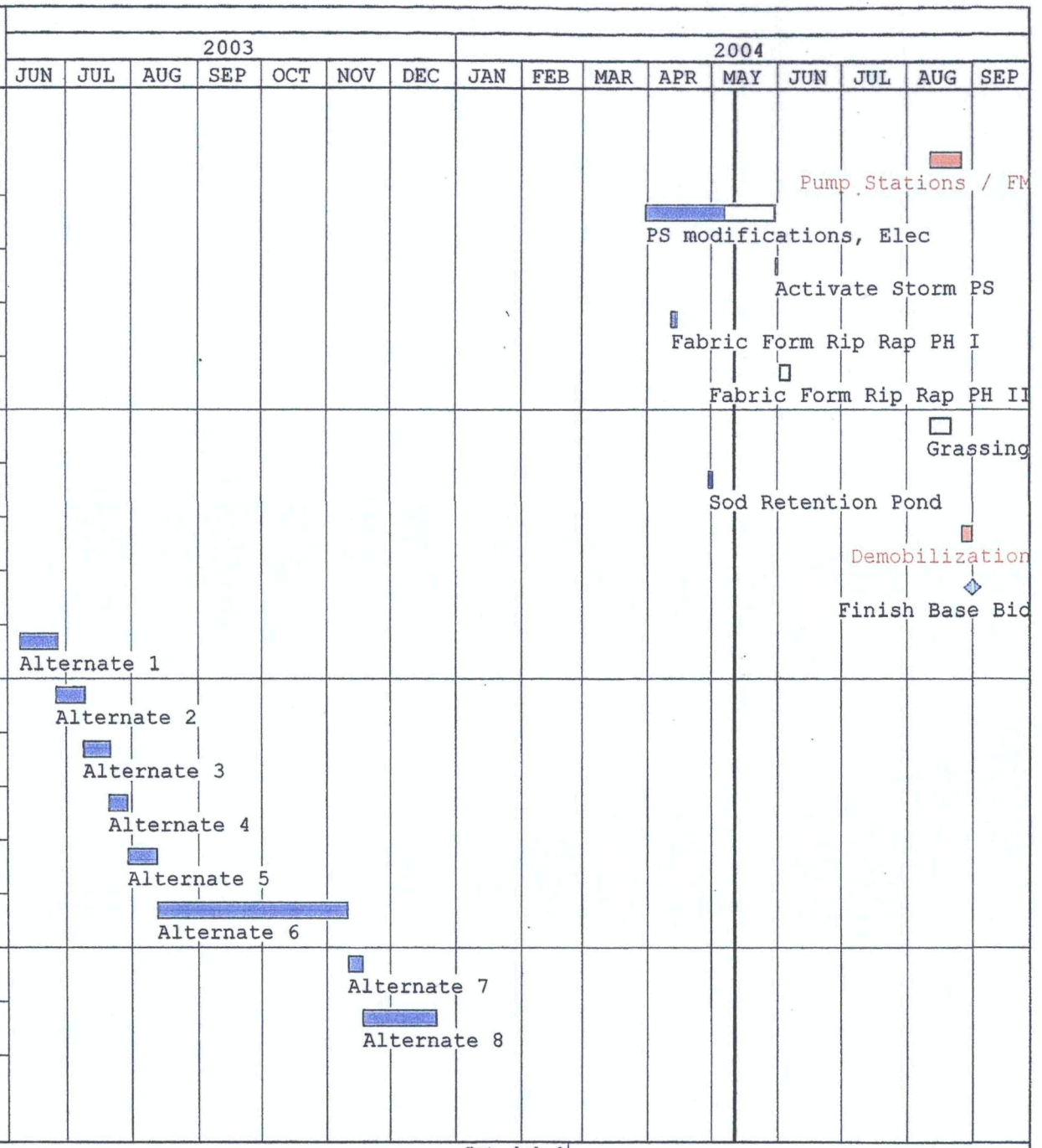
Sheet 2 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 5/12/03

Date	Revision	Checked	Approved

ACTIVITY ID	EARLY START	EARLY FINISH	ORIG DUR
1400	12AUG04	26AUG04	15
1500	31MAR04A	30MAY04	49
1505	31MAY04	31MAY04	1
1600	12APR04A	14APR04A	5
1605	2JUN04	6JUN04	5
1700	12AUG04	21AUG04	10
1701	30APR04A	1MAY04A	2
1800	27AUG04	31AUG04	5
4999		31AUG04A	0
5010	9JUN03A	26JUN03A	60
5020	26JUN03A	9JUL03A	60
5030	9JUL03A	21JUL03A	60
5040	21JUL03A	29JUL03A	60
5050	30JUL03A	12AUG03A	60
5060	13AUG03A	10NOV03A	60
5070	11NOV03A	17NOV03A	60
5080	18NOV03A	22DEC03A	60



Plot Date 13MAY04
Data Date 12MAY04
Project Start 6JUN03
Project Finish 31AUG04

(c) Primavera Systems, Inc.

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

C710

Sheet 3 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 5/12/03

Date	Revision	Checked	Approved

B\ \RD OF COUNTY COMM SIONERS
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION
P.O. Box 340, Lecanto, Florida 34460
(352) 527-7670 FAX (352) 527-7672

D.E.P.
FEB 2 3 2004
Southwest District Tampa

February 18, 2004

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

Re: Citrus County Central Landfill
Permit No. 21375-004-SC Phase 2 Landfill Construction
Progress Report #5

Dear Mr. Ford:

In accordance with Specific Condition 4 of the referenced permit, we are submitting the updated construction schedule for this project, as prepared by our construction contractor, Advance Construction Services, Inc.

As of this date, cell excavation part 2 (inside the area to be lined) is within a few weeks of completion. The stormwater pump station installation is complete. Liner installation activities should take place within the next two to three months.

Please let me know if you have any questions.

Sincerely,

Susan J Metcalfe

Susan Metcalfe, P.G.
Director

CC: Tom Dick, Assistant Director, Public Works Department
John Banks, SCS Engineers
Ken Pitts, Advance Construction

Advance Construction Services, Inc.

400 Neal Road • Cantonment, Florida 32533 • Phone: (850) 937-1013 • Fax: (850) 937-1019

D.E.P.
FEB 2 3 2004
Southwest District Tampa

February 1, 2004

Mr. John Banks
Project Director
3012 US Highway 301
Suite 700
Tampa, FL 33619

Re: Citrus County Landfill Phase II Expansion
Schedule Update

Dear Mr. Banks:

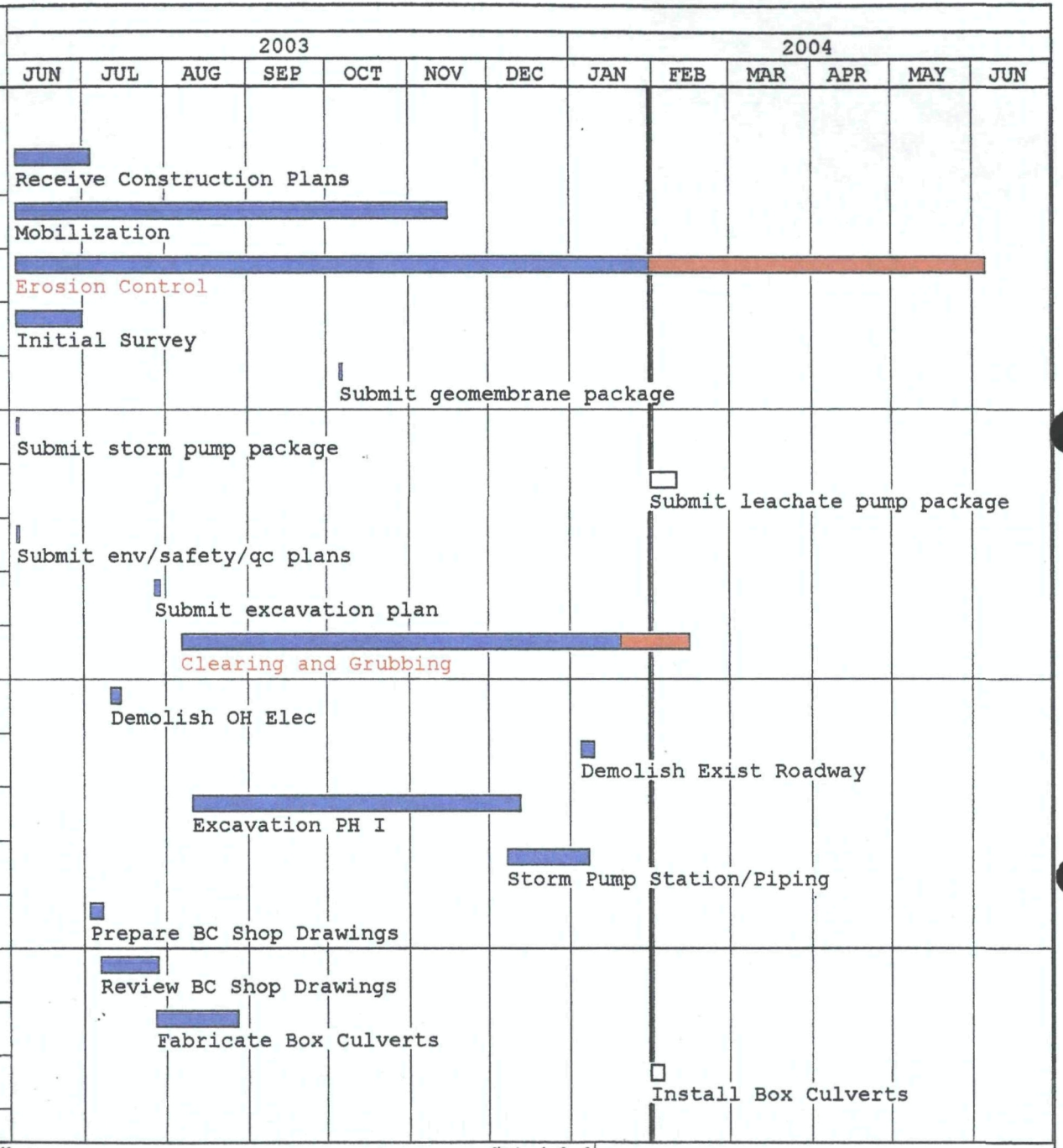
Please find attached for your review an updated project schedule bar chart reflecting progress as of 1/31/04. Phase II excavation is underway and should be completed by the end of February. Design modifications have been received for the stormwater pump station, electrical distribution and box culverts crossings, and are currently under review for pricing. The stormwater pump station has been completed per original design, and will be tested upon completion of the modified electrical distribution and valve changes. The project has been slightly delayed by these changes, but with favorable weather these delays may be recovered later in the project.

If I can provide any additional information, please call at your convenience.

Sincerely,
Advance Construction Services, Inc.

Kenneth W. Pitts, P.E.
Project Manager

TIVITY ID	EARLY START	EARLY FINISH	PCT
10	6JUN03A	3JUL03A	100
100	6JUN03A	15NOV03A	100
105	6JUN03A	5JUN04	65
110	6JUN03A	30JUN03A	100
150	6OCT03A	6OCT03A	100
155	6JUN03A	6JUN03A	100
160	31JAN04	9FEB04	0
165	6JUN03A	6JUN03A	100
170	28JUL03A	29JUL03A	100
200	7AUG03A	14FEB04	86
210	11JUL03A	14JUL03A	100
220	5JAN04A	9JAN04A	100
300	11AUG03A	12DEC03A	100
400	8DEC03A	7JAN04A	100
500	3JUL03A	7JUL03A	100
510	7JUL03A	28JUL03A	100
520	28JUL03A	27AUG03A	100
600	31JAN04	4FEB04	0



t Date 5FEB04
a Date 31JAN04
ject Start 6JUN03
ject Finish 17JUN04

Primavera Systems, Inc.

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT08

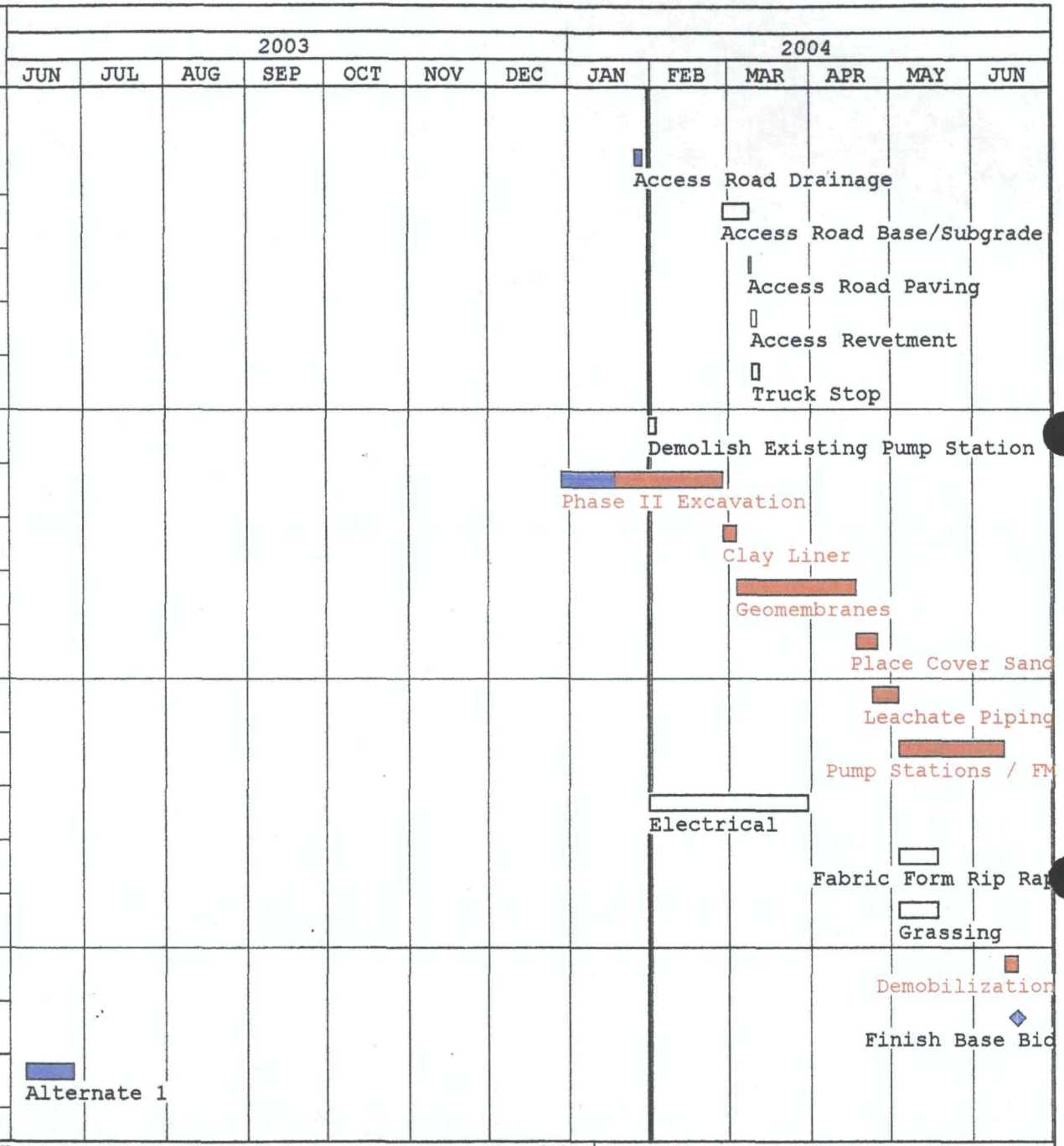
Sheet 1 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 10/31/03

Date	Revision	Checked	Approved

CTIVITY ID	EARLY START	EARLY FINISH	PCT
800	26JAN04A	28JAN04A	100
810	28FEB04	8MAR04	0
820	9MAR04	9MAR04	0
830	10MAR04	11MAR04	0
840	10MAR04	12MAR04	0
900	31JAN04	2FEB04	0
1000	29DEC03A	27FEB04	33
1100	28FEB04	3MAR04	0
1200	4MAR04	17APR04	0
1250	18APR04	25APR04	0
1300	24APR04	3MAY04	0
1400	4MAY04	12JUN04	0
1500	31JAN04	30MAR04	0
1600	4MAY04	18MAY04	0
1700	4MAY04	18MAY04	0
1800	13JUN04	17JUN04	0
4999		17JUN04A	100
5010	9JUN03A	26JUN03A	100



ot Date 5FEB04
ta Date 31JAN04
oject Start 6JUN03
oject Finish 17JUN04

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT08

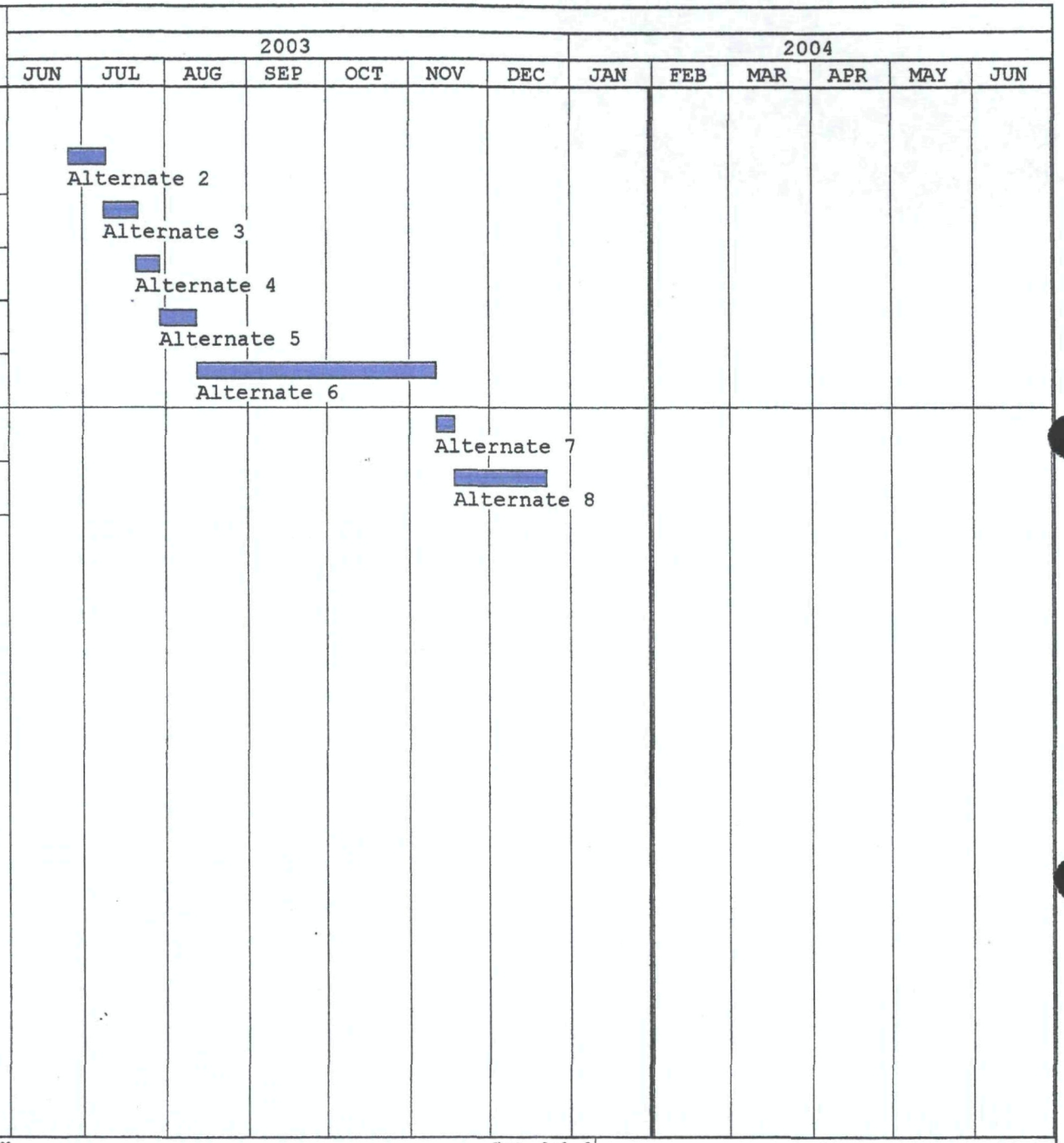
Sheet 2 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 10/31/03

Date	Revision	Checked	Approved

ACTIVITY ID	EARLY START	EARLY FINISH	PCT
5020	26JUN03A	9JUL03A	100
5030	9JUL03A	21JUL03A	100
5040	21JUL03A	29JUL03A	100
5050	30JUL03A	12AUG03A	100
5060	13AUG03A	10NOV03A	100
5070	11NOV03A	17NOV03A	100
5080	18NOV03A	22DEC03A	100



Data Date 5FEB04
Data Date 31JAN04
Project Start 6JUN03
Project Finish 17JUN04

Primavera Systems, Inc.

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT08

Sheet 3 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 10/31/03

Date	Revision	Checked	Approved

BOARD OF COUNTY COMMISSIONERS
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION
P.O. Box 340, Lecanto, Florida 34460
(352) 527-7670 FAX (352) 527-7672

LR JR 1/16/04
HDS HDS 1/29/04

December 30, 2003

D.E.P.
JAN 02 2004
Southwest District Tampa

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

Re: Citrus County Central Landfill
Permit No. 21375-004-SC Phase 2 Landfill Construction

Dear Mr. Ford:

As you may recall, in October 1992, there was a major rainfall event at this site that resulted in failure of the "exterior" drainage system into the area excavated for the cell. At that time, staff placed a large number of tires in the northwest corner of the excavation in an effort to reduce further erosion. Although some of those tires were removed when the area was re-graded and sodded in 1993, some may have remained buried. Construction activity is now proceeding with excavation in that area. This is to request permission to place any tires that are discovered into the existing Class 1 cell for disposal "as is".

Please let me know if you have any questions.

Sincerely,

Susan J Metcalfe

Susan Metcalfe, P.G.
Director

CC: Tom Dick, Assistant Director, Public Works Department
John Banks, SCS Engineers

BOARD OF COUNTY COMMISSIONERS
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION
P.O. Box 340, Lecanto, Florida 34460
(352) 527-7670 FAX (352) 527-7672

December 30, 2003

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

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
JAN 0 2 2004
SOUTHWEST DISTRICT TAMPA

Re: Citrus County Central Landfill
Permit No. 21375-004-SC Phase 2 Landfill Construction
Progress Report #4

Dear Mr. Ford:

In accordance with Specific Condition 4 of the referenced permit, we are submitting the updated construction schedule for this project, as prepared by our construction contractor, Advance Construction Services, Inc.

As of this date, cell excavation Phase 1 (outside the new lined area) is complete. Cell excavation Phase 2 (inside the new lined area) has started. Work on the alternates (unrelated to actual cell construction) is complete. The stormwater pump station installation is underway.

Please let me know if you have any questions.

Sincerely,

Susan J Metcalfe

Susan Metcalfe, P.G.
Director

CC: Tom Dick, Assistant Director, Public Works Department
John Banks, SCS Engineers
Ken Pitts, Advance Construction

Project File

Advance Construction Services, Inc.

400 Neal Road • Cantonment, Florida 32533 • Phone: (850) 937-1013 • Fax: (850) 937-1019

December 29, 2003

Mr. John Banks
Project Director
3012 US Highway 301
Suite 700
Tampa, FL 33619

Re: Citrus County Landfill Phase II Expansion
Schedule Update

Dear Mr. Banks:

JM
OK to change
w Karl Kugel

Please find attached for your review an updated project schedule bar chart reflecting progress as of ~~11~~ 12/30/03. Major items showing progress are as follows:

1. Phase I excavation – completed, on schedule
2. Stockpile excavation, alternates 1-8 – completed, significantly ahead of schedule
3. Install box culverts – delayed due to redesign by engineer. Delayed indefinitely pending direction from engineer
4. Stormwater pump station and outfall – installation started, concrete pad completed, with piping underway. Completion of above ground piping delayed due to design change
5. Phase II excavation – started out of sequence in order to maintain scheduled progress.

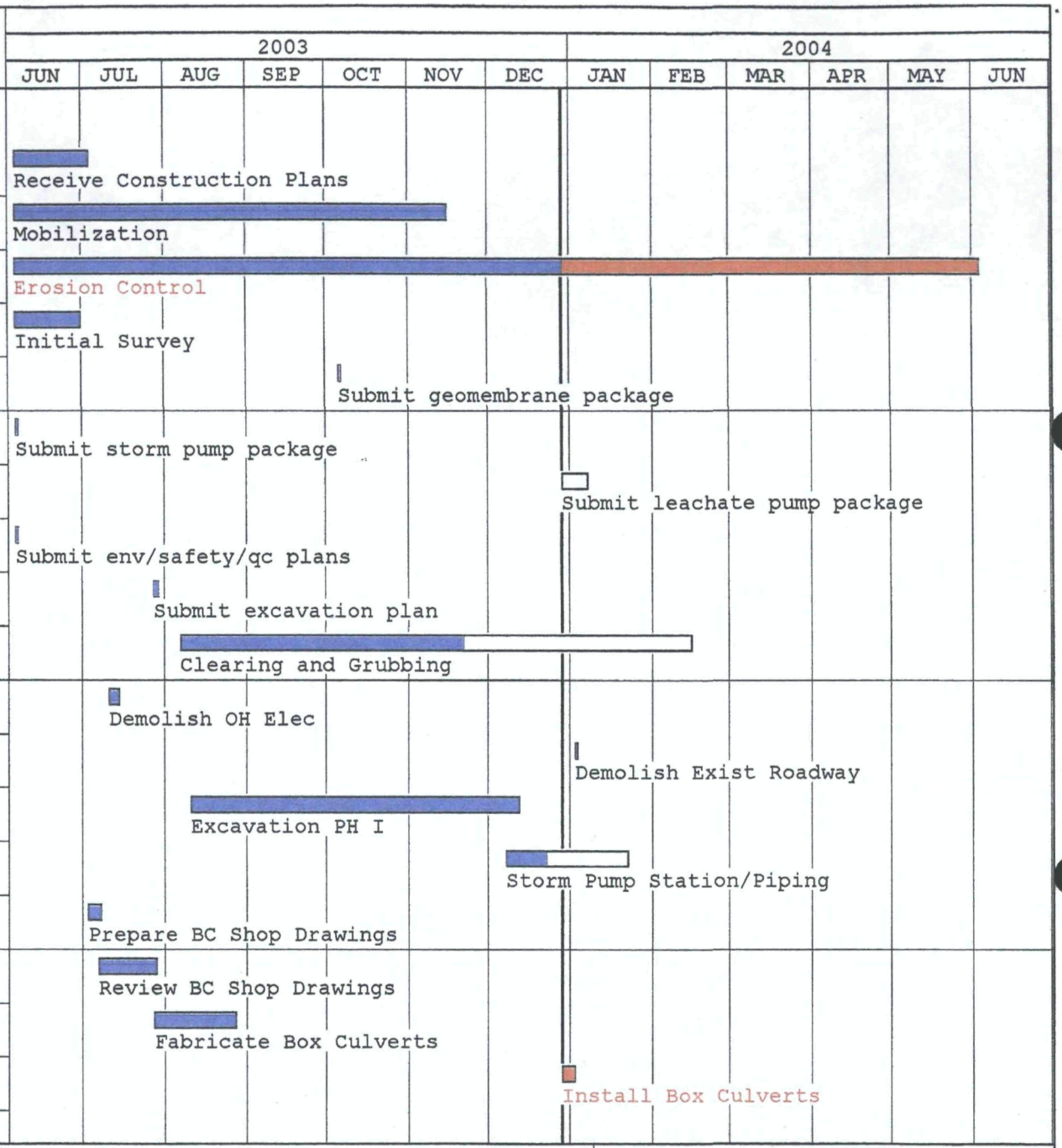
With the accelerated start of Phase II excavation, the project is on schedule. However, the box culverts cannot be completed without additional direction, and changes are expected to the stormwater pump station due to possible design modifications to the above ground piping.

If I can provide any additional information, please call at your convenience.

Sincerely,
Advance Construction Services, Inc.

Kenneth W. Pitts, P.E.
Project Manager

EARLY START	EARLY FINISH	PCT	
6JUN03A	3JUL03A	100	Receive Construction Plans
6JUN03A	15NOV03A	100	Mobilization
6JUN03A	3JUN04	57	Erosion Control
6JUN03A	30JUN03A	100	Initial Survey
6OCT03A	6OCT03A	100	Submit geomembrane package
6JUN03A	6JUN03A	100	Submit storm pump package
29DEC03	7JAN04	0	Submit leachate pump package
6JUN03A	6JUN03A	100	Submit env/safety/qc plans
28JUL03A	29JUL03A	100	Submit excavation plan
7AUG03A	15FEB04	56	Clearing and Grubbing
11JUL03A	14JUL03A	100	Demolish OH Elec
3JAN04	3JAN04	67	Demolish Exist Roadway
11AUG03A	12DEC03A	100	Excavation PH I
8DEC03A	22JAN04	33	Storm Pump Station/Piping
3JUL03A	7JUL03A	100	Prepare BC Shop Drawings
7JUL03A	28JUL03A	100	Review BC Shop Drawings
28JUL03A	27AUG03A	100	Fabricate Box Culverts
29DEC03	2JAN04	0	Install Box Culverts



Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT07

Sheet 1 of 3

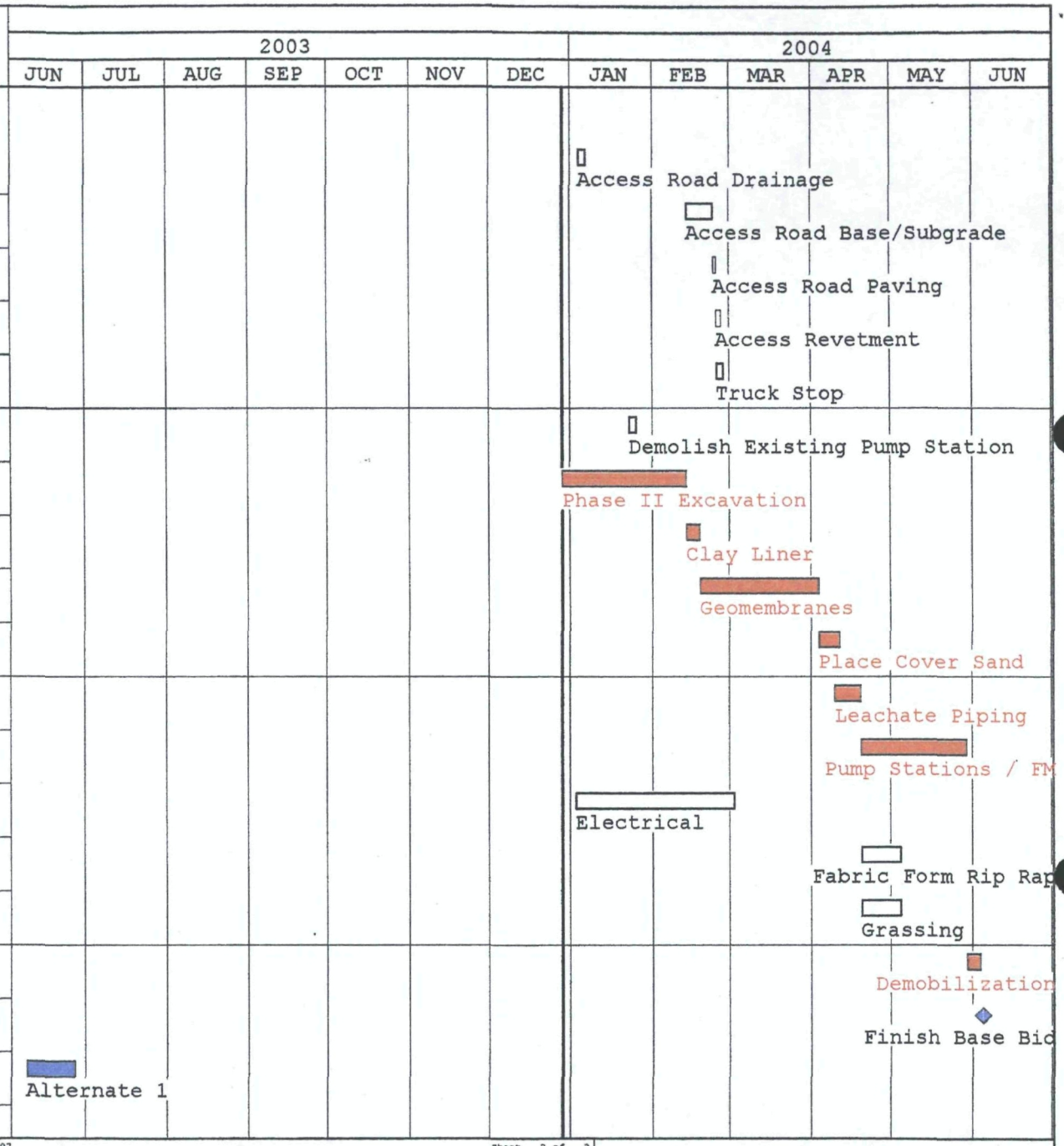
Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 10/31/03

Date	Revision	Checked	Approved

Inc.

:TIVITY ID	EARLY START	EARLY FINISH	PCT
800	4JAN04	6JAN04	0
810	14FEB04	23FEB04	0
820	24FEB04	24FEB04	0
830	25FEB04	26FEB04	0
840	25FEB04	27FEB04	0
900	23JAN04	25JAN04	0
1000	29DEC03A	13FEB04	0
1100	14FEB04	18FEB04	0
1200	19FEB04	3APR04	0
1250	4APR04	11APR04	0
1300	10APR04	19APR04	0
1400	20APR04	29MAY04	0
1500	3JAN04	2MAR04	0
1600	20APR04	4MAY04	0
1700	20APR04	4MAY04	0
1800	30MAY04	3JUN04	0
4999		4JUN04A	100
5010	9JUN03A	26JUN03A	100



ɔt Date 29DEC03
:a Date 29DEC03
ɔject Start 6JUN03
ɔject Finish 3JUN04

) Primavera Systems, Inc.

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT07

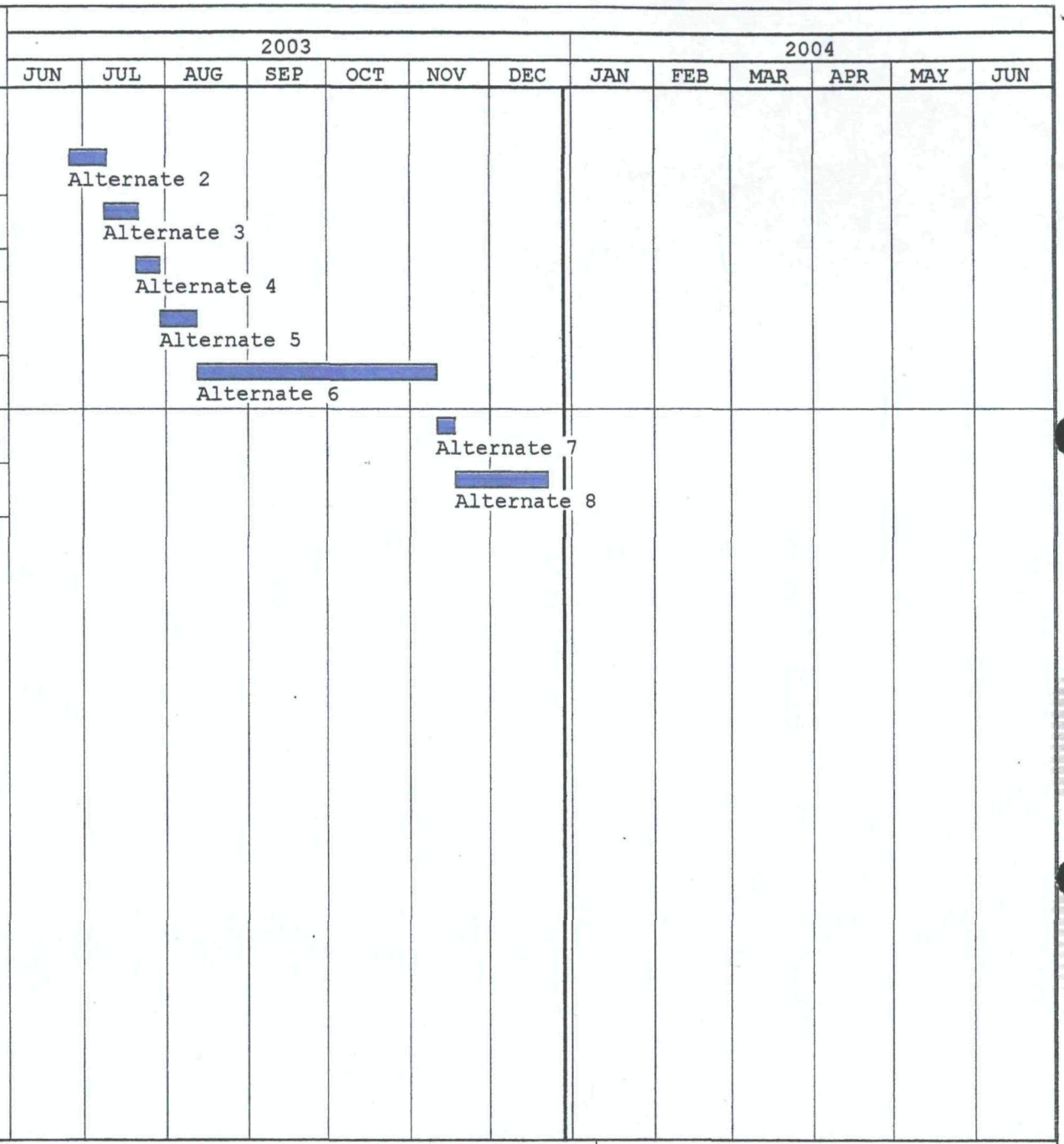
Sheet 2 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 10/31/03

Date	Revision	Checked	Approved

CTIVITY ID	EARLY START	EARLY FINISH	PCT
5020	26JUN03A	9JUL03A	100
5030	9JUL03A	21JUL03A	100
5040	21JUL03A	29JUL03A	100
5050	30JUL03A	12AUG03A	100
5060	13AUG03A	10NOV03A	100
5070	11NOV03A	17NOV03A	100
5080	18NOV03A	22DEC03A	100



ot Date 29DEC03
ta Date 29DEC03
oject Start 6JUN03
oject Finish 3JUN04

) Primavera Systems, Inc.

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT07

Sheet 3 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 10/31/03

Date	Revision	Checked	Approved

B. ARD OF COUNTY COMM SIONERS
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION
P.O. Box 340, Lecanto, Florida 34460
(352) 527-7670 FAX (352) 527-7672

D.E.P.
NOV 07 2003
Southwest District Tampa

November 4, 2003

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

Re: Citrus County Central Landfill
Permit No. 21375-004-SC Phase 2 Landfill Construction
Progress Report #3

Dear Mr. Ford:

In accordance with Specific Condition 4 of the referenced permit, we are submitting the updated construction schedule for this project, as prepared by our construction contractor, Advance Construction Services, Inc.

As of this date, cell excavation Phase 1 (outside the new lined area) is ahead of schedule. Work on the alternates is ahead of schedule.

Please let me know if you have any questions.

Sincerely,

Susan J Metcalfe

Susan Metcalfe, P.G.
Director

CC: Tom Dick, Assistant Director, Public Works Department
John Banks, SCS Engineers
Ken Pitts, Advance Construction

Advance Construction Services, Inc.

400 Neal Road • Cantonment, Florida 32533 • Phone: (850) 937-1013 • Fax: (850) 937-1019

October 30, 2003

Mr. Dennis Brown
Project Engineer
3012 US Highway 301
Suite 700
Tampa, FL 33619

Re: Citrus County Landfill Phase II Expansion
Schedule Update

Dear Mr. Brown:

Please find attached for your review an updated project schedule bar chart reflecting progress as of 10/30/03. Major items showing progress are as follows:

1. Clearing and Grubbing – occurs continuously with the excavation, currently ahead of schedule
2. Phase I excavation – currently ahead of schedule
3. Stockpile excavation, alternates 1-8 – significantly ahead of schedule
4. Install box culverts – delayed due to redesign by engineer. A design modification has been received and is currently being evaluated.

The schedule items for excavation have been modified to correct the division of quantity between Phase I and Phase II. Quantity take-off indicates approximately 120,000 CY of excavation in Phase II, or 25% of the total, rather than 40% as originally assumed. The schedule has been adjusted accordingly, with the total combined duration of the Phase I and Phase II excavation activities remaining the same. Phase I excavation continues ahead of schedule.

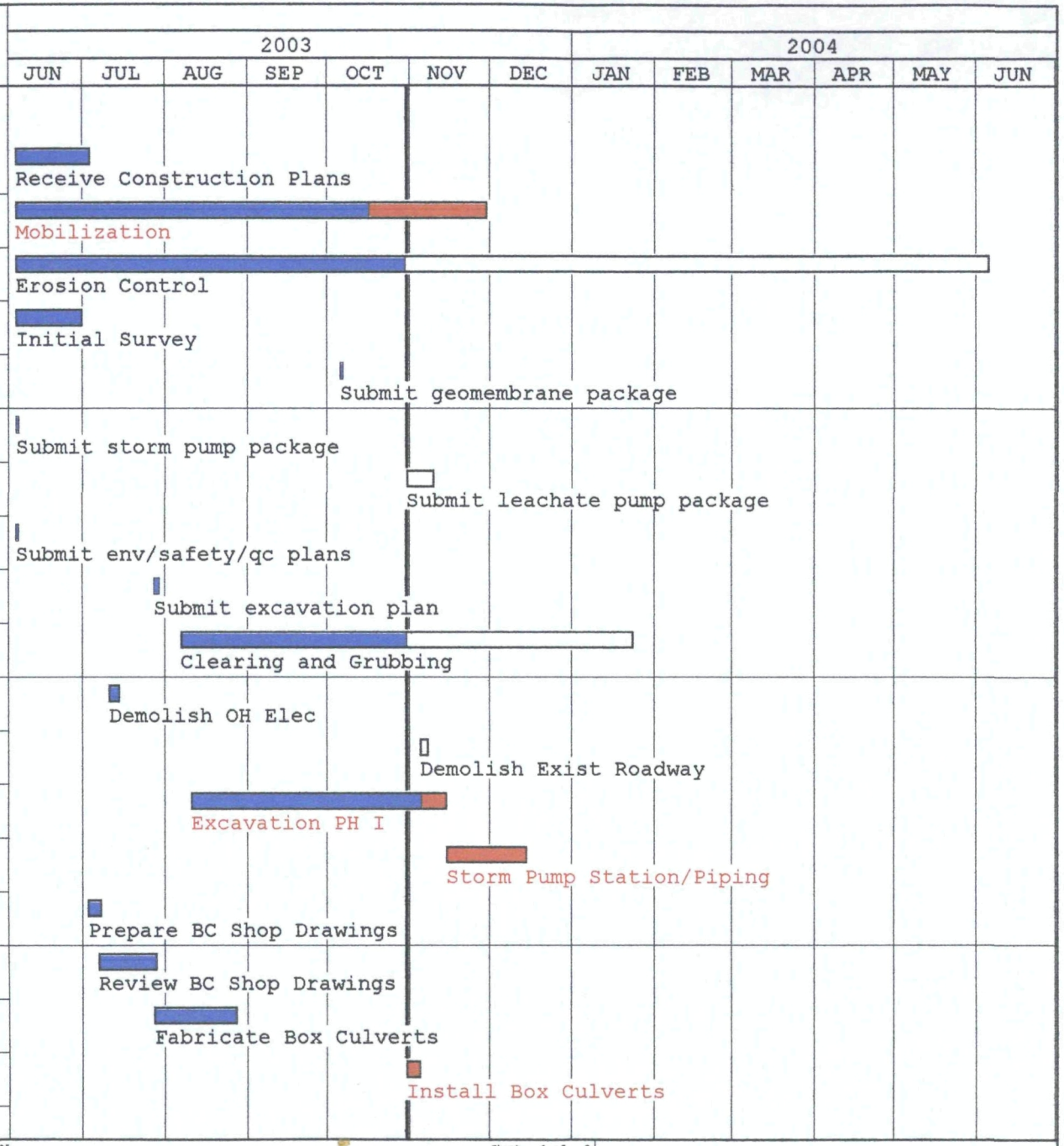
Advance has received a delivery date for the new stormwater pumps of December 8. This falls within the scheduled completion time of the pump station. If I can provide any additional information, please call at your convenience.

Sincerely,
Advance Construction Services, Inc.

Kenneth W. Pitts, P.E.
Project Manager

cc: Susan Metcalf, Citrus County Solid Waste

ACTIVITY ID	EARLY START	EARLY FINISH	PCT	
10	6JUN03A	3JUL03A	100	Receive Construction Plans
100	6JUN03A	29NOV03	75	Mobilization
105	6JUN03A	5JUN04	40	Erosion Control
110	6JUN03A	30JUN03A	100	Initial Survey
150	6OCT03A	6OCT03A	100	Submit geomembrane package
155	6JUN03A	6JUN03A	100	Submit storm pump package
160	31OCT03	9NOV03	0	Submit leachate pump package
165	6JUN03A	6JUN03A	100	Submit env/safety/qc plans
170	28JUL03A	29JUL03A	100	Submit excavation plan
200	7AUG03A	23JAN04	50	Clearing and Grubbing
210	11JUL03A	14JUL03A	100	Demolish OH Elec
220	5NOV03	7NOV03	0	Demolish Exist Roadway
300	11AUG03A	14NOV03	90	Excavation PH I
400	15NOV03	14DEC03	0	Storm Pump Station/Piping
500	3JUL03A	7JUL03A	100	Prepare BC Shop Drawings
510	7JUL03A	28JUL03A	100	Review BC Shop Drawings
520	28JUL03A	27AUG03A	100	Fabricate Box Culverts
600	31OCT03	4NOV03	0	Install Box Culverts



Plot Date 30OCT03
Data Date 31OCT03
Project Start 6JUN03
Project Finish 27SEP04

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT05

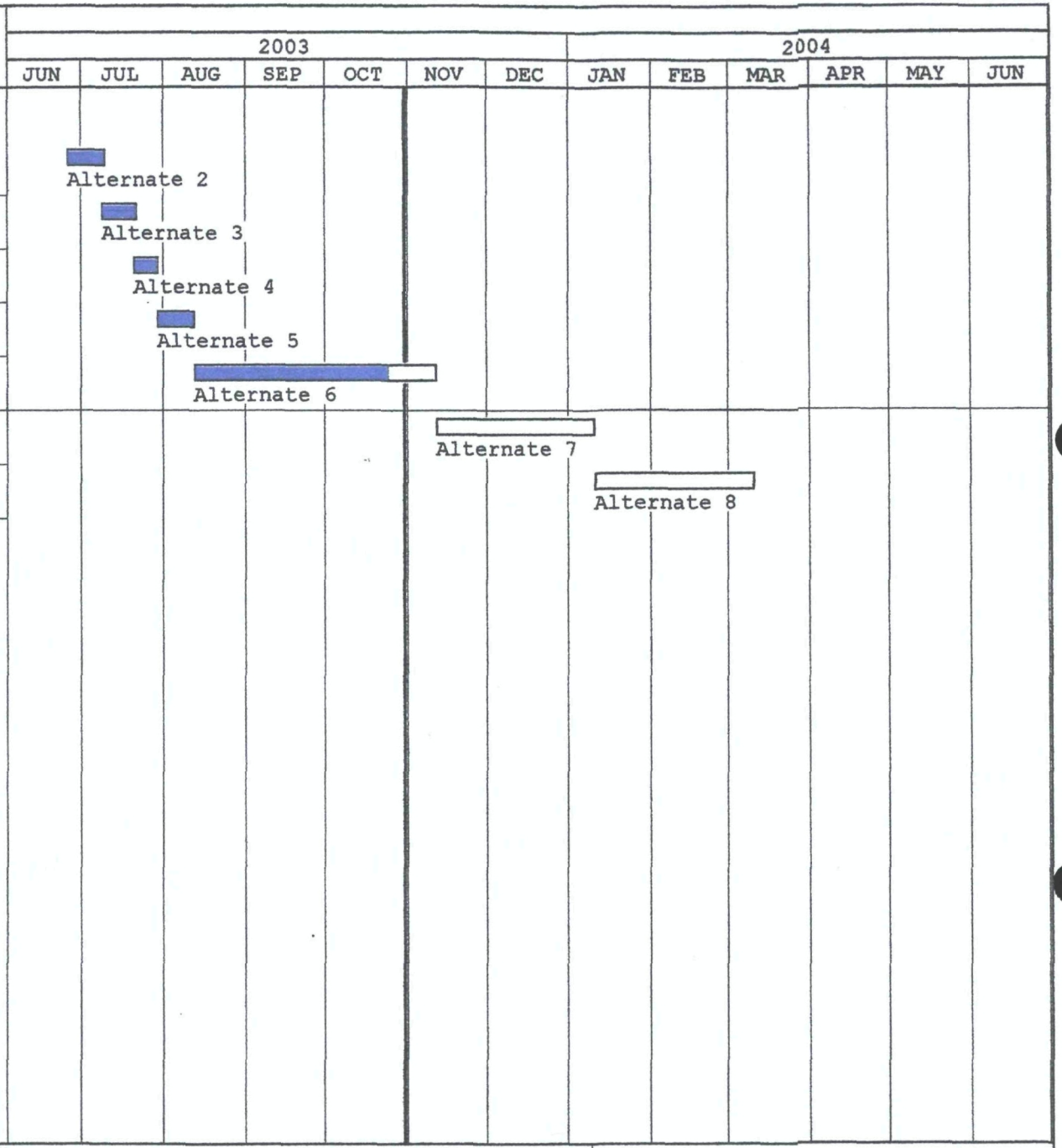
Sheet 1 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 10/31/03

Date	Revision	Checked	Approved

TIVITY ID	EARLY START	EARLY FINISH	PCT
5020	26JUN03A	9JUL03A	100
5030	9JUL03A	21JUL03A	100
5040	21JUL03A	29JUL03A	100
5050	30JUL03A	12AUG03A	100
5060	13AUG03A	11NOV03	80
5070	12NOV03	10JAN04	0
5080	11JAN04	10MAR04	0



t Date 30OCT03
a Date 31OCT03
ject Start 6JUN03
ject Finish 27SEP04

Primavera Systems, Inc.

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT05

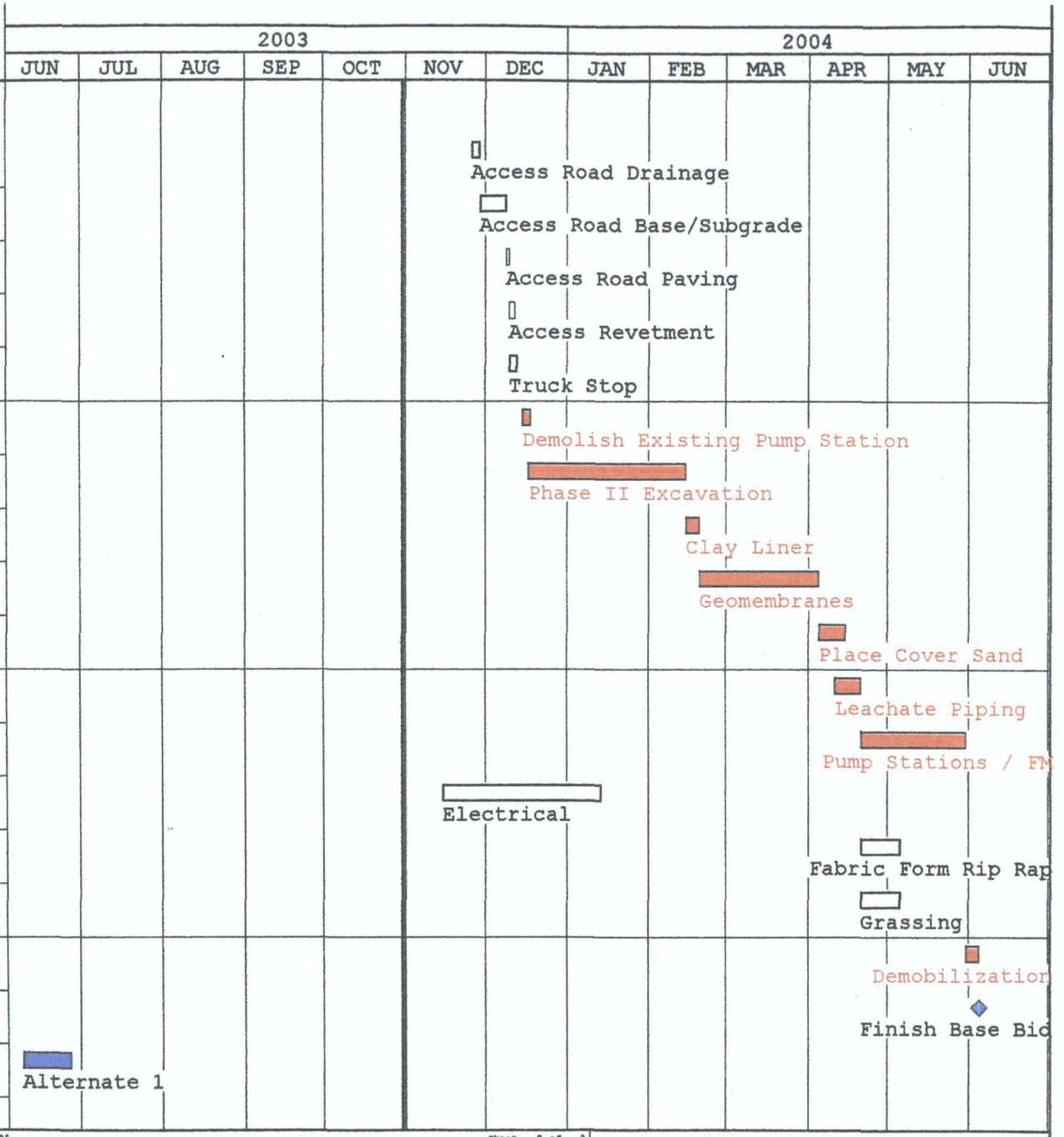
Sheet 3 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 10/31/03

Date	Revision	Checked	Approved

ACTIVITY ID	EARLY START	EARLY FINISH	PCT
800	26NOV03	28NOV03	0
810	29NOV03	8DEC03	0
820	9DEC03	9DEC03	0
830	10DEC03	11DEC03	0
840	10DEC03	12DEC03	0
900	15DEC03	17DEC03	0
1000	17DEC03	14FEB04	0
1100	15FEB04	19FEB04	0
1200	20FEB04	4APR04	0
1250	5APR04	14APR04	0
1300	11APR04	20APR04	0
1400	21APR04	30MAY04	0
1500	15NOV03	13JAN04	0
1600	21APR04	5MAY04	0
1700	21APR04	5MAY04	0
1800	31MAY04	4JUN04	0
4999		4JUN04A	100
5010	9JUN03A	26JUN03A	100



Plot Date 30OCT03
Data Date 31OCT03
Project Start 6JUN03
Project Finish 27SEP04

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT05

Sheet 2 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 10/31/03

Date	Revision	Checked	Approved

B ARD OF COUNTY COMMISSIONERS
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION
P.O. Box 340, Lecanto, Florida 34460
(352) 527-7670 FAX (352) 527-7672

D.E.P.
OCT 1 4 2003
Southwest District Tampa

October 7, 2003

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

Re: Citrus County Central Landfill
Permit No. 21375-004-SC Phase 2 Landfill Construction
Progress Report #2

Dear Mr. Ford:

In accordance with Specific Condition 4 of the referenced permit, we are submitting the updated construction schedule for this project, as prepared by our construction contractor, Advance Construction Services, Inc.

As of this date, cell excavation Phase 1 (outside the new lined area) is ahead of schedule. We expect to receive the geomembrane submittal this week. SCS is revising the box culvert design, but we expect the first one to be installed this week. Work on the alternates is ahead of schedule.

Please let me know if you have any questions.

Sincerely,

Susan J Metcalfe

Susan Metcalfe, P.G.
Director

CC: Tom Dick, Assistant Director, Public Works Department
John Banks, SCS Engineers
Ken Pitts, Advance Construction

Mark Copy

Advance Construction Services, Inc.

400 Neal Road • Cantonment, Florida 32533 • Phone: (850) 937-1013 • Fax: (850) 937-1019

October 1, 2003

Mr. Dennis Brown
Project Engineer
3012 US Highway 301
Suite 700
Tampa, FL 33619

Re: Citrus County Landfill Phase II Expansion
Schedule Update

Dear Mr. Brown:

Please find attached for your review an updated project schedule bar chart reflecting progress as of 9/30/03. Phase I excavation in the proposed cell has recovered due to additional equipment assigned to the excavation, resulting in a net gain to the schedule of approximately ten days. Major items showing progress are as follows:

1. Clearing and Grubbing – occurs continuously with the excavation, currently 10 days ahead of schedule
2. Phase I excavation – currently 10 days ahead of schedule
3. Stockpile excavation, alternates 1-8 – significantly ahead of schedule
4. Install box culverts – delayed to consideration of redesign by engineer. Culverts have been fabricated and are onsite, and were scheduled to be installed week of September 22.
5. Submittal of geosynthetics package – currently being prepared, and subcontractor will forward for submittal on October 7. This item currently carries approximately 120 days of float, allowing 30 days of review time.
6. Submittal of leachate pump package - currently being prepared, and subcontractor will forward for submittal as soon as possible. Submittal and delivery of leachate pumps currently carries approximately 180 days of float, allowing 30 days of review time.

If current excavation production continues, advance expects additional gains in the schedule. If I can provide any additional information, please call at your convenience.

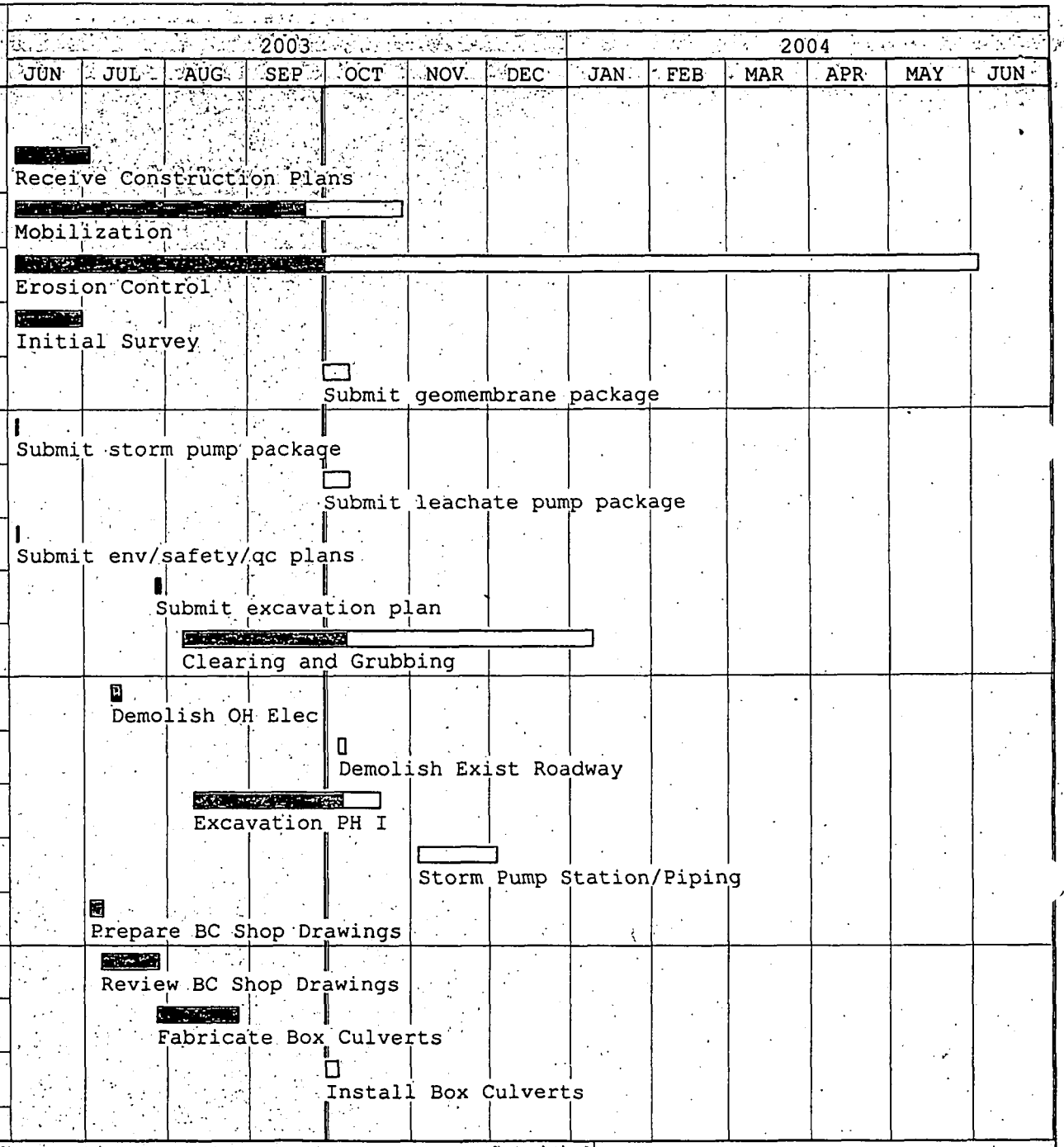
Sincerely,
Advance Construction Services, Inc.

Kenneth W. Pitts, P.E.
Project Manager

cc: Susan Metcalf, Citrus County Solid Waste

RECEIVED
OCT - 3 2003
SCS ENGINEERS

ACTIVITY ID	EARLY START	EARLY FINISH	PCT
10	6JUN03A	3JUL03A	100
100	6JUN03A	29OCT03	75
105	6JUN03A	3JUN04	32
110	6JUN03A	30JUN03A	100
150	30SEP03	9OCT03	0
155	6JUN03A	6JUN03A	100
160	30SEP03	9OCT03	0
165	6JUN03A	6JUN03A	100
170	28JUL03A	29JUL03A	100
200	7AUG03A	9JAN04	40
210	11JUL03A	14JUL03A	100
220	5OCT03	7OCT03	0
300	11AUG03A	20OCT03	80
400	4NOV03	3DEC03	0
500	3JUL03A	7JUL03A	100
510	7JUL03A	28JUL03A	100
520	28JUL03A	27AUG03A	100
600	30SEP03	4OCT03	0



Plot Date 2OCT03
Data Date 30SEP03
Project Start 6JUN03
Project Finish 27SEP04

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT04

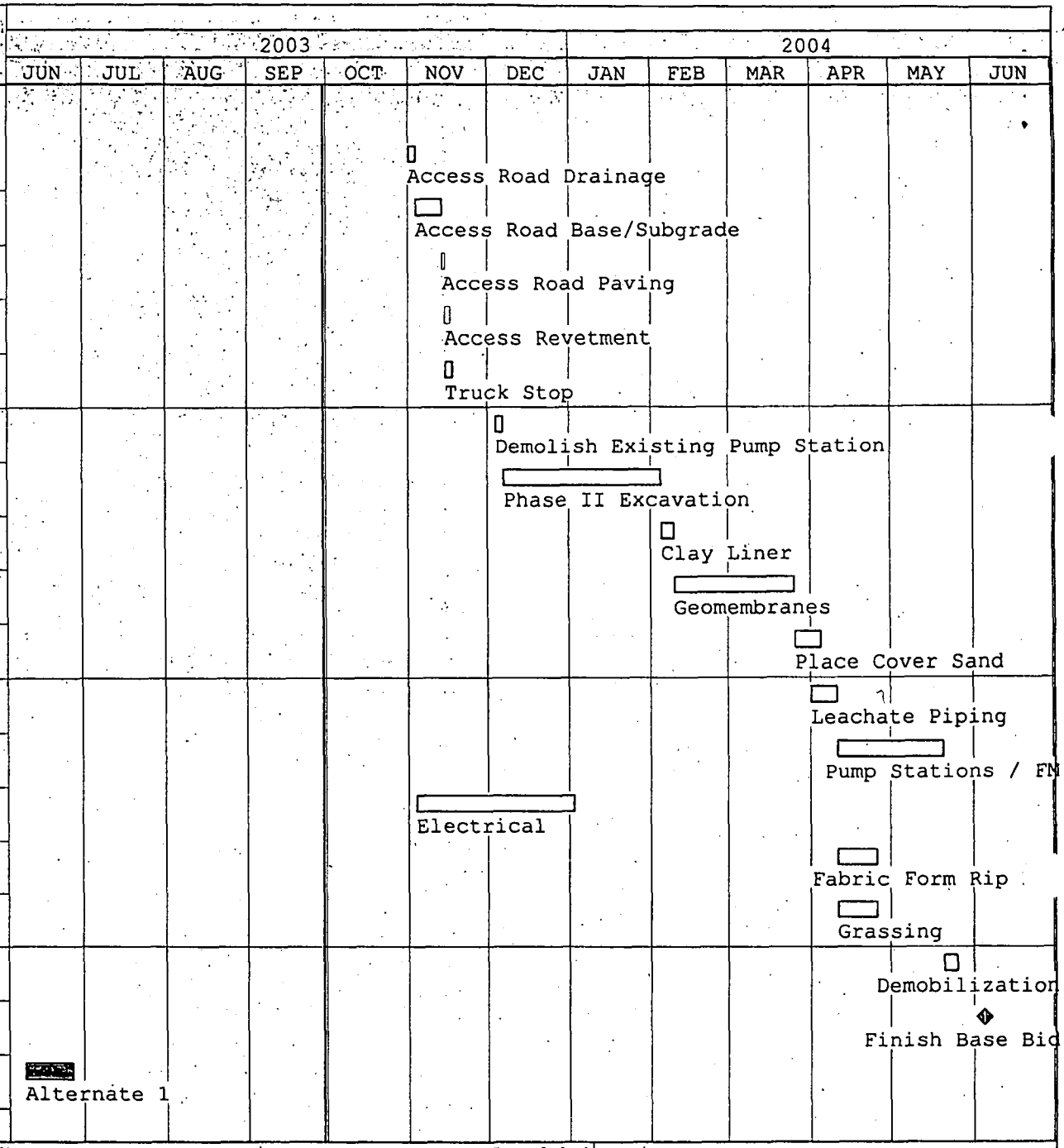
Sheet 1 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 9/30/03

Date	Revision	Checked	Approved

ACTIVITY ID	EARLY START	EARLY FINISH	PCT
800	1NOV03	3NOV03	0
810	4NOV03	13NOV03	0
820	14NOV03	14NOV03	0
830	15NOV03	16NOV03	0
840	15NOV03	17NOV03	0
900	4DEC03	6DEC03	0
1000	7DEC03	4FEB04	0
1100	5FEB04	9FEB04	0
1200	10FEB04	25MAR04	0
1250	26MAR04	4APR04	0
1300	1APR04	10APR04	0
1400	11APR04	20MAY04	0
1500	4NOV03	2JAN04	0
1600	11APR04	25APR04	0
1700	11APR04	25APR04	0
1800	21MAY04	25MAY04	0
4999		4JUN04A	100
5010	9JUN03A	26JUN03A	100



Plot Date 20CT03
Data Date 30SEP03
Project Start 6JUN03
Project Finish 27SEP04

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT01

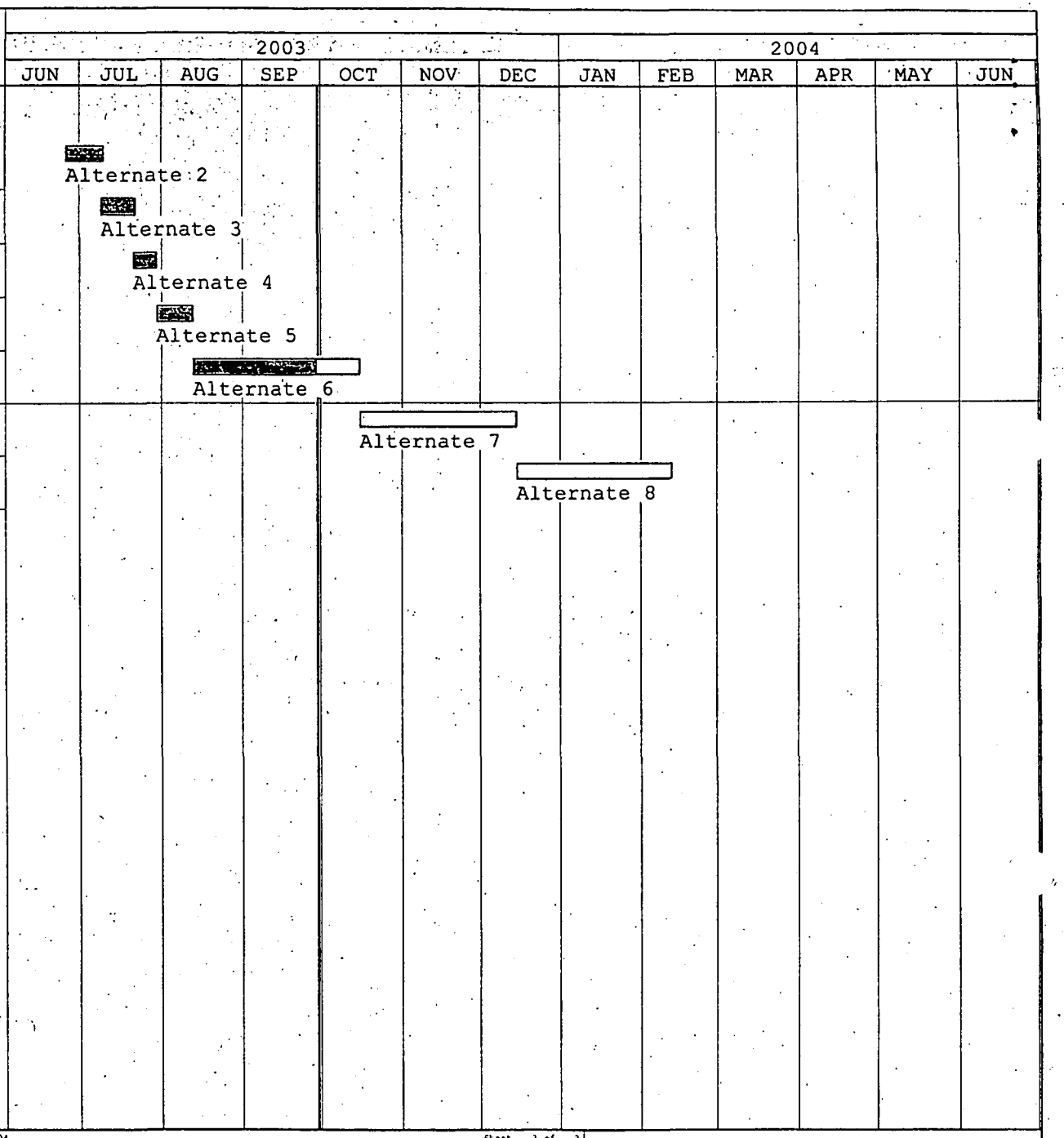
Sheet 2 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 9/30/03

Date	Revision	Checked	Approved

ACTIVITY ID	EARLY START	EARLY FINISH	PCT
5020	26JUN03A	9JUL03A	100
5030	9JUL03A	21JUL03A	100
5040	21JUL03A	29JUL03A	100
5050	30JUL03A	12AUG03A	100
5060	13AUG03A	15OCT03	74
5070	16OCT03	14DEC03	0
5080	15DEC03	12FEB04	0



Plot Date 2OCT03
Data Date 30SEP03
Project Start 6JUN03
Project Finish 27SEP04

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT04

Sheet 2 of 2

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

UPDATED 9/30/03

Date	Revision	Checked	Approved

B ARD OF COUNTY COMMISSIONERS
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION
P.O. Box 340, Lecanto, Florida 34460
(352) 527-7670 FAX (352) 527-7672

RECEIVED
SEP 08 2003
D.E.P.
SOUTHWEST DISTRICT

September 5, 2003

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

Re: Citrus County Central Landfill
Permit No. 21375-004-SC Phase 2 Landfill Construction
Progress Report #1

Dear Mr. Ford:

In accordance with Specific Condition 4 of the referenced permit, we are submitting the construction schedule for this project. Advance Construction Services Inc. is the County's contractor for this project. SCS Engineers Inc. is providing inspection services for the project. The attached schedule was prepared by the contractor and will be updated monthly along with a progress report.

In addition to the landfill cell construction, Advance is removing a portion of the excess soil stockpile, listed as alternates 1-8 on the project schedule. Each alternate consists of removal of 50,000 cubic yards of material from the stockpile.

Construction commenced June 9, 2003. As of this date, work on the alternates is ahead of schedule, with No 1through No 5 complete and No 6 partially complete. Approximately 10% of the cell excavation (Phases 1 and 2 combined) has been completed. Box culverts have not yet been installed, but have been delivered. Geomembrane and leachate pump submittals have not yet been received. Please contact me if you have any questions.

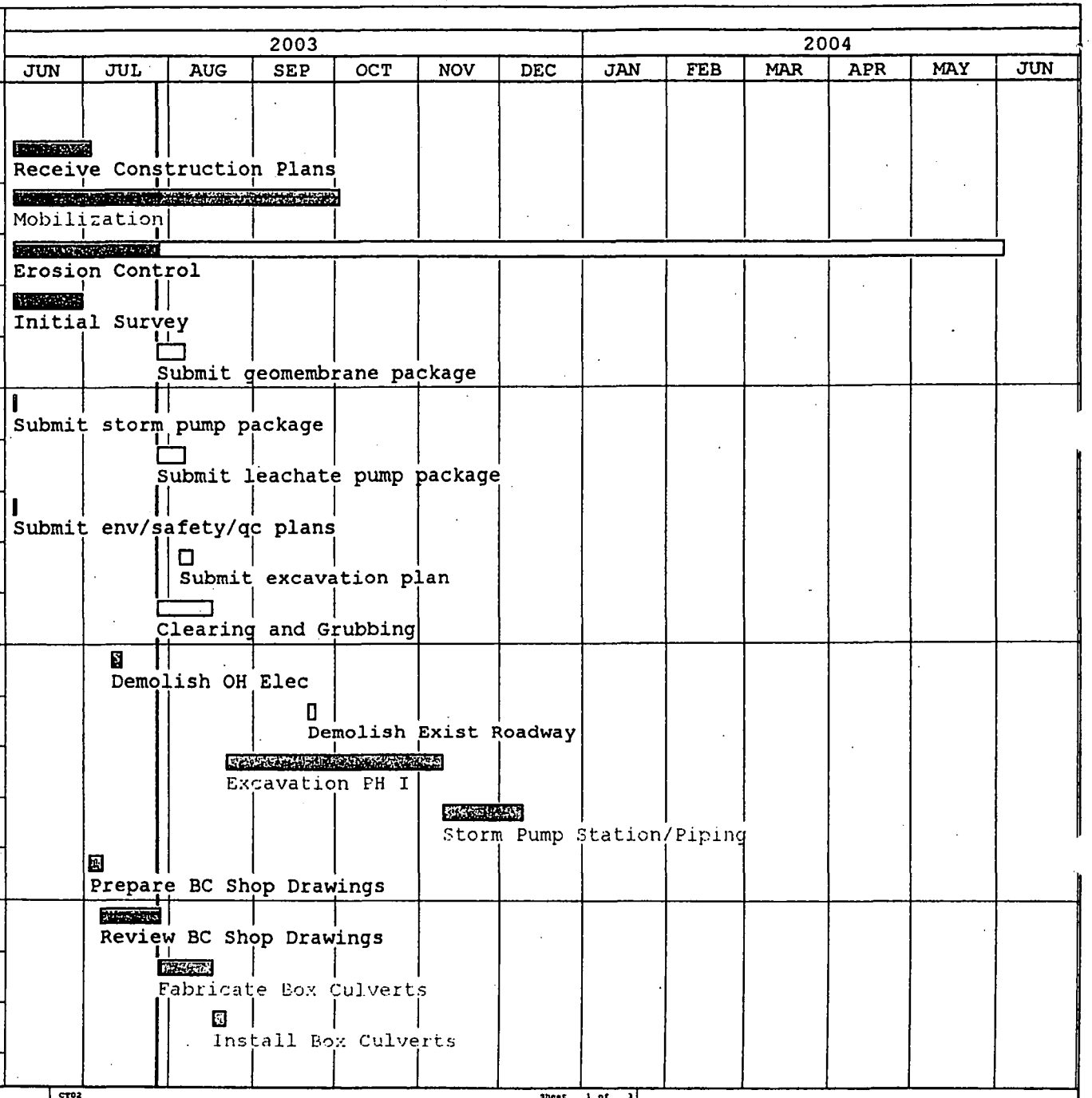
Sincerely,

Susan J. Metcalfe

Susan Metcalfe, P.G.
Director

CC: Tom Dick, Assistant Director, Public Works Department
John Banks, SCS Engineers
Ken Pitts, Advance Construction

ACTIVITY ID	EARLY START	EARLY FINISH
10	6JUN03A	3JUL03A
100	6JUN03A	2OCT03
105	6JUN03A	3JUN04
110	6JUN03A	30JUN03A
150	28JUL03	6AUG03
155	6JUN03A	6JUN03A
160	28JUL03	6AUG03
165	6JUN03A	6JUN03A
170	5AUG03	9AUG03
200	28JUL03	16AUG03
210	11JUL03A	14JUL03A
220	21SEP03	23SEP03
300	22AUG03	9NOV03
400	10NOV03	9DEC03
500	3JUL03A	7JUL03A
510	7JUL03A	28JUL03A
520	28JUL03A	16AUG03
600	17AUG03	21AUG03



Plot Date 29JUL03
Data Date 28JUL03
Project Start 6JUN03
Project Finish 27SEP04

Primavera Systems, Inc.

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT02

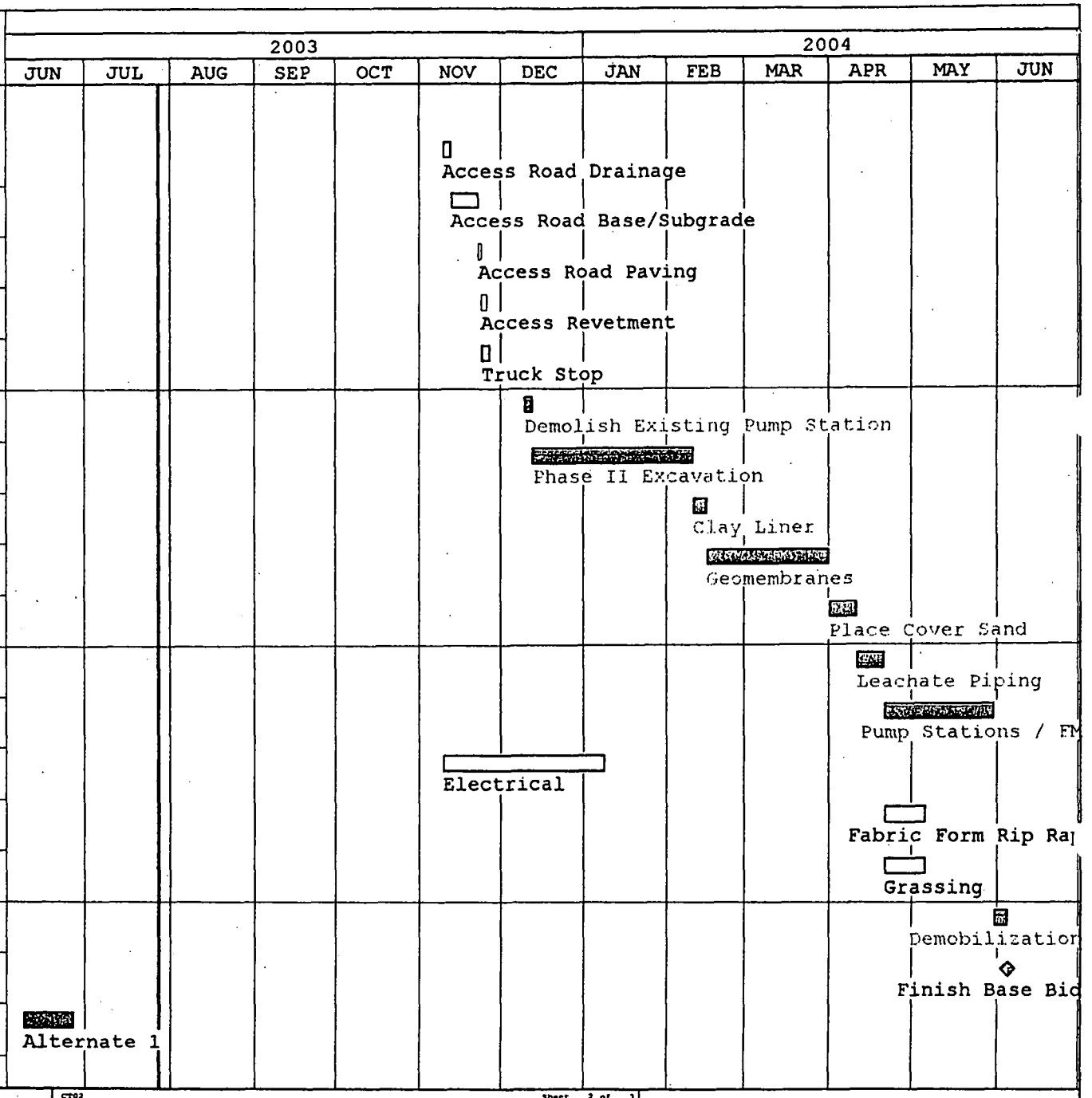
Sheet 1 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

Preliminary 6/03

Date	Revision	Checked	Approved

ACTIVITY ID	EARLY START	EARLY FINISH
800	10NOV03	12NOV03
810	13NOV03	22NOV03
820	23NOV03	23NOV03
830	24NOV03	25NOV03
840	24NOV03	26NOV03
900	10DEC03	12DEC03
1000	13DEC03	10FEB04
1100	11FEB04	15FEB04
1200	16FEB04	31MAR04
1250	1APR04	10APR04
1300	11APR04	20APR04
1400	21APR04	30MAY04
1500	10NOV03	8JAN04
1600	21APR04	5MAY04
1700	21APR04	5MAY04
1800	31MAY04	4JUN04
4999		4JUN04A
5010	9JUN03A	26JUN03A



Plot Date 29JUL03
Data Date 28JUL03
Project Start 6JUN03
Project Finish 27SEP04

Primavera Systems, Inc.

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT02

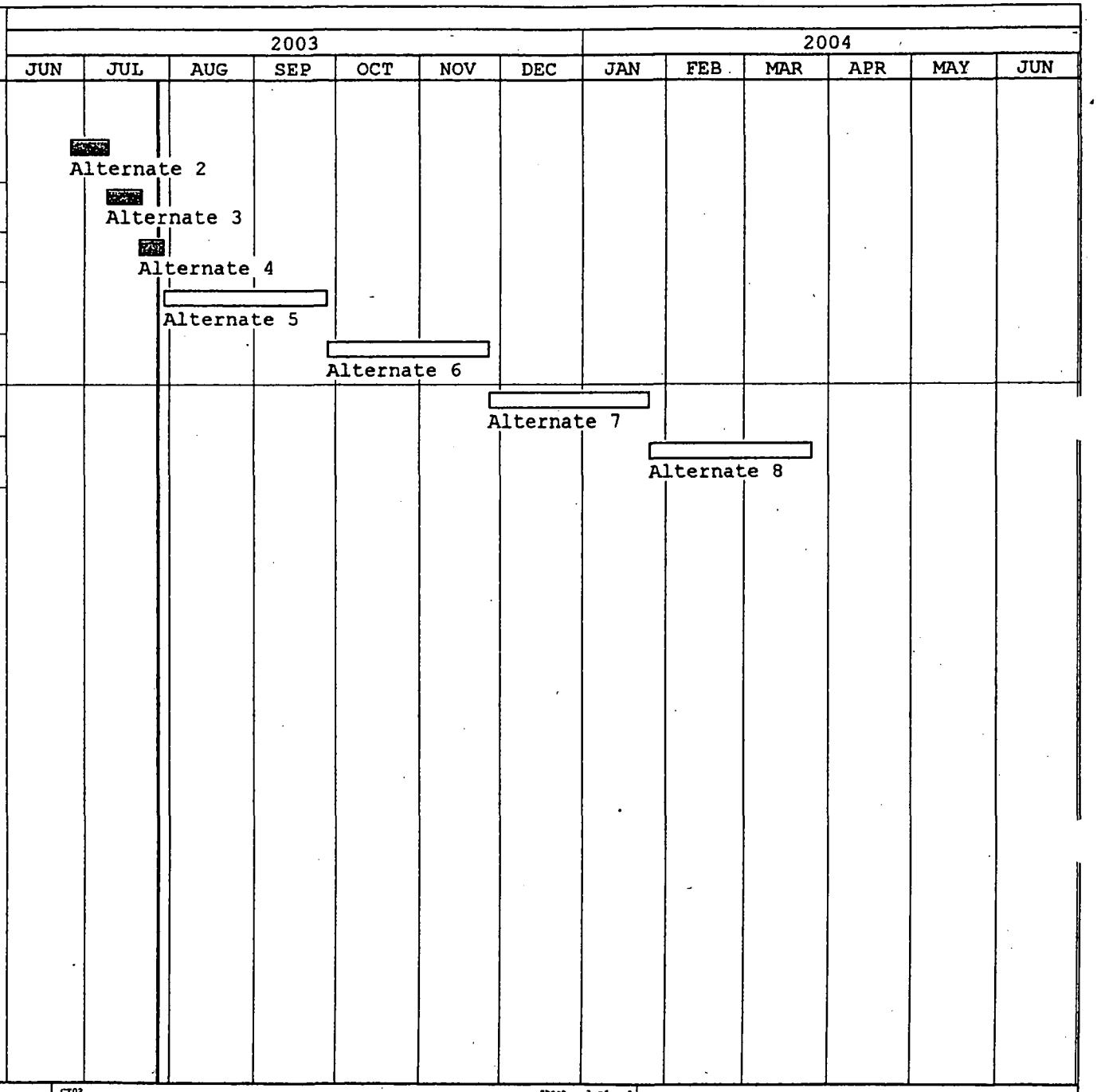
Sheet 2 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

Preliminary 6/03

Date	Revision	Checked	Approved

ACTIVITY ID	EARLY START	EARLY FINISH
5020	26JUN03A	9JUL03A
5030	9JUL03A	21JUL03A
5040	21JUL03A	29JUL03
5050	30JUL03	27SEP03
5060	28SEP03	26NOV03
5070	27NOV03	25JAN04
5080	26JAN04	25MAR04



Plot Date 29JUL03
Data Date 28JUL03
Project Start 6JUN03
Project Finish 27SEP04

Primavera Systems, Inc.

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CT02

Sheet 3 of 3

Advance Construction Services, Inc.
Citrus County Landfill PH II
CONSTRUCTION SCHEDULE

Preliminary 6/03

Date	Revision	Checked	Approved

Ford, Kim

From: Ford, Kim

Sent: Wednesday, August 13, 2003 10:38 AM

To: Pelz, Susan; Morris, John R.

Subject: conversation with Susan Metcalfe about citrus landfill

On August 13, 2003 I spoke with S.M. about the following:

1. S.M. said all problems with LTF fixed.
2. I suggested she propose a different way for emergency leachate disposal from the working face berm rather than letting it out into the stormwater pond. I suggested the infiltration trench like Hillsborough County uses.
3. I asked for the monthly progress report for the new construction.
4. I asked for all leachate reports to show estimated values in italics and to note the cause of the problem.

Kim

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

Ms. Susan J. Metcalfe, P.G., Director
Citrus County Solid Waste Division
PO Box 340
Lecanto, Fl. 34460-0340

April 28, 2003

RE: Citrus County Landfill Financial Assurance Cost Estimates
Permit No.: 21375-003-SO, Class I, Phases 1, 1A
Permit No.: 21375-004-SC, Class I Phase 2 construction

Dear Ms. Metcalfe:

This letter is to acknowledge receipt of the cost estimates dated July 24, 2002 (received August 14, 2002 as part of Construction Permit Application Citrus County Central Landfill Phase 2 Expansion), prepared by SCS Engineers, Inc., for closing and long-term care of the Citrus County Landfill (Phases 1, 1A, 2 and old closed 60 acres). It appears that the Department did not respond directly concerning these estimates. The Department apologizes for any miscommunication and provides the following information for clarification.

The cost estimates received August 14, 2002 (closing $3,142,555 and long-term care $200,344/year x 30 years=$6,010,334), are **APPROVED for 2002**. Since the Phase 2 area has not been constructed, the next annual update which includes the Phase 2 area (revised or inflation-adjusted estimates) is due no later than **September 1, 2003 or 60 days prior to the receipt of waste in Phase 2, whichever occurs later**. Please note that the Department recommends that revised cost estimates which include the Phase 2 area be submitted in conjunction with the Certification of Construction Completion documentation required by Specific Condition #7 of permit number 21375-004-SC in order to expedite the review. Cost estimates for Phases 1, 1A and the old closed 60 acres are due no later than September 1, 2003 as indicated in the Department's October 3, 2002 letter (attached).

A copy of these estimates will be forwarded to Mr. Fred Wick, Solid Waste Section, FDEP, 2600 Blair Stone Road, Tallahassee, Florida 32399-2407. Please work with him directly to assess the facility's compliance with the funding mechanism requirements of Rule 62-701.630, F.A.C. If you have any questions, you may contact me at (813) 744-6100 ext. 386.

Sincerely,

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

sjp
Attachment
cc: Fred Wick, FDEP, Tallahassee, w/attachment
Kim Ford, P.E., FDEP Tampa

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

CERTIFIED MAIL 7001 1940 0001 7487 9277
RETURN RECEIPT REQUESTED

March 19, 2003

Citrus County
Board of County Commissioners
c/o Ms. Susan Metcalfe, P.G.
P. O. Box 340
Lacanto, FL 34460

NOTICE OF PERMIT

Dear Ms. Metcalfe:

Enclosed is Permit Number 21375-004-SC, issued pursuant to Section(s) 403.087(1), Florida Statues.

Any party to the Order (permit) has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Final Order is filed with the Clerk of the Department.

Executed in Tampa Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

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

KBF/ab
Attachment
cc: John Banks, P.E., SCS Engineers
Susan Pelz, P.E., FDEP Tampa (permit notebook)
Richard Tedder, P.E, FDEP Tallahassee
Fred Wick, FDEP Tallahassee

UNITED STATES POSTAL SERVICE

First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

• Print your name, address, and ZIP Code in this box •

D.E.P.
MAR 31 2003
Southwest District Tampa

State of Florida
Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619-8318

Kim Ford - Solid Waste

63

ISSUED PERMIT #21375-004-SC

SENDER: CENTRAL COUNTY CENTRAL LF Phase 2 Exp.

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Citrus County
Board of County commissioners
c/o Ms. Susan Metcalfe, P.G.
P O Box 340
Lecanto, FL 34460

4a. Article Number: 7001 1940 0001 7487 9277

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☒ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

5. Received By: (Print Name) CHRESMUT

6. Signature: (Addressee or Agent) X

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1994 102595-97-B-0179 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

OFFICIAL USE

7001 1940 0001 7487 9277

Postage	$	03/19/2003
Certified Fee		Postmark Here
Return Receipt Fee (Endorsement Required)		
Restricted Delivery Fee (Endors		
Total I		

Sent T
Street, or PO E
City, Sta

Citrus County
Board of County commissioners
c/o Ms. Susan Metcalfe, P.G.
P O Box 340
Lecanto, FL 34460

PS Form 3800, January 2001 See Reverse for Instructions

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on March 19, 2003 to the listed persons.

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52(10), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Lana Black 03/19/2003
Clerk Date

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

PERMITTEE
Citrus County
Board of County Commissioners
c/o Ms. Susan Metcalfe, P.G.
P.O. Box 340
Lecanto, FL 34460

PERMIT/CERTIFICATION
WACS Facility ID No: SWD/09/39859
Permit No: 21375-004-SC
Date of Issue: **03/19/2003**
Expiration Date: **03/15/2008**
County: Citrus
Lat/Long: 28°51'08"N
82°26'16"W
Sec/Town/Rge: 1/19S/18E
Project: Central County Central Landfill - Phase 2 Expansion

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 62-4 and 62-701. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents, attached hereto or on file with the Department and made a part hereof and specifically described as follows:

To construct approximately 6 acres of a Class I landfill, referred to as the Phase 2 Expansion, subject to the specific and general conditions attached, located near S.R. 44, 3 miles east of Lecanto, Citrus County, Florida. The specific conditions attached are for the construction of a:

1. Class I Landfill Disposal Unit - Phase 2

General Information: The construction will cover 6 acres with a double geomembrane liner system with leachate collection. Leachate removed will be pumped to the on-site leachate tank and treatment facility.

Replaces Permit No.: N/A, new

This permit contains compliance items summarized in Attachment 1 that shall be complied with and submitted to the Department by the dates noted. If the compliance dates are not met and submittals are not received by the Department on the dates noted, enforcement action may be initiated to assure compliance with the conditions of this permit.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.161, 403.727, or 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of rights, nor any infringement of federal, State, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, are required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

GENERAL CONDITIONS:

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

(a) Have access to and copy any records that must be kept under conditions of the permit;

(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of noncompliance; and

(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statues after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

GENERAL CONDITIONS:

11. This permit is transferable only upon Department approval in accordance with Rule 62-4.120 and 62-730.300, Florida Administrative Code, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

(a) Determination of Best Available Control Technology (BACT)

(b) Determination of Prevention of Significant Deterioration (PSD)

(c) Certification of compliance with State Water Quality Standards (Section 401, PL 92-500)

(d) Compliance with New Source Performance Standards

14. The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. the date, exact place, and time of sampling or measurements;
2. the person responsible for performing the sampling or measurements;
3. the dates analyses were performed;
4. the person responsible for performing the analyses;
5. the analytical techniques or methods used;
6. the results of such analyses.

GENERAL CONDITIONS:

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS:

1. **Permit Application Documentation.** This permit is valid for construction of the 6 acre Phase 2 Expansion disposal unit in accordance with the reports, plans and other information as follows:

- Application and supporting information received on August 14, 2002;
- Additional supporting information and responses by SCS Engineers including replacement pages, received on October 16 and December 16, 2002, and January 14 and 15, 2003;
- CQA Manual and specifications by SCS Engineers received on January 14, 2003;
- Construction plans received on January 14, 2003, with replacement Sheet 11 received on January 15, 2003;
- The conditions of Alternate Procedure #SWAP 01-6 (attached);

and in accordance with all applicable requirements of Department rules. Upon receipt and approval of a request for a minor permit modification pursuant to FAC 62-4.050(4)(s) to operate the new components of the facility regulated by this permit, including Certification of Construction Completion for the landfill expansion liner system and related improvements, revised operation and maintenance manual, report assessing effectiveness of the related liner and leachate collection system, financial assurance, and related supporting documents identified in this permit, the current landfill operation permit shall be modified to allow the operation of the new expansion and related improvements.

2. **Permit Modifications.** Any construction subject to Department Solid Waste regulations not previously approved as part of this permit shall require a separate Department permit unless the Department determines a permit modification to be more appropriate, or unless otherwise approved in writing by the Department. Permits shall be modified in accordance with the requirements of 62-4.080, F.A.C. A modification which is reasonably expected to lead to substantially different environmental impacts which require a detailed review by the Department is considered a substantial modification.

3. **Permit Renewal.** No later than **one hundred eighty (180) days** before the expiration of the Department Permit, the permittee shall apply for a renewal of a permit, if necessary for continuing related activities, on forms and in a manner prescribed by the Department, in order to assure conformance with all applicable Department rules. Permits shall be renewed at least every five years as required by F.A.C. 62-4.070(4).

4. **Construction Schedule and Progress Report.** No later than **two (2) weeks after** the pre-construction conference, the owner or operator shall submit a construction schedule which includes estimated dates for related solid waste construction activities to the Department. The Engineer of Record or another qualified professional engineer shall make

SPECIFIC CONDITIONS:

periodic inspections during construction to ensure that design integrity is maintained. An updated construction schedule and progress report shall be submitted to the Department **monthly**. Progress reports shall include a description of deviations from approved plans and specifications. Field changes shall be noted on construction plans kept at the project site. The Department shall be notified at least one week in advance of beginning liner installation.

5. **Quality Assurance.** A construction quality assurance plan shall provide personnel with adequate information to achieve continuous compliance with the construction requirements. The plan shall include or refer to specifications and construction methods which use established engineering practices for construction and provide for quality control testing procedures and sampling frequencies, pursuant to F.A.C. 62-701.400(7) and (8). Sampling and testing shall be conducted by trained personnel during construction and after construction completion. Such personnel will be under the direction of the construction quality assurance professional engineer, to assure the project will comply with the standards. The engineer or his designee shall be on-site at all times during construction to monitor construction activities.

6. **Laboratory and Field Testing Requirements.** Field testing during the construction activities shall be conducted under the direct supervision of the Certifying Engineer or his designee representing the owner. A laboratory experienced in the testing of geosynthetics, independent of the liner manufacturer and installer, shall perform the required conformance testing and testing of seam shear and peel strength.

7. **Certification of Construction Completeness.** Within **sixty (60) days** after the specified construction has been completed for each part completed during a construction period, the following activities shall be completed:

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

b. The owner or operator shall submit Record Drawings showing all changes (i.e. additions, deletions, revisions to the plans previously approved by the Department including site grades and elevations). The Record Drawings shall include, but not be limited to, details such as the as-built elevations of the excavated areas, top and bottom of the liner system, ditches, piping, pumps and controls.

SPECIFIC CONDITIONS:

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

d. The engineer of record shall provide a report to verify conformance with the project specifications and applicable requirements of F.A.C. Rule 62-701.400(7) and (8). The report including all testing results for the entire project shall be submitted to the Department along with the completion of construction documents.

8. **Control of Nuisance Conditions.** The operating authority shall be responsible for the control of odors and fugitive particulates arising from the construction. Such control shall minimize the creation of nuisance conditions on adjoining property. If a complaint is received from the general public concerning activities regulated by this permit, and the Department personnel confirms that the complaint is based on a violation of the standards and criteria applicable to the permittee pursuant to this permit, then the permittee must take immediate corrective action to abate the violation.

9. **Facility Maintenance and Repair.** If there is any damage to any portion of the site facilities regulated by this permit or failure of any portion of the associated systems including monitor wells and piezometers, and such damage or failure may adversely affect the continued compliance with this permit, then the permittee shall **immediately (within 24 hours)** notify the Department explaining such occurrence and remedial measures to be taken and time needed for repairs. Written detailed notification shall be submitted to the Department **within seven (7) days** following the occurrence.

10. **Professional Certification.** Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.), Florida Statutes, applicable portions of permit applications and supporting documents which are submitted to the Department for public record shall be signed and sealed by the professional(s) who prepared or approved them.

11. **General Conditions.** The permittee shall be aware of and operate under the "General Conditions". General Conditions are binding upon the permittee and enforceable pursuant to Chapter 403, Florida Statutes.

SPECIFIC CONDITIONS:

12. **Permit Acceptance.** By acceptance of this Permit, the Permittee certifies that he/she has read and understands the obligations imposed by the Specific and General Conditions contained herein, including date of permit expiration and renewal deadlines. It is a violation of this permit for failure to comply with all conditions and deadlines.

Executed in Tampa, Florida

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Deborah A. Getzoff
Director of District Management
Southwest District

ATTACHMENT 1

SPECIFIC CONDITION	SUBMITTAL DUE DATE	REQUIRED ITEM
4.	2 weeks after pre-construction conference	Submit construction schedule
4.	Monthly	Update construction schedule
7.	Within 60 days after construction is complete	Submit Certification of Construction Completion, Arrange for inspection, submit Record Drawings, submit narrative describing all deviations.

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

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

DEP Application No. _____
(Filled by DEP)

Certification of Construction Completion of a Solid Waste Management Facility

DEP Construction Permit No:_____County:_____

Name of Project:_____

Name of Owner:_____

Name of Engineer:_____

Type of Project:_____

_____

Cost: Estimate $_____ Actual $_____

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

Deviations from Plans and Application Approved by DEP:_____

_____

_____

_____

_____

Address and Telephone No. of Site:_____

_____

Name(s) of Site Supervisor:_____

Date Site inspection is requested:_____

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

Permit No.:_____ Dated:_____

Date:_____ _____
Signature of Professional Engineer

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

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

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

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

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

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

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

IN RE: CITRUS COUNTY BOARD OF COUNTY COMMISSIONERS
REQUEST PURSUANT TO
FLORIDA ADMINISTRATIVE CODE
RULE 62-701.310

CASE NO. SWAP 01-6

_____/

APPROVAL OF ALTERNATE PROCEDURES

This cause comes before me upon receipt of a request by Citrus County Division of Solid Waste Management on behalf of the Citrus County Commission for the approval of alternate procedures and requirements under Rule 62-701.310, Florida Administrative Code (F.A.C.), for use of an alternate landfill side slope liner subbase material and alternate setback requirement for the Phase 2 expansion at the Citrus County Central Landfill in Citrus County. The applicant requests that an exception be granted from compliance with Rule 62-701.400(3)(c)1., F.A.C., which requires that the lower geomembrane of a double liner system for a landfill be placed directly on a subbase with a minimum thickness of six inches and a maximum saturated hydraulic conductivity of less than or equal to $1x10^{-5}$ cm/sec. The applicant also requests that an exception be granted from Rule 62-701.340(4)(c), F.A.C., which requires a minimum 100 foot horizontal separation between the toe of the proposed cover slope and the landfill property boundary.

FINDINGS OF FACT

1. The applicant currently operates a Class I landfill under permit number 21375-003-SO. This existing landfill consists of Phase 1, a disposal area of 16.5 acres which is lined with a single geomembrane liner, and Phase 1A, a disposal area of 3.3 acres which is lined with a double geomembrane liner. The applicant has applied for the Phase 2 expansion which is being processed under permit application number 21375-004-SC.

2. Phase 2 is a proposed expansion of approximately 6.0 acres to the existing facility and is to be constructed with a double geomembrane liner design, with a composite drainage net for the leachate collection and leachate detection systems, and a geogrid to enhance interface stability. The applicant has proposed to install the liner system in accordance with Rule 62-701.400(3)(c)1., F.A.C. with the exception of using in-situ soils for the liner side slopes in place of the six-inch subbase required by rule. The angles of the side slopes for Phase 2 are proposed at 2:1, horizontal to vertical, and their total area is approximately 3.0 acres. This portion of the Request for Alternate Procedure only applies to the liner on the side slopes in Phase 2.

3. The applicant has demonstrated that the proposed alternate design has a containment capability equal to or better than the established double liner design. Additionally, the applicant has demonstrated through calculations and proposed

methods of operation that the proposed alternate design will be stable.

4. The current permit for Phases 1 and 1A allows a 75-foot setback from the toe of the covered slope to the landfill property boundary. This is also authorized by local ordinances, which require concurrence from the adjacent property owner, which is the Division of Forestry for the Withlacoochee State Forest. The Division of Forestry concurred with this usage, with conditions, on May 30, 1989.

5. Maintaining a consistent setback along the East side of the proposed landfill and the existing landfill will minimize operational problems and liner stresses associated with a severe jog in liner alignment between the two phases. This will provide an equivalent degree of protection as evidenced by the existing operation of Phase 1A.

CONCLUSIONS OF LAW

Rule 62-701.310, F.A.C., authorizes the approval by the Department of alternate procedures and requirements concerning solid waste management facilities. Based upon the above findings and the information contained in the Request for Alternate Procedures the Department concludes:

1. That the applicant has demonstrated a sufficient basis for the exception from the established requirements;

2. That the applicant has adequately demonstrated that the alternate procedures provide an equal degree of protection for

the public and the environment as the established requirements; and,

3. That the alternate procedures are at least as effective as the established requirements.

Upon consideration of the foregoing it is therefore ORDERED that the request for alternate procedures and requirements from Rules 62-701.400(3)(c)1. and 62-701.340(4)(c), F.A.C., are GRANTED, subject to the following conditions:

1. This Order does not authorize construction of any solid waste disposal unit until and unless permit number 21375-004-SC is issued.

2. This Order applies only to the Phase 2 liner side slopes and 75-foot setback distance on the East side of the Phase 2 expansion.

NOTICE OF RIGHTS

Pursuant to Section 403.815, F.S., and Rule 62-110.107, F.A.C., you are required to publish at your own expense the enclosed Notice of Proposed Agency Action. The notice shall be published one time only within 30 days in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. Where

there is more than one newspaper of general circulation in the county, the newspaper used must be one with significant circulation in the area that may be affected by the permit. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. You must provide proof of publication to the Department at the address listed below as soon as practical after publication.

In the alternative, you may include the following language in the public notice for permit number 21375-004-SC provided that that public notice allows 21 days for the filing of any petition:

> The Department of Environmental Protection also gives Notice of its Intent to grant approval of alternate procedures pursuant to Rule 62-701.310, Florida Administrative Code (F.A.C.), as part of the proposed permit, to Citrus County Board of County Commissioners for use of an alternate landfill side slope liner subbase material on the Phase 2 expansion and alternate setback distance for the East side of the Phase 2 expansion at the Citrus County Central Landfill in Citrus County. The applicant has requested an exception from Rule 62-701.400(3)(c)1., F.A.C., which requires that the lower geomembrane of a double liner system for a landfill be placed directly on a subbase

with a minimum thickness of six inches and a maximum saturated hydraulic conductivity of less then or equal to $1x10^{-5}$ cm/sec, and from Rule 62-701.340(4)(c), F.A.C., which requires a 100-foot horizontal separation from the toe of the proposed cover slope to the landfill property boundary.

The Department's Order Granting Approval of Alternate Procedures and Requirements will be considered final, unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

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

Petitions by the applicant or any of the parties listed below must be filed within twenty-one days of receipt of this written notice. Petitions filed by other persons must be filed within twenty-one days of publication of the notice or receipt of

the written notice, whichever occurs first. The petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

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

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department File Number and the county in which the project is proposed;

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

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

(d) A statement of all material facts disputed by petitioner or a statement that there are no disputed facts;

(e) A statement of the ultimate facts alleged, including a statement of the specific facts which the petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wants the Department to take with respect to the Department's action or proposed action.

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

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

Department have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

In accordance with Section 120.573, F.S., the Department advises that mediation is not available in this case under the provisions of that statute. This does not prevent any interested parties from agreeing to other forms of alternate dispute resolution.

Any party to this order has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department in the Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within thirty days after this order is filed with the clerk of the Department.

DONE AND ORDERED this 28th day of January, 2003, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

John M. Ruddell

John M. Ruddell, Director
Division of Waste Management
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been sent by United States Mail to Mr. Brad Thorpe, Chairman, Citrus County Board of County Commissioners, Third Floor Masonic Building, 111 West Main Street, Inverness, Florida 34450, on this 29th day of January, 2003, in Tallahassee, Florida.

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department clerk, receipt of which is hereby acknowledged.

Sebrena L. Peck 1/29/03
(Clerk) (date)

Copies furnished to:
Susan Metcalfe, Citrus Co.
John Banks, SCS Engineers
Chris McGuire, DEP/OGC
Susan Pelz, DEP/SWD
Richard Tedder, DEP/Tallahassee

Memorandum

Florida Department of Environmental Protection

PERMIT COVER MEMO

TO: X DEBORAH GETZOFF, **Director of District Management** 3/18/03

FROM/THROUGH:

William Kutash **ENVIRONMENTAL ADMINISTRATOR**
Susan Pelz, P.E. **SUPERVISOR** 3/18/03
Kim Ford, P.E. **ENGINEER** 3/17/03

DATE: 3/17/03

FILE NAME: Citrus County Central Landfill Phase 2 Expansion **PERMIT #:** 21375-004-SC
PROGRAM: Solid Waste **COUNTY:** Citrus

TYPE OF PERMIT ACTION: X **ISSUE** ___**DENY** ___**MODIFY**
___**TRANSFER OWNER** ___**NOD**
___**PUBLIC NOTICE** ___**INTENT TO ISSUE**

PUBLIC NOTICE PERIOD CLOSED? yes **PETITION FILED?** no

PERMIT SUMMARY: This permit is to allow the construction of a landfill expansion and related improvements, including a new liner system. Construction certification and revisions to the current Operation Manual are required by this permit.

PROFESSIONAL RECOMMENDATION: X **APPROVE** _____**DENY**

EVALUATION SUMMARY: The application was received on August 14, 2002. Two deficiency letters were sent with responses received on October 16 and December 16, 2002. Revised construction plans, CQA manual, and specifications were received on January 14, 2003.

This application was deemed complete on **December 16, 2002.**
Published Intent to Issue on February 22, 2003
No Petitions as of March 17, 2003

Department Processing Time = 128 days (as of March 15, 2003)
Total Processing Time (TIH) = 213 days (as of March 15, 2003)

Day 90/30 for this Action is April 5, 2003.

Memorandum

Florida Department of Environmental Protection

PERMIT COVER MEMO

2/11

TO: X DEBORAH GETZOFF, **Director of District Management**

FROM/THROUGH:

William Kutash **ENVIRONMENTAL ADMINISTRATOR** 2/12/03
Susan Pelz, P.E. **SUPERVISOR** 2/11/03
Kim Ford, P.E. **ENGINEER** 2/4/03

DATE: 2/4/03

FILE NAME: Citrus County Central Landfill Phase 2 Expansion **PERMIT #:** 21375-004-SC
PROGRAM: Solid Waste **COUNTY:** Citrus

TYPE OF PERMIT ACTION: ___**ISSUE** ___**DENY** ___**MODIFY**
___**TRANSFER OWNER** ___**NOD**
___**PUBLIC NOTICE** X **INTENT TO ISSUE**

PUBLIC NOTICE PERIOD CLOSED? ___ **PETITION FILED?** ___.

PERMIT SUMMARY: This permit is to allow the construction of a landfill expansion and related improvements, including a new liner system. Construction certification and revisions to the current Operation Manual are required by this permit.

PROFESSIONAL RECOMMENDATION: X **APPROVE** _____**DENY**

EVALUATION SUMMARY: The application was received on August 14, 2002. Two deficiency letters were sent with responses received on October 16 and December 16, 2002. Revised construction plans, CQA manual, and specifications were received on January 14, 2003.

This application was deemed complete on **December 16, 2002.**

Department Processing Time = 94 days (as of January 20, 2003)
Total Processing Time (TIH) = 159 days (as of January 20, 2003)

Day 90/30 for this Action is March 15, 2003.

P.E. CERTIFICATION

Application No.: **21375-004-SC**

Phase 2 Expansion of the Citrus County Landfill

I HEREBY CERTIFY that in my professional judgment the engineering features described in the above referenced application provide reasonable assurance of compliance with applicable provisions of Florida Administrative Code Chapter 62-701. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical and structural, features).

(Signed)

2/4/03

(Date)

(Seal)

Permitting Application - Permit Detail and L[illegible]rmit

SITE Permit

Site Name: CITRUS CO CENTRAL SLF (LF1) | Site #: 0021375

County: CITRUS | Comments: N | RPAs: N | # Cases: 0

Project

Permit #: 0021375 - 005 - SO | Project #: 005 | Received: 08/15/2002 | CRA #:

Permit Office: TAL (HEADQUARTERS) | Agency Action: Issued

Project Name: CITRUS CENTRAL PH 2 ALT. PROC. | Desc: Alt. side slope liner design and setback

Type/Sub/Des: SO / 18 ALTER PROC-LANDFILL | COE #:

Logged: 11/27/2002 | Issued: 01/29/2003 | Expires: 01/29/2008 | OGC:

Fee: 2000.00 | Fee Recd: | Dele: 0.00 | Override: NONE

Related Party

Role: APPLICANT | Begin: 11/27/2002 | End:

Name: METCALFE, SUSAN J. | Company: CITRUS COUNTY

Address: PO BOX 340

City: LECANTO | State: FL | Zip: 34460 - | Country: U.S.A.

Phone: 352-527-7671 | Fax:

Processors

Processor: MARTIN_L | Y | Active: 11/27/2002 | Inactive: | Events

Permitting Application - Events

Events Scheduled

-76 of 90

Site # 0021375 | Site Name CITRUS CO CENTRAL SLF (LF1)

Permit # 0021375-005-SO | Type/Subtype SO / 18 | Received 08/15/2002

Project # 005 | Project Name CITRUS CENTRAL PH 2 ALT. PROC.

> ISSUE PERMIT: Issued

Event	Begin Date	Period	Due Date	Rmn	Status	End Date
Receive Request	08/15/2002	1	08/16/2002		Done	08/15/2002
Fee Verification	08/15/2002	2	08/17/2002		Sufficient Fee	08/17/2002
Completeness Review	08/15/2002	30	09/14/2002		Complete	01/24/2003
Determine Agency Action	08/15/2002	90	11/13/2002		Issue	01/29/2003
Issue Final Permit	01/29/2003	14	02/12/2003		Issued	01/29/2003
STOP CLOCK	01/29/2003	1	01/30/2003		Done	01/29/2003
ISSUE PERMIT	01/29/2003	1	01/30/2003		Issued	01/29/2003

BOARD OF COUNTY COMMISSIONERS
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION

P.O. Box 340, Lecanto, Florida 34460
(352) 527-7670 FAX (352) 527-7672
Citrus Springs/Dunnellon area Toll Free # (352) 489-2120

RECEIVED
MAR 17 2003
D.E.P.
SOUTHWEST DISTRICT

March 13, 2003

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

Re: Citrus County Central Landfill
Permit No. 21375-003-SO

Dear Mr. Ford:

The liner at our facility was damaged on March 12, 2003. The location of the damage, about 100 feet north of the vehicle access road, is shown on the attached sketch. The incident occurred while raincoat material was being removed adjacent to the west anchor trench. Both the original Phase 1 smooth liner and the textured liner installed in 2001 were involved. A hole approximately 4 feet long and 18 inches wide resulted. The damaged material was removed and a temporary patch made of "raincoat" material was glued in place. The liner layers will be patched with like material during construction of Phase 2.

If you have any questions, please contact me.

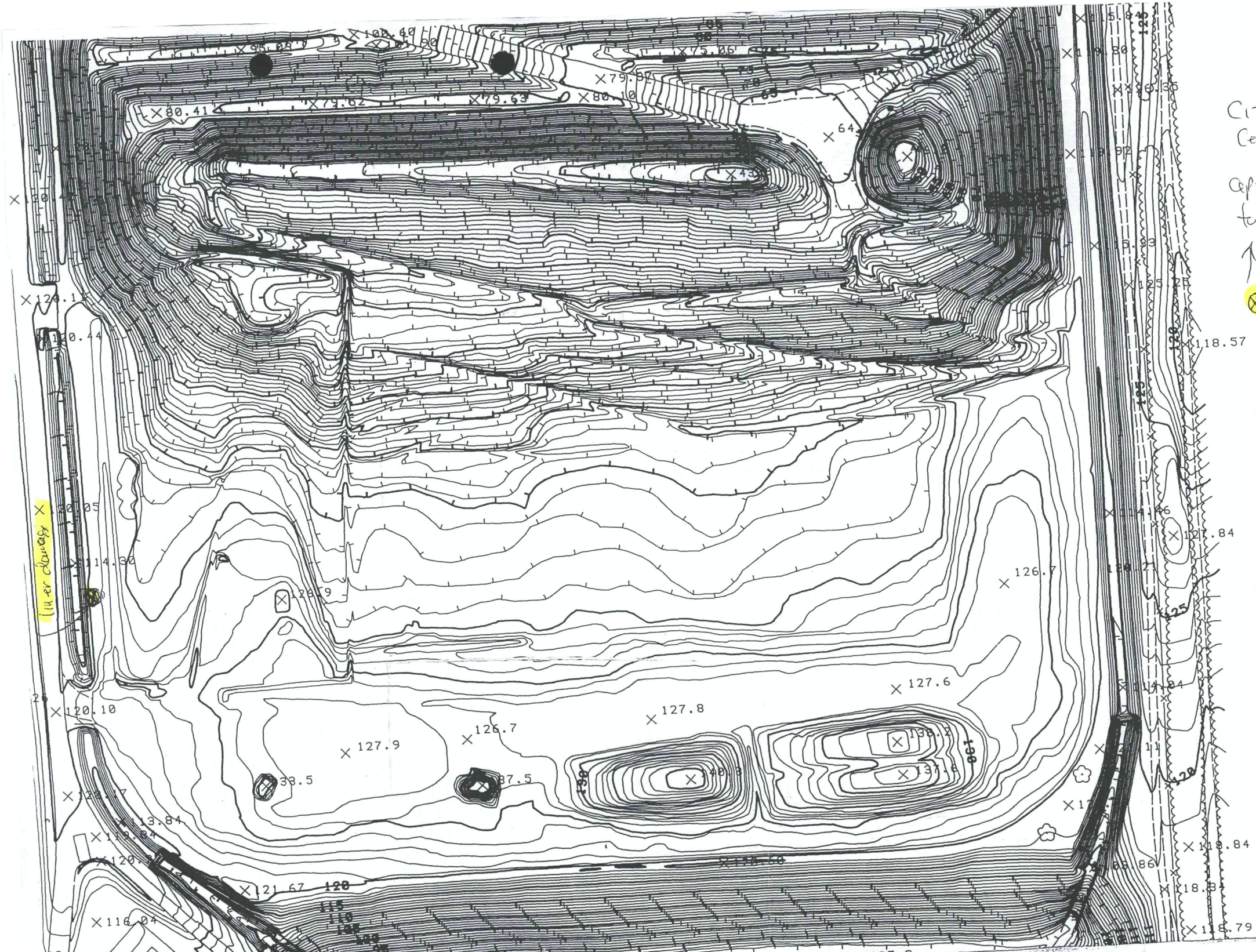
Sincerely,

Susan J Metcalfe

Susan Metcalfe, Director
Solid Waste Management

Attachment: Map

CC: Tom Dick, Assistant Director, Public Works Department
John Banks, SCS Engineers, Tampa
Susan Pelz, Solid Waste Section, FDEP, Tampa


Citrus County
Central Landfill
Approx Scale 1" = 100'
topography 10/2002
N
location of 3/12/03
liner damage
liner damage
MAR 17 2003
SOUTHWEST DISTRICT
TAMPA
ENVIRONMENTAL PROTECTION
80.41
79.02
79.63
80.10
75.86
79.97
64
120.10
127.9
126.7
127.8
127.6
126.7
33.5
37.5
118.57
114.30
113.84
121.67
116.04
118.84
118.79
127.84
126.7

MISSIONERS
IC WORKS
ENT DIVISION
da 34460
527-7672
ee # (352) 489-2120

Department of Environmental Protection

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619-8318

INFORMATION REQUEST

TO: LEE MARTIN
SOLID WASTE SECTION
TALLAHASSEE

We are pleased to send the enclosed information you requested.

If we can be of further service, please contact:

Kim B. Ford, P.E.
Solid Waste Section
Waste Management Division
3804 Coconut Palm Drive
Tampa, FL 33619-8318
(813) 744-6100, ext. 382

COMMENTS: CITRUS CO ALT PROC.
PROOF OF PUBLICATION
FW
3/7/03

advertisements related to
des both the notice of intent to
rocedures. These ads were run

RECEIVED
MAR 03 2003
D.E.P.
SOUTHWEST DISTRICT

ɔARD OF COUNTY COM ISSIONERS
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION

P.O. Box 340, Lecanto, Florida 34460
(352) 527-7670 FAX (352) 527-7672
Citrus Springs/Dunnellon area Toll Free # (352) 489-2120

February 27, 2003

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

Re: Citrus County Central Landfill
Permit No. 21375-004-SC

Dear Mr. Ford:

Attached, please find the proof of publication of the two required legal advertisements related to construction of Phase 2 of the Citrus County Central Landfill. This includes both the notice of intent to issue the permit and the notice of intent to issue approval of alternate procedures. These ads were run on February 22.

If you have any questions, please contact me.

Sincerely,

Susan J Metcalfe

Susan Metcalfe, Director
Solid Waste Management

RECEIVED
MAR 0 3 2003
D.E.P.
SOUTHWEST DISTRICT

Attachment: Proof of Advertising

CC: Tom Dick, Assistant Director, Public Works Department
John Banks, SCS Engineers, Tampa
Susan Pelz, Solid Waste Section, FDEP, Tampa

Proof of Publication

from the

CITRUS COUNTY CHRONICLE

Crystal River, Citrus County, Florida

PUBLISHED DAILY

STATE OF FLORIDA
COUNTY OF CITRUS
Before the undersigned authority personally appeared

Karen McDaniel

Of the Citrus County Chronicle, a newspaper published daily at Crystal River, in Citrus County, Florida, that the attached copy of advertisement being a public notice in the matter of the
223-0222 SACRN State of Florida Department of Environmental Protection Notice of Proposed Agency Action on Permit Application Display Advertisement A/R #071-223506

Court, was published in said newspaper in the issues of
February 22nd, 2003.

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

Karen McDaniel

The forgoing instrument was acknowledged before me

This 22nd day of February, 2003

By: Karen McDaniel

who is personally known to me and who did take an oath.

Jeanette A Schmidt

Notary Public

NOTARY PUBLIC STATE OF FLORIDA
JEANETTE A. SCHMIDT
MY COMMISSION # DD 049734
EXPIRES: August 16, 2005
1-800-3-NOTARY FL Notary Service & Bonding, Inc.

223-0222 SACRN

State of Florida
Department of Environmental Protection Notice of Proposed Agency Action on Permit Application

The Department gives notice of its intent to issue a permit (File No. 21375-004-SC) to Citrus County, c/o Ms. Susan Metcalfe, P.O. Box 340, Lecanto, Florida, 34460, who applied on August 14, 2002 to the Department of Environmental Protection for a permit to construct an expansion of the existing landfill (approximately 6 acres) referred to as Phase 2 of the Citrus County Central Landfill, subject to the specific and general conditions, located near S.R. 44, 3 miles east of Lecanto, Citrus County, Florida.

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below, and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, within fourteen (14) days of publication of this notice. A copy of the petition must also be mailed at the time of filing to the applicant at the address indicated. Failure to file a request for hearing within this time period shall constitute a waiver any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The petition shall contain the following information; (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of Department's action, or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by Petitioner, if any; (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action; and (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department.

Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes, and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, Florida Administrative Code.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at 3804 Coconut Palm Drive, Tampa, Florida 33619-8318.

Proof of Publication

from the

CITRUS COUNTY CHRONICLE

Crystal River, Citrus County, Florida

PUBLISHED DAILY

STATE OF FLORIDA
COUNTY OF CITRUS

Before the undersigned authority personally appeared

Karen McDaniel

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222-0222 SACRN State of Florida Department of Environmental Protection Notice of Proposed Agency Action Display Advertisement A/R #071-223506

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Karen McDaniel

The forgoing instrument was acknowledged before me

This 22nd day of February, 2003

By: Karen McDaniel

who is personally known to me and who did take an oath.

Jeanette A. Schmidt
Notary Public

JEANETTE A. SCHMIDT
MY COMMISSION # DD 049734
EXPIRES: August 16, 2005
1-800-3-NOTARY FL Notary Service & Bonding, Inc.

The church is off U.S. 41, at East Citrus Springs Boulevard and West G. Martinelli Boulevard, in Citrus Springs. Call (352) 489-0878.

Seder meal slated

Congregation Beth Sholom in Beverly Hills will sponsor a strictly kosher community Passover Seder under the supervision of Rabbi Zvi Ettinger, at 6 p.m. Wednesday, April 16, at S.J. Kellner Auditorium. Reservations and payments must be received by March 31. Call Les at 527-0698.

Renew your spirit

The ladies of **First United Methodist Church**, 8831 Bradshaw Blvd., Homosassa, will host a "Welcome Sunday" reception at the parish center Sunday, March 2, from noon to 4 p.m.

Special guests will be newcomers who have joined the parish during the last six months. The Fr. Eric Peters also invites any and all Catholics and non-Catholics to attend.

Light refreshments, music and information about the parish will be available.

See small display

Dunnellon Christian Women's Club will celebrate its 19th birthday March 4 at **Hope Evangelical Lutheran Church** in Citrus Springs will host a "Teen Talent Challenge" at 4:30 p.m. Sunday, March 2. Teens and adults may participate with music, skits, magic, jokes, poetry reading, storytelling or dancing. The theme is "Stop, Look, Listen and Laugh." There will be a biblical quiz show. Dinner will follow.

Tickets ($5 for adults, $3 for children 10 and under and $3 for participants) will be available following the 8 and 10:45 a.m. Sunday worship services tomorrow and March 2.

The Family Activities and Christian Education committees are co-sponsoring the event.

CCW events

Tickets are now available for the **Our Lady of Grace Council of Catholic Women's** "Luck of the Irish" luncheon and fashion show at noon Tuesday, March 4, in the auditorium from 6 to midnight.

Two tickets ($30 each) will be mailed to all parishioners; send a check and ticket stubs for reservations. Additional tickets are available by calling Alice Poulos at 746-5469, Diane Minnelli at 746-4234, Freda Lane at 527-0490 or Bunny Dart at 347-2109.

Teens share talents

The Teens 4 Christ youth group at **Hope Evangelical Lutheran Church** in Citrus Springs will host a "Teen Talent Challenge" at 4:30 p.m. Sunday, March 2. Teens and adults may participate with music, skits, magic, jokes, poetry reading, storytelling or dancing. The theme is "Stop, Look, Listen and Laugh." There will be a biblical quiz show. Dinner will follow.

Tickets ($5 for adults, $3 for children 10 and under and $3 for participants) will be available following the 8 and 10:45 a.m. Sunday worship services tomorrow and March 2.

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Karen McDaniel

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222-0222 SACRN S
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Court, was published
February 22nd, 2003,

Affiant further says
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corporation any disco
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the said newspaper.

Karen

The forgoing instrume

This 22nd day of Febr
By: Karen McDaniel

who is personally kno

Notary Public

NOTARY PUBLIC STATE OF FLORIDA JEANETTE
MY COMMISS
EXPIRES:
1-800-3-NOTARY FL Notary S

222-0222-SACRN

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION NOTICE OF PROPOSED AGENCY ACTION

The Department of Environmental Protection gives Notice of its Intent to grant approval of alternate procedures pursuant to Rule 62-701.310, Florida Administrative Code (F.A.C.), to Citrus County Board of County Commissioners for use of an alternate landfill side slope liner subbase material on the Phase 2 expansion and alternate setback distance for the East side of the Phase 2 expansion of the Citrus County Central Landfill in Citrus County. The applicant requests that an exception be granted from compliance with Rule 62-701.400 (3) (c) 1., F.A.C., which requires that the lower geomembrane of a double liner system for a landfill be placed directly on a subbase with a minimum thickness of six inches and a maximum saturated hydraulic conductivity of less than or equal to $1x10^{-5}$ cm/sec and from Rule 62-701.340 (4) (c), F.A.C., which requires a 100 foot setback from the toe of the proposed cover slope to the landfill property boundary.

The Department's file on this matter is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Division of Waste Management, Solid Waste Section, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

Persons whose substantial interests are affected by the above proposed agency action have a right, pursuant to Sections 120.569 and 120.57, Florida Statutes (F.S.), to petition for an administrative determination (hearing) on the proposed action. The petition must contain the information set forth below and must be filed (received) in the Department's Office of General Counsel, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, within 21 days of publication of this notice. A copy of the Petition must be also be mailed at the time of filing to the applicant at the address indicated. Failure to file a petition within 21 days constitutes a waiver of any right such person has to an administrative determination (hearing) pursuant to Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

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

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department File Number and the county in which the project is proposed;
(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(c) A statement of how each petitioner's substantial interests are or will be affected by the Department's action or proposed action;
(d) A statement of all material facts disputed by petitioner or a statement that there are no disputed facts;
(e) A statement of ultimate facts alleged, including a statement of the specific facts which the petitioner contends warrant reversal or modification of the Department's action or proposed action;
(f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the Department's action or proposed action;

UNITED STATES POSTAL SERVICE

GAINESVILLE FL 32608
PM
14 FEB
2003

First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

• Print your name, address, and ZIP Code in this box •

State of Florida
Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619-8318

RECEIVED
FEB 18 2003
D.E.P.
SOUTHWEST DISTRICT

Kim Ford, Solid Waste

33619+1352

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7001 1940 0001 7487 9246

OFFICIAL USE

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

2-12-03
Postmark Here

Sent To: Susan Hetcalfe, Citrus Co BCC
Street, Apt. No.; or PO Box No.: PO Box 340
City, State, ZIP+4: Lecanto, FL 34460

PS Form 3800, January 2001 — See Reverse for Instructions

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Citrus County
Board of County Commissioners
c/o Ms. Susan Metcalfe, P.G.
P O BOX 340
Lecanfo, FL 34460

4a. Article Number

7001 1940 0001 7487 9246

4b. Service Type

☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☒ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

LECANTO FL 34460 FEB 14 2009 USPS

5. Received By: *(Print Name)* CLARE SMITH

6. Signature: *(Addressee or Agent)* X Clare Smith

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CERTIFIED MAIL 7001 1940 0001 7487 9246
RETURN RECEIPT REQUESTED

February 12, 2003

In the matter of an
Application for Permit by:

Permit NO. 21375-004-SC
Citrus County

Citrus County
Board of County Commissioners
c/o Ms. Susan Metcalfe, P.G.
P. O. Box 340
Lecanto, FL 34460

INTENT TO ISSUE

The Department of Environmental Protection gives notice of its Intent to Issue a permit (copy attached) for the proposed project as detailed in the application specified above, for the reasons stated below.

The applicant, Citrus County, c/o Ms. Susan Metcalfe, applied on August 14, 2002 to the Department of Environmental Protection for a permit to construct an expansion of the existing landfill (approximately 6 acres), referred to as Phase 2 of the Citrus County Central Landfill, subject to the specific and general conditions attached, located near S.R. 44, 3 miles east of Lecanto, Citrus County, Florida.

The Department has permitting jurisdiction under Sections 403.707 and 403.861, Florida Statutes (F.S.), and Chapters 62-4 and 62-701, Florida Administrative Code (F.A.C.). The project is not exempt from permitting procedures. The Department has determined that a solid waste permit is required for the proposed work.

The Department intends to issue this permit based on its belief that reasonable assurances have been provided to indicate that the

proposed project will not adversely impact water quality and the proposed project will comply with appropriate provisions of Chapters 62-4 and 62-701, F.A.C., subject to the specific conditions attached in the permit.

Pursuant to Section 403.815, Florida Statutes and Chapters 62-110 and 28-106, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Proposed Agency Action on Permit Application. The notice must be published one time only within thirty (30) days of receipt of this intent in the legal ad section of a newspaper of general circulation in the area affected. Proof of publication must be provided to the Department within seven (7) days of publication of the notice. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit. The Department will issue the permit with the attached conditions unless petition for administrative proceeding (hearing) is filed pursuant to the provisions of Sections 120.569 and 120.57, Florida Statutes.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any other person must be filed within fourteen days of publication of the public notice or within fourteen days of receipt

of this notice of intent, whichever occurs first. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition (or a request for mediation, as discussed below) within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57 of the Florida Statutes, or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the discretion of the presiding officer upon the filing of a motion in compliance with rule 28-5.207 of the Florida Administrative Code.

A petition must contain the following information:

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number, and the county in which the project is proposed;

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

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

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

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

(f) A statement identifying the rules or statutes that the petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take with respect to the action or proposed action addressed in this notice of intent.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

In addition to requesting an administrative hearing, any person may elect to pursue mediation by reaching a mediation agreement with all parties to the proceeding (which include the applicant, the Department, and any person who has filed a timely and sufficient petition for a hearing) and by showing how the substantial interests of each mediating party are affected by the Department's action or proposed action. The agreement, in accordance with Rule 28-106.404, must be filed in (received by) the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, by the same deadline as set forth above for the filing of a petition. Choosing mediation will not adversely affect the right to a hearing if mediation does not result in a settlement.

The agreement to mediate must include the following:

(a) The names, addresses, and telephone numbers of any persons who may attend the mediation;

(b) The name, address, and telephone number of the mediator selected by the parties, or a provision for selecting a mediator within a specified time;

(c) The agreed allocation of the costs and fees associated with the mediation;

(d) The agreement of the parties on the confidentiality of discussions and documents introduced during mediation;

(e) The date, time, and place of the first mediation session, or a deadline for holding the first session, if no mediator has yet been chosen;

(f) The name of each party's representative who shall have authority to settle or recommend settlement; and

(g) Either an explanation of how the substantial interests of each mediating party will be affected by the action or proposed action addressed in this notice of intent or a statement clearly identifying the petition for hearing that each party has already filed, and incorporating it by reference.

(h) The signatures of all parties or their authorized representatives.

As provided in Section 120.573 of the Florida Statutes, the timely agreement of all parties to mediate will toll the time limitations imposed by Sections 120.569 and 120.57 for requesting and holding an administrative hearing and issuing a final order. Unless otherwise agreed by the parties, the mediation must be concluded within sixty days of the execution of the agreement. If mediation results in settlement of the administrative dispute, the Department must enter a final order incorporating the agreement of the parties. Persons whose substantial interests will be affected by such a modified final decision of the Department have a right to petition for a hearing only in accordance with the requirements for such petitions set forth above, and must therefore file their petitions within fourteen days of receipt of this notice of intent. If mediation terminates without settlement of the dispute, the Department shall notify all parties in writing that the administrative hearing processes under Sections

120.569 and 120.57 remain available for disposition of the dispute, and the notice will specify the deadlines that then will apply for challenging the agency action and electing remedies under those two statutes.

Executed in Tampa, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

James F. Cleary

Deborah A. Getzoff
Director of District Management
Southwest District

DAG/kbfb
Attachment

Copies furnished to:
Elected Officials Notification
John Banks, P.E., SCS Engineers
Susan Pelz, P.E., FDEP Tampa
Douglas Beason, OGC Tallahassee

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this **NOTICE OF INTENT TO ISSUE** and all copies were mailed before the close of business on February 12, 2003 to the listed persons.
Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to
Section 120.52(11), Florida Statutes,
with the designated Department Clerk,
receipt of which is hereby
acknowledged.

Anna Black 02-12-03
(Clerk) (Date)

State of Florida
Department of Environmental Protection
Notice of Proposed Agency Action on Permit Application

The Department gives notice of its intent to issue a permit (File No. 21375-004-SC) to Citrus County, c/o Ms. Susan Metcalfe, P.O. Box 340, Lecanto, Florida, 34460, who applied on August 14, 2002 to the Department of Environmental Protection for a permit to construct an expansion of the existing landfill (approximately 6 acres) referred to as Phase 2 of the Citrus County Central Landfill, subject to the specific and general conditions, located near S.R. 44, 3 miles east of Lecanto, Citrus County, Florida.

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below, and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, within fourteen (14) days of publication of this notice. A copy of the petition must also be mailed at the time of filing to the applicant at the address indicated. Failure to file a request for hearing within this time period shall constitute a waiver any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The petition shall contain the following information; (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of Department's action, or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by Petitioner, if any; (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action; and (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department.

Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes, and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, Florida Administrative Code.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at 3804 Coconut Palm Drive, Tampa, Florida 33619-8318.

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

PERMITTEE
Citrus County
Board of County Commissioners
c/o Ms. Susan Metcalfe, P.G.
P.O. Box 340
Lecanto, FL 34460

PERMIT/CERTIFICATION
WACS Facility ID No: SWD/09/39859
Permit No: 21375-004-SC
Date of Issue:
Expiration Date:
County: Citrus
Lat/Long: 28°51'08"N
82°26'16"W
Sec/Town/Rge: 1/19S/18E
Project: Central County Central Landfill - Phase 2 Expansion

DRAFT

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 62-4 and 62-701. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents, attached hereto or on file with the Department and made a part hereof and specifically described as follows:

To construct approximately 6 acres of a Class I landfill, referred to as the Phase 2 Expansion, subject to the specific and general conditions attached, located near S.R. 44, 3 miles east of Lecanto, Citrus County, Florida. The specific conditions attached are for the construction of a:

1. Class I Landfill Disposal Unit - Phase 2

General Information: The construction will cover 6 acres with a double geomembrane liner system with leachate collection. Leachate removed will be pumped to the on-site leachate tank and treatment facility.

Replaces Permit No.: N/A, new

This permit contains compliance items summarized in Attachment 1 that shall be complied with and submitted to the Department by the dates noted. If the compliance dates are not met and submittals are not received by the Department on the dates noted, enforcement action may be initiated to assure compliance with the conditions of this permit.

DRAFT

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.161, 403.727, or 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of rights, nor any infringement of federal, State, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, are required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

GENERAL CONDITIONS:

DRAFT

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

(a) Have access to and copy any records that must be kept under conditions of the permit;

(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of noncompliance; and

(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statues after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

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GENERAL CONDITIONS:

11. This permit is transferable only upon Department approval in accordance with Rule 62-4.120 and 62-730.300, Florida Administrative Code, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

(a) Determination of Best Available Control Technology (BACT)

(b) Determination of Prevention of Significant Deterioration (PSD)

(c) Certification of compliance with State Water Quality Standards (Section 401, PL 92-500)

(d) Compliance with New Source Performance Standards

14. The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. the date, exact place, and time of sampling or measurements;
2. the person responsible for performing the sampling or measurements;
3. the dates analyses were performed;
4. the person responsible for performing the analyses;
5. the analytical techniques or methods used;
6. the results of such analyses.

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GENERAL CONDITIONS:

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS:

1. **Permit Application Documentation.** This permit is valid for construction of the 6 acre Phase 2 Expansion disposal unit in accordance with the reports, plans and other information as follows:

- Application and supporting information received on August 14, 2002;
- Additional supporting information and responses by SCS Engineers including replacement pages, received on October 16 and December 16, 2002, and January 14 and 15, 2003;
- CQA Manual and specifications by SCS Engineers received on January 14, 2003;
- Construction plans received on January 14, 2003, with replacement Sheet 11 received on January 15, 2003;
- The conditions of Alternate Procedure #SWAP 01-6 (attached);

and in accordance with all applicable requirements of Department rules. Upon receipt and approval of a request for a minor permit modification pursuant to FAC 62-4.050(4)(s) to operate the new components of the facility regulated by this permit, including Certification of Construction Completion for the landfill expansion liner system and related improvements, revised operation and maintenance manual, report assessing effectiveness of the related liner and leachate collection system, financial assurance, and related supporting documents identified in this permit, the current landfill operation permit shall be modified to allow the operation of the new expansion and related improvements.

2. **Permit Modifications.** Any construction subject to Department Solid Waste regulations not previously approved as part of this permit shall require a separate Department permit unless the Department determines a permit modification to be more appropriate, or unless otherwise approved in writing by the Department. Permits shall be modified in accordance with the requirements of 62-4.080, F.A.C. A modification which is reasonably expected to lead to substantially different environmental impacts which require a detailed review by the Department is considered a substantial modification.

3. **Permit Renewal.** No later than **one hundred eighty (180) days** before the expiration of the Department Permit, the permittee shall apply for a renewal of a permit, if necessary for continuing related activities, on forms and in a manner prescribed by the Department, in order to assure conformance with all applicable Department rules. Permits shall be renewed at least every five years as required by F.A.C. 62-4.070(4).

4. **Construction Schedule and Progress Report.** No later than **two (2) weeks after** the pre-construction conference, the owner or operator shall submit a construction schedule which includes estimated dates for related solid waste construction activities to the Department. The Engineer of Record or another qualified professional engineer shall make

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periodic inspections during construction to ensure that design integrity is maintained. An updated construction schedule and progress report shall be submitted to the Department **monthly**. Progress reports shall include a description of deviations from approved plans and specifications. Field changes shall be noted on construction plans kept at the project site. The Department shall be notified at least one week in advance of beginning liner installation.

5. **Quality Assurance.** A construction quality assurance plan shall provide personnel with adequate information to achieve continuous compliance with the construction requirements. The plan shall include or refer to specifications and construction methods which use established engineering practices for construction and provide for quality control testing procedures and sampling frequencies, pursuant to F.A.C. 62-701.400(7) and (8). Sampling and testing shall be conducted by trained personnel during construction and after construction completion. Such personnel will be under the direction of the construction quality assurance professional engineer, to assure the project will comply with the standards. The engineer or his designee shall be on-site at all times during construction to monitor construction activities.

6. **Laboratory and Field Testing Requirements.** Field testing during the construction activities shall be conducted under the direct supervision of the Certifying Engineer or his designee representing the owner. A laboratory experienced in the testing of geosynthetics, independent of the liner manufacturer and installer, shall perform the required conformance testing and testing of seam shear and peel strength.

7. **Certification of Construction Completeness.** Within **sixty (60) days** after the specified construction has been completed for each part completed during a construction period, the following activities shall be completed:

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

b. The owner or operator shall submit Record Drawings showing all changes (i.e. additions, deletions, revisions to the plans previously approved by the Department including site grades and elevations). The Record Drawings shall include, but not be limited to, details such as the as-built elevations of the excavated areas, top and bottom of the liner system, ditches, piping, pumps and controls.

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SPECIFIC CONDITIONS:

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

d. The engineer of record shall provide a report to verify conformance with the project specifications and applicable requirements of F.A.C. Rule 62-701.400(7) and (8). The report including all testing results for the entire project shall be submitted to the Department along with the completion of construction documents.

8. **Control of Nuisance Conditions.** The operating authority shall be responsible for the control of odors and fugitive particulates arising from the construction. Such control shall minimize the creation of nuisance conditions on adjoining property. If a complaint is received from the general public concerning activities regulated by this permit, and the Department personnel confirms that the complaint is based on a violation of the standards and criteria applicable to the permittee pursuant to this permit, then the permittee must take immediate corrective action to abate the violation.

9. **Facility Maintenance and Repair.** If there is any damage to any portion of the site facilities regulated by this permit or failure of any portion of the associated systems including monitor wells and piezometers, and such damage or failure may adversely affect the continued compliance with this permit, then the permittee shall **immediately (within 24 hours)** notify the Department explaining such occurrence and remedial measures to be taken and time needed for repairs. Written detailed notification shall be submitted to the Department **within seven (7) days** following the occurrence.

10. **Professional Certification.** Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.), Florida Statutes, applicable portions of permit applications and supporting documents which are submitted to the Department for public record shall be signed and sealed by the professional(s) who prepared or approved them.

11. **General Conditions.** The permittee shall be aware of and operate under the "General Conditions". General Conditions are binding upon the permittee and enforceable pursuant to Chapter 403, Florida Statutes.

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SPECIFIC CONDITIONS:

12. **Permit Acceptance.** By acceptance of this Permit, the Permittee certifies that he/she has read and understands the obligations imposed by the Specific and General Conditions contained herein, including date of permit expiration and renewal deadlines. It is a violation of this permit for failure to comply with all conditions and deadlines.

Executed in Tampa, Florida

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

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Deborah A. Getzoff
Director of District Management
Southwest District

ATTACHMENT 1

SPECIFIC CONDITION	SUBMITTAL DUE DATE	REQUIRED ITEM
4.	2 weeks after pre-construction conference	Submit construction schedule
4.	Monthly	Update construction schedule
7.	Within 60 days after construction is complete	Submit Certification of Construction Completion, Arrange for inspection, submit Record Drawings, submit narrative describing all deviations.

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

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

DEP Application No. _____
(Filled by DEP)

Certification of Construction Completion of a Solid Waste Management Facility

DEP Construction Permit No:_____County:_____

Name of Project:_____

Name of Owner:_____

Name of Engineer:_____

Type of Project:_____

_____

Cost: Estimate $_____ Actual $_____

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

Deviations from Plans and Application Approved by DEP:_____

_____

_____

_____

_____

Address and Telephone No. of Site:_____

_____

Name(s) of Site Supervisor:_____

Date Site inspection is requested:_____

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

Permit No.:_____ Dated:_____

Date:_____ _____
Signature of Professional Engineer

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

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

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

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

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

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

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

IN RE: CITRUS COUNTY BOARD OF COUNTY COMMISSIONERS
REQUEST PURSUANT TO
FLORIDA ADMINISTRATIVE CODE
RULE 62-701.310

CASE NO. SWAP 01-6

_____/

APPROVAL OF ALTERNATE PROCEDURES

This cause comes before me upon receipt of a request by Citrus County Division of Solid Waste Management on behalf of the Citrus County Commission for the approval of alternate procedures and requirements under Rule 62-701.310, Florida Administrative Code (F.A.C.), for use of an alternate landfill side slope liner subbase material and alternate setback requirement for the Phase 2 expansion at the Citrus County Central Landfill in Citrus County. The applicant requests that an exception be granted from compliance with Rule 62-701.400(3)(c)1., F.A.C., which requires that the lower geomembrane of a double liner system for a landfill be placed directly on a subbase with a minimum thickness of six inches and a maximum saturated hydraulic conductivity of less than or equal to $1x10^{-5}$ cm/sec. The applicant also requests that an exception be granted from Rule 62-701.340(4)(c), F.A.C., which requires a minimum 100 foot horizontal separation between the toe of the proposed cover slope and the landfill property boundary.

FINDINGS OF FACT

1. The applicant currently operates a Class I landfill under permit number 21375-003-SO. This existing landfill consists of Phase 1, a disposal area of 16.5 acres which is lined with a single geomembrane liner, and Phase 1A, a disposal area of 3.3 acres which is lined with a double geomembrane liner. The applicant has applied for the Phase 2 expansion which is being processed under permit application number 21375-004-SC.

2. Phase 2 is a proposed expansion of approximately 6.0 acres to the existing facility and is to be constructed with a double geomembrane liner design, with a composite drainage net for the leachate collection and leachate detection systems, and a geogrid to enhance interface stability. The applicant has proposed to install the liner system in accordance with Rule 62-701.400(3)(c)1., F.A.C. with the exception of using in-situ soils for the liner side slopes in place of the six-inch subbase required by rule. The angles of the side slopes for Phase 2 are proposed at 2:1, horizontal to vertical, and their total area is approximately 3.0 acres. This portion of the Request for Alternate Procedure only applies to the liner on the side slopes in Phase 2.

3. The applicant has demonstrated that the proposed alternate design has a containment capability equal to or better than the established double liner design. Additionally, the applicant has demonstrated through calculations and proposed

methods of operation that the proposed alternate design will be stable.

4. The current permit for Phases 1 and 1A allows a 75-foot setback from the toe of the covered slope to the landfill property boundary. This is also authorized by local ordinances, which require concurrence from the adjacent property owner, which is the Division of Forestry for the Withlacoochee State Forest. The Division of Forestry concurred with this usage, with conditions, on May 30, 1989.

5. Maintaining a consistent setback along the East side of the proposed landfill and the existing landfill will minimize operational problems and liner stresses associated with a severe jog in liner alignment between the two phases. This will provide an equivalent degree of protection as evidenced by the existing operation of Phase 1A.

CONCLUSIONS OF LAW

Rule 62-701.310, F.A.C., authorizes the approval by the Department of alternate procedures and requirements concerning solid waste management facilities. Based upon the above findings and the information contained in the Request for Alternate Procedures the Department concludes:

1. That the applicant has demonstrated a sufficient basis for the exception from the established requirements;

2. That the applicant has adequately demonstrated that the alternate procedures provide an equal degree of protection for

the public and the environment as the established requirements; and,

3. That the alternate procedures are at least as effective as the established requirements.

Upon consideration of the foregoing it is therefore ORDERED that the request for alternate procedures and requirements from Rules 62-701.400(3)(c)1. and 62-701.340(4)(c), F.A.C., are GRANTED, subject to the following conditions:

1. This Order does not authorize construction of any solid waste disposal unit until and unless permit number 21375-004-SC is issued.

2. This Order applies only to the Phase 2 liner side slopes and 75-foot setback distance on the East side of the Phase 2 expansion.

NOTICE OF RIGHTS

Pursuant to Section 403.815, F.S., and Rule 62-110.107, F.A.C., you are required to publish at your own expense the enclosed Notice of Proposed Agency Action. The notice shall be published one time only within 30 days in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. Where

there is more than one newspaper of general circulation in the county, the newspaper used must be one with significant circulation in the area that may be affected by the permit. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. You must provide proof of publication to the Department at the address listed below as soon as practical after publication.

In the alternative, you may include the following language in the public notice for permit number 21375-004-SC provided that that public notice allows 21 days for the filing of any petition:

> The Department of Environmental Protection also gives Notice of its Intent to grant approval of alternate procedures pursuant to Rule 62-701.310, Florida Administrative Code (F.A.C.), as part of the proposed permit, to Citrus County Board of County Commissioners for use of an alternate landfill side slope liner subbase material on the Phase 2 expansion and alternate setback distance for the East side of the Phase 2 expansion at the Citrus County Central Landfill in Citrus County. The applicant has requested an exception from Rule 62-701.400(3)(c)1., F.A.C., which requires that the lower geomembrane of a double liner system for a landfill be placed directly on a subbase

with a minimum thickness of six inches and a maximum saturated hydraulic conductivity of less then or equal to $1x10^{-5}$ cm/sec, and from Rule 62-701.340(4)(c), F.A.C., which requires a 100-foot horizontal separation from the toe of the proposed cover slope to the landfill property boundary.

The Department's Order Granting Approval of Alternate Procedures and Requirements will be considered final, unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

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

Petitions by the applicant or any of the parties listed below must be filed within twenty-one days of receipt of this written notice. Petitions filed by other persons must be filed within twenty-one days of publication of the notice or receipt of

the written notice, whichever occurs first. The petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

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

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department File Number and the county in which the project is proposed;

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

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

(d) A statement of all material facts disputed by petitioner or a statement that there are no disputed facts;

(e) A statement of the ultimate facts alleged, including a statement of the specific facts which the petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wants the Department to take with respect to the Department's action or proposed action.

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

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

Department have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

In accordance with Section 120.573, F.S., the Department advises that mediation is not available in this case under the provisions of that statute. This does not prevent any interested parties from agreeing to other forms of alternate dispute resolution.

Any party to this order has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department in the Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within thirty days after this order is filed with the clerk of the Department.

DONE AND ORDERED this 28th day of January, 2003, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

John M. Ruddell

John M. Ruddell, Director
Division of Waste Management
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been sent by United States Mail to Mr. Brad Thorpe, Chairman, Citrus County Board of County Commissioners, Third Floor Masonic Building, 111 West Main Street, Inverness, Florida 34450, on this 29th day of January, 2003, in Tallahassee, Florida.

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department clerk, receipt of which is hereby acknowledged.

Sebrena L. Peck 1/29/03
(Clerk) (date)

Copies furnished to:
Susan Metcalfe, Citrus Co.
John Banks, SCS Engineers
Chris McGuire, DEP/OGC
Susan Pelz, DEP/SWD
Richard Tedder, DEP/Tallahassee

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF PROPOSED AGENCY ACTION

The Department of Environmental Protection gives Notice of its Intent to grant approval of alternate procedures pursuant to Rule 62-701.310, Florida Administrative Code (F.A.C.), to Citrus County Board of County Commissioners for use of an alternate landfill side slope liner subbase material on the Phase 2 expansion and alternate setback distance for the East side of the Phase 2 expansion of the Citrus County Central Landfill in Citrus County. The applicant requests that an exception be granted from compliance with Rule 62-701.400(3)(c)1., F.A.C., which requires that the lower geomembrane of a double liner system for a landfill be placed directly on a subbase with a minimum thickness of six inches and a maximum saturated hydraulic conductivity of less then or equal to $1x10^{-5}$ cm/sec and from Rule 62-701.340(4)(c), F.A.C., which requires a 100 foot setback from the toe of the proposed cover slope to the landfill property boundary.

The Department's file on this matter is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Division of Waste Management, Solid Waste Section, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

Persons whose substantial interests are affected by the above proposed agency action have a right, pursuant to Sections 120.569 and 120.57, Florida Statutes (F.S.), to petition for an administrative determination (hearing) on the proposed action. The petition must contain the information set forth below and must be filed (received) in the Department's Office of General Counsel, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, within 21 days of publication of this notice. A copy of the Petition must also be mailed at the time of filing to the applicant at the address indicated. Failure to file a petition within 21 days constitutes a waiver of any right such person has to an administrative determination (hearing) pursuant to Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

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

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department File Number and the county in which the project is proposed;

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

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

(d) A statement of all material facts disputed by petitioner or a statement that there are no disputed facts;

(e) A statement of the ultimate facts alleged, including a statement of the specific facts which the petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 21 days of publication of this notice in the Office of General Counsel of the Department at the above address. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, Florida Administrative Code.

In accordance with Section 120.573, F.S., the Department advises that mediation is not available in this case under the provisions of that statute. This does not prevent any interested parties from agreeing to other forms of alternate dispute resolution.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DISTRICT ROUTING SLIP

To: Susan Pelz DATE: 1/30/03

			CC To
	PENSACOLA	**NORTHWEST DISTRICT**	
	Panama City	Northwest District Branch Office	
	Tallahassee	Northwest District Branch Office	
	Sopchoppy	Northwest District Satellite Office	
X	**TAMPA**	**SOUTHWEST DISTRICT**	
	Punta Gorda	Southwest District Branch Office	
	Bartow	Southwest District Satellite Office	
	ORLANDO	**CENTRAL DISTRICT**	
	Melbourne	Central District Satellite Office	
	JACKSONVILLE	**NORTHEAST DISTRICT**	
	Gainesville	Northeast District Branch Office	
	FORT MYERS	**SOUTH DISTRICT**	
	Marathon	South District Branch Office	
	WEST PALM BEACH	**SOUTHEAST DISTRICT**	
	Port St. Lucie	Southeast District Branch Office	

☐ Reply Optional Date Due _____ ☐ Reply Required Date Due: _____ ☐ Info Only

Comments:

D.E.P. FEB 03 2003 Southwest District Tampa

From: Lee Martin Tel.: 245-8734

08-18-93

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

IN RE: CITRUS COUNTY BOARD OF COUNTY COMMISSIONERS
REQUEST PURSUANT TO
FLORIDA ADMINISTRATIVE CODE
RULE 62-701.310

CASE NO. SWAP 01-6

_____/

APPROVAL OF ALTERNATE PROCEDURES

This cause comes before me upon receipt of a request by Citrus County Division of Solid Waste Management on behalf of the Citrus County Commission for the approval of alternate procedures and requirements under Rule 62-701.310, Florida Administrative Code (F.A.C.), for use of an alternate landfill side slope liner subbase material and alternate setback requirement for the Phase 2 expansion at the Citrus County Central Landfill in Citrus County. The applicant requests that an exception be granted from compliance with Rule 62-701.400(3)(c)1., F.A.C., which requires that the lower geomembrane of a double liner system for a landfill be placed directly on a subbase with a minimum thickness of six inches and a maximum saturated hydraulic conductivity of less than or equal to $1x10^{-5}$ cm/sec. The applicant also requests that an exception be granted from Rule 62-701.340(4)(c), F.A.C., which requires a minimum 100 foot horizontal separation between the toe of the proposed cover slope and the landfill property boundary.

FINDINGS OF FACT

1. The applicant currently operates a Class I landfill under permit number 21375-003-SO. This existing landfill consists of Phase 1, a disposal area of 16.5 acres which is lined with a single geomembrane liner, and Phase 1A, a disposal area of 3.3 acres which is lined with a double geomembrane liner. The applicant has applied for the Phase 2 expansion which is being processed under permit application number 21375-004-SC.

2. Phase 2 is a proposed expansion of approximately 6.0 acres to the existing facility and is to be constructed with a double geomembrane liner design, with a composite drainage net for the leachate collection and leachate detection systems, and a geogrid to enhance interface stability. The applicant has proposed to install the liner system in accordance with Rule 62-701.400(3)(c)1., F.A.C. with the exception of using in-situ soils for the liner side slopes in place of the six-inch subbase required by rule. The angles of the side slopes for Phase 2 are proposed at 2:1, horizontal to vertical, and their total area is approximately 3.0 acres. This portion of the Request for Alternate Procedure only applies to the liner on the side slopes in Phase 2.

3. The applicant has demonstrated that the proposed alternate design has a containment capability equal to or better than the established double liner design. Additionally, the applicant has demonstrated through calculations and proposed

methods of operation that the proposed alternate design will be stable.

4. The current permit for Phases 1 and 1A allows a 75-foot setback from the toe of the covered slope to the landfill property boundary. This is also authorized by local ordinances, which require concurrence from the adjacent property owner, which is the Division of Forestry for the Withlacoochee State Forest. The Division of Forestry concurred with this usage, with conditions, on May 30, 1989.

5. Maintaining a consistent setback along the East side of the proposed landfill and the existing landfill will minimize operational problems and liner stresses associated with a severe jog in liner alignment between the two phases. This will provide an equivalent degree of protection as evidenced by the existing operation of Phase 1A.

CONCLUSIONS OF LAW

Rule 62-701.310, F.A.C., authorizes the approval by the Department of alternate procedures and requirements concerning solid waste management facilities. Based upon the above findings and the information contained in the Request for Alternate Procedures the Department concludes:

1. That the applicant has demonstrated a sufficient basis for the exception from the established requirements;

2. That the applicant has adequately demonstrated that the alternate procedures provide an equal degree of protection for

the public and the environment as the established requirements; and,

3. That the alternate procedures are at least as effective as the established requirements.

Upon consideration of the foregoing it is therefore ORDERED that the request for alternate procedures and requirements from Rules 62-701.400(3)(c)1. and 62-701.340(4)(c), F.A.C., are GRANTED, subject to the following conditions:

1. This Order does not authorize construction of any solid waste disposal unit until and unless permit number 21375-004-SC is issued.

2. This Order applies only to the Phase 2 liner side slopes and 75-foot setback distance on the East side of the Phase 2 expansion.

NOTICE OF RIGHTS

Pursuant to Section 403.815, F.S., and Rule 62-110.107, F.A.C., you are required to publish at your own expense the enclosed Notice of Proposed Agency Action. The notice shall be published one time only within 30 days in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. Where

there is more than one newspaper of general circulation in the county, the newspaper used must be one with significant circulation in the area that may be affected by the permit. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. You must provide proof of publication to the Department at the address listed below as soon as practical after publication.

In the alternative, you may include the following language in the public notice for permit number 21375-004-SC provided that that public notice allows 21 days for the filing of any petition:

> The Department of Environmental Protection also gives Notice of its Intent to grant approval of alternate procedures pursuant to Rule 62-701.310, Florida Administrative Code (F.A.C.), as part of the proposed permit, to Citrus County Board of County Commissioners for use of an alternate landfill side slope liner subbase material on the Phase 2 expansion and alternate setback distance for the East side of the Phase 2 expansion at the Citrus County Central Landfill in Citrus County. The applicant has requested an exception from Rule 62-701.400(3)(c)1., F.A.C., which requires that the lower geomembrane of a double liner system for a landfill be placed directly on a subbase

with a minimum thickness of six inches and a maximum saturated hydraulic conductivity of less then or equal to $1x10^{-5}$ cm/sec, and from Rule 62-701.340(4)(c), F.A.C., which requires a 100-foot horizontal separation from the toe of the proposed cover slope to the landfill property boundary.

The Department's Order Granting Approval of Alternate Procedures and Requirements will be considered final, unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

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

Petitions by the applicant or any of the parties listed below must be filed within twenty-one days of receipt of this written notice. Petitions filed by other persons must be filed within twenty-one days of publication of the notice or receipt of

the written notice, whichever occurs first. The petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

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

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department File Number and the county in which the project is proposed;

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

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

(d) A statement of all material facts disputed by petitioner or a statement that there are no disputed facts;

(e) A statement of the ultimate facts alleged, including a statement of the specific facts which the petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wants the Department to take with respect to the Department's action or proposed action.

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

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

Department have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

In accordance with Section 120.573, F.S., the Department advises that mediation is not available in this case under the provisions of that statute. This does not prevent any interested parties from agreeing to other forms of alternate dispute resolution.

Any party to this order has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department in the Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within thirty days after this order is filed with the clerk of the Department.

DONE AND ORDERED this 28th day of January, 2003, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

John M. Ruddell

John M. Ruddell, Director
Division of Waste Management
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been sent by United States Mail to Mr. Brad Thorpe, Chairman, Citrus County Board of County Commissioners, Third Floor Masonic Building, 111 West Main Street, Inverness, Florida 34450, on this 29th day of January, 2003, in Tallahassee, Florida.

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department clerk, receipt of which is hereby acknowledged.

Sebrena L. Peck (Clerk) 1/29/03 (date)

Copies furnished to:
Susan Metcalfe, Citrus Co.
John Banks, SCS Engineers
Chris McGuire, DEP/OGC
Susan Pelz, DEP/SWD
Richard Tedder, DEP/Tallahassee

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF PROPOSED AGENCY ACTION

The Department of Environmental Protection gives Notice of its Intent to grant approval of alternate procedures pursuant to Rule 62-701.310, Florida Administrative Code (F.A.C.), to Citrus County Board of County Commissioners for use of an alternate landfill side slope liner subbase material on the Phase 2 expansion and alternate setback distance for the East side of the Phase 2 expansion of the Citrus County Central Landfill in Citrus County. The applicant requests that an exception be granted from compliance with Rule 62-701.400(3)(c)1., F.A.C., which requires that the lower geomembrane of a double liner system for a landfill be placed directly on a subbase with a minimum thickness of six inches and a maximum saturated hydraulic conductivity of less then or equal to $1x10^{-5}$ cm/sec and from Rule 62-701.340(4)(c), F.A.C., which requires a 100 foot setback from the toe of the proposed cover slope to the landfill property boundary.

The Department's file on this matter is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Division of Waste Management, Solid Waste Section, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

Persons whose substantial interests are affected by the above proposed agency action have a right, pursuant to Sections 120.569 and 120.57, Florida Statutes (F.S.), to petition for an administrative determination (hearing) on the proposed action. The petition must contain the information set forth below and must be filed (received) in the Department's Office of General Counsel, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, within 21 days of publication of this notice. A copy of the Petition must also be mailed at the time of filing to the applicant at the address indicated. Failure to file a petition within 21 days constitutes a waiver of any right such person has to an administrative determination (hearing) pursuant to Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

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In accordance with Section 120.573, F.S., the Department advises that mediation is not available in this case under the provisions of that statute. This does not prevent any interested parties from agreeing to other forms of alternate dispute resolution.

Ford, Kim

From: Martin, Lee
Sent: Wednesday, January 22, 2003 5:01 PM
To: Ford, Kim; Pelz, Susan
Cc: Tedder, Richard; McGuire, Chris
Subject: RE: Draft SWAP 01-6 revised for Citrus Co. Central LF

Thanks Kim, I appreciate your help, I'll make that change and start the processing for Ruddell's signature. Lee

-----Original Message-----
From: Ford, Kim
Sent: Wednesday, January 22, 2003 4:48 PM
To: Martin, Lee; Pelz, Susan
Cc: Tedder, Richard; McGuire, Chris
Subject: RE: Draft SWAP 01-6 revised for Citrus Co. Central LF

Lee:

Susan and I spoke and the only suggestion I have is Finding of Fact #4 on page 3 to state that the current permit "**allows**" rather than requires a 75-foot setback.

Thanks. Kim

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From: Martin, Lee
Sent: Thursday, January 16, 2003 4:11 PM
To: Pelz, Susan; Ford, Kim
Cc: Tedder, Richard; McGuire, Chris
Subject: Draft SWAP 01-6 revised for Citrus Co. Central LF

Susan and Kim, attached is the latest revised draft of the Citrus Co. Alternate Procedure for alternate side slope liner design using in-situ subbase material and an alternate setback of 75' on the East side of the site. I've incorporated Richard's and Chris's previous comments and received additional information from SCS reinstating the geogrid in the liner design and confirming the site is surrounded on three sides by the Withlacoochee State Forest and on the fourth side by Hwy. 44. Please review and provide any comments before going final. Thanks for your help, Lee
<< File: SWAP01-6rev.doc >>

Ford, Kim

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SWAP01-6rev.doc

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

IN RE: CITRUS COUNTY BOARD OF COUNTY COMMISSIONERS
REQUEST PURSUANT TO
FLORIDA ADMINISTRATIVE CODE CASE NO. SWAP 01-6
RULE 62-701.310
_____/

APPROVAL OF ALTERNATE PROCEDURES

This cause comes before me upon receipt of a request by Citrus County Division of Solid Waste Management on behalf of the Citrus County Commission for the approval of alternate procedures and requirements under Rule 62-701.310, Florida Administrative Code (F.A.C.), for use of an alternate landfill side slope liner subbase material and alternate setback requirement for the Phase 2 expansion at the Citrus County Central Landfill in Citrus County. The applicant requests that an exception be granted from compliance with Rule 62-701.400(3)(c)1., F.A.C., which requires that the lower geomembrane of a double liner system for a landfill be placed directly on a subbase with a minimum thickness of six inches and a maximum saturated hydraulic conductivity of less than or equal to $1x10^{-5}$ cm/sec. The applicant also requests that an exception be granted from Rule 62-701.340(4)(c), F.A.C., which requires a minimum 100 foot horizontal separation between the toe of the proposed cover slope and the landfill property boundary.

FINDINGS OF FACT

1. The applicant currently operates a Class I landfill under permit number 21375-003-SO. This existing landfill consists of Phase 1, a disposal area of 16.5 acres which is lined with a single geomembrane liner, and Phase 1A, a disposal area of 3.3 acres which is lined with a double geomembrane liner. The applicant has applied for the Phase 2 expansion which is being processed under permit application number 21375-004-SC.

2. Phase 2 is a proposed expansion of approximately 6.0 acres to the existing facility and is to be constructed with a double geomembrane liner design, with a composite drainage net for the leachate collection and leachate detection systems, and a geogrid to enhance interface stability. The applicant has proposed to install the liner system in accordance with Rule 62-701.400(3)(c)1., F.A.C. with the exception of using in-situ soils for the liner side slopes in place of the six-inch subbase required by rule. The angles of the side slopes for Phase 2 are proposed at 2:1, horizontal to vertical, and their total area is approximately 3.0 acres. This portion of the Request for Alternate Procedure only applies to the liner on the side slopes in Phase 2.

3. The applicant has demonstrated that the proposed alternate design has a containment capability equal to or better than the established double liner design. Additionally, the applicant has demonstrated through calculations and proposed

methods of operation that the proposed alternate design will be stable.

4. The current permit for Phases 1 and 1A require a 75-foot setback from the toe of the covered slope to the landfill property boundary. This is also authorized by local ordinances, which require concurrence from the adjacent property owner, which is the Division of Forestry for the Withlacoochee State Forest. The Division of Forestry concurred with this usage, with conditions, on May 30, 1989.

5. Maintaining a consistent setback along the East side of the proposed landfill and the existing landfill will minimize operational problems and liner stresses associated with a severe jog in liner alignment between the two phases. This will provide an equivalent degree of protection as evidenced by the existing operation of Phase 1A.

CONCLUSIONS OF LAW

Rule 62-701.310, F.A.C., authorizes the approval by the Department of alternate procedures and requirements concerning solid waste management facilities. Based upon the above findings and the information contained in the Request for Alternate Procedures the Department concludes:

1. That the applicant has demonstrated a sufficient basis for the exception from the established requirements;

2. That the applicant has adequately demonstrated that the alternate procedures provide an equal degree of protection for

the public and the environment as the established requirements; and,

3. That the alternate procedures are at least as effective as the established requirements.

Upon consideration of the foregoing it is therefore ORDERED that the request for alternate procedures and requirements from Rules 62-701.400(3)(c)1. and 62-701.340(4)(c), F.A.C., are GRANTED, subject to the following conditions:

1. This Order does not authorize construction of any solid waste disposal unit until and unless permit number 21375-004-SC is issued.

2. This Order applies only to the Phase 2 liner side slopes and 75-foot setback distance on the East side of the Phase 2 expansion.

NOTICE OF RIGHTS

Pursuant to Section 403.815, F.S., and Rule 62-110.107, F.A.C., you are required to publish at your own expense the enclosed Notice of Proposed Agency Action. The notice shall be published one time only within 30 days in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. Where

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> The Department of Environmental Protection also gives Notice of its Intent to grant approval of alternate procedures pursuant to Rule 62-701.310, Florida Administrative Code (F.A.C.), as part of the proposed permit, to Citrus County Board of County Commissioners for use of an alternate landfill side slope liner subbase material on the Phase 2 expansion and alternate setback distance for the East side of the Phase 2 expansion at the Citrus County Central Landfill in Citrus County. The applicant has requested an exception from Rule 62-701.400(3)(c)1., F.A.C., which requires that the lower geomembrane of a double liner system for a landfill be placed directly on a subbase

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The Department's Order Granting Approval of Alternate Procedures and Requirements will be considered final, unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

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

Petitions by the applicant or any of the parties listed below must be filed within twenty-one days of receipt of this written notice. Petitions filed by other persons must be filed within twenty-one days of publication of the notice or receipt of

the written notice, whichever occurs first. The petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

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

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department File Number and the county in which the project is proposed;

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Department have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

In accordance with Section 120.573, F.S., the Department advises that mediation is not available in this case under the provisions of that statute. This does not prevent any interested parties from agreeing to other forms of alternate dispute resolution.

Any party to this order has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department in the Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within thirty days after this order is filed with the clerk of the Department.

DONE AND ORDERED this _____ day of January, 2003, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

_____

John M. Ruddell, Director
Division of Waste Management

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been sent by United States Mail to Mr. Brad Thorpe, Chairman, Citrus County Board of County Commissioners, Third Floor Masonic Building, 111 West Main Street, Inverness, Florida 34450, on this ____ day of January, 2003, in Tallahassee, Florida.

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department clerk, receipt of which is hereby acknowledged.

_____ _____
(Clerk) (date)

Copies furnished to:
Susan Metcalfe, Citrus Co.
John Banks, SCS Engineers
Chris McGuire, DEP/OGC
Susan Pelz, DEP/SWD
Richard Tedder, DEP/Tallahassee

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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In accordance with Section 120.573, F.S., the Department advises that mediation is not available in this case under the provisions of that statute. This does not prevent any interested parties from agreeing to other forms of alternate dispute resolution.

Environmental Consultants

3012 U.S. Highway 301 N
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

January 15, 2003
File No. 09199056.02

D.E.P.
JAN 15 2003
Southwest District Tampa

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

Subject: Citrus County Central Landfill - Phase 2 Expansion
Permit No.: #21375-004-SC, Citrus County

Dear Mr. Ford:

Enclosed, please find two sets of the following documents related to the above referenced project:

1. Project drawing Sheet 11

2. Technical specification Section 02930 Geocomposite

3. Calculations for the geogrid anchor trench on the south slope.

Please call if you have any questions related to this submittal.

Sincerely,

John A. Banks, P.E.
Project Director
SCS ENGINEERS

for Bruce J. Clark, P.E., DEE
Project Manager
SCS ENGINEERS

JAB/BJC:jab

Enclosures

cc: Susan Metcalfe, P.G., Citrus County (w/enclosures)

SCS ENGINEERS

CLIENT	PROJECT	JOB NO.
CFHS Co	Phase 2 Cell	09190512

SUBJECT	BY	DATE
Geogrid Anchor Trench North and South Sides	JAB	1/15/03
	CHECKED D. Arnold	DATE 1/15/03

North Anchor Trench same as Top Slope Anchor Trench

Connection to existing system

Assume $F_{TS} = 0$ (ie All Horizontal Anchor)

$F_{TB} > T_T = 2400$ lb/ft

@ 10 ft $F_{TB} = 3948$ lb/ft

$FS = \frac{3948}{2400} = 1.16$

@ 12 ft $F_{TB} = 2[105(0.5)(12)(\tan 25^\circ)(.8)]$

$= 4700$ lb/ft

$FS = \frac{4700}{2400} = 1.38$ OK

1-15-03

D.E.P.
JAN 15 2003
Southwest District Tampa

SECTION 02930 - GEOCOMPOSITE

PART 1 - GENERAL

1.01 SUMMARY

A. The WORK specified in this Section includes the manufacture, fabrication, testing, and installation of geocomposite (i.e., composite geonet). The Plans call for geocomposite, which is a three-layer material comprised of an inner core of tri-planar high density polyethylene (HDPE) geonet between an upper and lower layer of geotextile. The geotextile is thermally fused to both sides of the geonet.

B. All testing specified in this section is quality control (QC) testing and is the CONTRACTOR's responsibility and all costs shall be included in the bid price. The OWNER is responsible for the Quality Assurance (QA) testing described in the FDEP approved CQA Plan presented as Exhibit B to these specifications.

1.02 MANUFACTURER'S QUALIFICATIONS

A. Single Source: All products, or components of the product, used for construction shall be obtained from a single manufacturer. Fusion of the geonet and geotextile, for each product, shall be completed by a single manufacturer.

1.03 SUBMITTALS

A. Data showing manufacturer has a minimum of 5,000,000 ft^2 of experience.

B. Product Information: Submit the following information for each product, 14 calendar days prior to installation, to the ENGINEER for approval:

1. Prequalification: Submit independent laboratory test results demonstrating compliance with the material properties listed in Table 02930-1, Table 02930-2, and Table 02930-3. In addition, the manufacturer must provide a certificate of compliance which states that the material to be installed will use the same manufacturing techniques, resin type, and formulation as that for which test results are submitted.

2. Interface Shear Strength: CONTRACTOR is responsible for obtaining all materials needed to conduct the interface shear strength testing required for the actual materials to be used. This includes the geogrid and the textured HDPE geomembrane.

3. Roll Layout Drawings: At a minimum, include a roll layout drawing and installation details. The roll layout drawing shall be drawn to scale, and shall be coordinated with the geomembrane panel layout. Installation

details shall include cross sections, temporary anchorage, anchor trenches, and other terminations.

4. Protection from Wind and Weather: Submit methodology to protect each product from wind, dirt, and direct sunlight. At a minimum, the methodology shall reflect that materials shall be shipped and stored in rolls furnished at the manufacturing facility to prevent exposure of the geotextile to ultraviolet light, precipitation, moisture, mud, dirt, dust, puncture, or other damaging conditions.

5. Rolls of products shall not be stacked upon one another to the extent that deformation of the core occurs. If stored outdoors, they shall be elevated from the ground and protected with a waterproof cover. Outdoor storage should not be allowed to exceed six months. For storage for more than six months, a temporary enclosure shall be constructed so that the geocomposite rolls are stored inside an enclosed facility.

6. Material Data: Complete manufacturer's specifications, descriptive drawings, and literature for each product, including the product identification and suppliers of the polymer resin and recommended method for handling and storage of all materials prior to installation. Describe the manufacturer's methodology to comply with the requirements specified for manufacturing quality control.

7. Manufacturing Quality Control: Complete description of the manufacturer's formal quality control/quality assurance programs for manufacturing, fabricating, handling, installing, and testing. The description shall include, but not be limited to, polymer resin supplier and product identification, acceptance testing, production testing, installation inspection, installation techniques, repairs, and acceptance. The document shall include a complete description of methods for both roll end and roll side joining.

8. Installation Instructions: Samples of the product with a complete set of specifications, and manufacturer's complete written instructions for storage, handling, installation and joining.

9. Qualifications: Manufacturer's qualifications for each product.

10. Geonet Resin: The name of the HDPE resin supplier, the production plant, the brand name, and name of resin used to manufacture the product.

C. Manufacturing Quality Control: The CONTRACTOR shall submit quality control test reports within 48 hours of completion of the test. Submit the following manufacturing quality control information to the QA Consultant prior to material shipment:

1. Production Dates: Submit statement of production dates for each product.

2. Test Reports: See Part 2 of this Section for tests and test frequencies.

PART 2 - PRODUCTS

2.01 GEONET

A. The geonet shall be (Tri-planar 770-2) as manufactured by (Tenax Corporation) or ENGINEER approved substitution.

B. The geonet shall be manufactured by extruding three sets of polyethylene strands to form a tri-planar structure consisting of a thick vertical rib with diagonally placed top and bottom ribs. The Geonet shall meet the requirements listed in Table 02930-1.

C. The geonet shall consist of new, first-quality products designed and manufactured specifically for the intended purpose designated in this specification, as satisfactorily demonstrated by prior use. The geonet shall contain stabilizers to prevent ultraviolet light degradation. The HDPE shall be unmodified HDPE containing no plasticizer, fillers, chemical additives, reclaimed polymers, or extenders. Approximately 2 percent carbon black shall be added to the resin for ultraviolet resistance. The only other allowable compound elements shall be anti-oxidants and heat stabilizers, of which up to 1.5 percent total, as required for manufacturing, may be added.

2.02 GEOTEXTILE

A. The geotextile shall meet the requirements listed in Table 02930-2.

2.03 GEOCOMPOSITE

A. The final product material shall meet the requirements listed in Table 02930-3.

B. Manufacturer: The geocomposite shall be fabricated by heat bonding the geotextile to both sides of the geonet. No burn-through of geotextiles shall be permitted. No glue or adhesive shall be permitted. The bond between the geotextile and the geonet shall meet the requirements listed in Table 02930-3.

C. Labels: Geocomposite shall be supplied in rolls, marked or tagged with the following information:

1. Manufacturer's name.

2. Product identification.

3. Lot number.

4. Roll number.

5. Roll dimensions.

D. Roll Dimensions: The product shall be supplied as a continuous sheet with no factory seams. During installation, the roll length shall be maximized to provide the largest manageable roll for the fewest field seams.

PART 3 - EXECUTION

3.01 MANUFACTURING QUALITY CONTROL TESTING (For Each Product)

A. All of the specified tests are the CONTRACTOR's responsibility. Testing during manufacturing shall be accomplished by the manufacturer's laboratory.

B. HDPE resin shall be tested at a frequency of one test per resin batch for compliance with Table 02930-1. One batch is defined as one rail car load of resin. The finished rolls shall be identified by a roll number corresponding to the resin batch used. The following minimum test frequencies shall be observed:

Property	Test Method	Minimum Frequency
Polymer Density	ASTM D 1505	1 per batch
Polymer Melt Index	ASTM D 1238	1 per batch

C. The geonet shall be tested during manufacturing for compliance with Table 02930-1. The following minimum test frequencies shall be observed:

Property	Test Method	Minimum Frequency
Polymer Density	ASTM D 1505	1/100,000 sf
Mass per Unit Area	ASTM D 5261	1/100,000 sf
Thickness	ASTM D 5199	1/100,000 sf

D. Geotextile shall be tested during manufacturing for compliance with Table 02930-2. The following minimum test frequencies shall be observed:

Property	Test Method	Minimum Frequency
(Mass) per Unit Area	ASTM D 5261	1/100,000 sf
Grab Strength	ASTM D 4632	1/100,000 sf
Trapezoidal Tear Strength	ASTM D 4533	1/100,000 sf
Burst Strength	ASTM D 3786	1/100,000 sf
Puncture Resistance	ASTM D 4833	1/100,000 sf
Thickness	ASTM D 1777	1/100,000 sf

E. Upon fusion of the geotextile and geonet, the product shall be tested during manufacturing for compliance with Table 02930-3. The following minimum test frequencies shall be observed:

Property	Test Method	Minimum Frequency
Ply Adhesion (minimum)	ASTM F 904	1/100,000 sf

Transmissivity	ASTM 04716	1/200,000 sf

F. The CONTRACTOR shall inspect every roll for bonding integrity between the geonet and the geotextile. All poorly bonded and/or delaminated material shall be rejected.

3.02 FIELD QUALITY CONTROL

A. Field Joining: The CONTRACTOR shall inspect all roll end joints and roll side joints. The results of these inspections shall be documented in the daily reports. Field joints shall comply with the requirements of Table 02930-4.

B. Quality Control Reporting Procedures: All information regarding the installation of the geocomposite will be recorded in the CONTRACTOR's daily report. This information shall include:

1. Reference to product submittals, certifications, substitutions and approvals.

2. Dates of installation.

3. Location and quantity of materials installed.

4. Statement of whether materials were installed in accordance with the Technical Specifications.

5. Additional information as required.

6. All product certifications, filed appropriately for future reference.

3.03 MANUFACTURER'S RECOMMENDATIONS

A. Each Product shall be installed in accordance with both the plans and specifications and the manufacturer's recommendations. In case of a conflict between these documents, the more stringent requirements shall apply.

3.04 CLEANLINESS

A. The interface between the geocomposite and the geomembrane shall be clean, dry, and free of dirt and dust during installation. If dirt, dust, or water are present, the CONTRACTOR shall clean the work area. Products which are clogged with silts shall be discarded and shall not be installed.

3.05 ROLL JOINING METHODS

A. Table 02903-4 summarizes acceptable roll joining methods.

B. Lap Seams: The bottom layer of geotextile shall be lap seamed. Lap seaming is accomplished by overlapping adjacent geotextile a minimum of 6 inches.

C. Nylon Ties: The material shall be overlapped and fastened with nylon ties. Nylon ties shall be yellow or white in color to facilitate inspection.

D. Machine Sewn Seams: Sewing shall be accomplished with a lock-stitching sewing machine. The thread shall be polymeric thread which complies with manufacturer's recommendations. The seam shall be placed at a minimum of 4 inches from the geotextile edges. The finished seam shall be folded to one side.

3.06 ROLL JOINING REQUIREMENTS

A. The minimum requirements for joining rolls are specified in Table 02930-4.

B. Roll Ends: The end of each roll of geocomposite shall be overlapped a minimum of six inches. The geonet portion shall be shingled, with the uphill end overlapping the downhill end. The geonet portion shall be tied 2 feet on center at a minimum. The bottom layer of geotextile shall be overlapped a minimum of 6 inches. The upper layer of geotextile shall be machine sewn. Where the geocomposite is to terminate, the upper geotextile shall be folded over the ends with a minimum of 12 inches of geotextile placed under the geocomposite.

C. Adjacent Roll Sides: At roll sides, the material shall be overlapped a minimum of 4 inches. The bottom geotextile shall be overlapped. The geonet shall be overlapped and tied a minimum of 5 feet on center. The upper layer of geotextile shall be machine sewn.

3.07 INSTALLATION

A. The product shall be installed in accordance with the manufacturer's recommendations or as specified herein, whichever is more stringent.

B. Orientation:

1. The Geocomposite shall be rolled down the slope in such a manner as to continually keep the material in tension. If necessary, the material shall be positioned by hand after unrolling to minimize wrinkles. The material shall not be unrolled laterally (i.e., across the slope).

C. The CONTRACTOR shall provide sufficient ballast and temporary anchorage to protect the product. The CONTRACTOR is responsible for protecting the product from damage due to weather at all times.

D. Physical Damage:

1. Personnel walking on the product shall not engage in activities or wear footwear that could damage the material. Smoking shall not be permitted on or near the geosynthetics.

2. Vehicular traffic shall not be permitted on the geosynthetics. Equipment shall not damage the material by handling, trafficking, or leakage of hydrocarbons. The surface shall not be used as a work area for preparing patches, storing tools and supplies, or other uses.

E. Bridging: The product shall be installed to avoid bridging.

F. Corners: In corners, where overlaps between rolls are staggered, an extra roll shall be installed from the top to the bottom of the slope.

G. Weather Protection: Each product shall be protected from direct sunlight or precipitation prior to installation. After installation this product shall not be exposed to direct sunlight and shall be protected within 30 days of installation. Product which is exposed to direct sunlight for 30 days or more shall be replaced at the CONTRACTOR's expense.

H. The geocomposite shall be properly anchored within the anchor trench to resist sliding. Anchor trench compacting equipment shall not come into direct contact with the geocomposite.

I. If there are any obstructions (such as outlet pipes or monitoring wells) while deploying the geocomposite, the geocomposite shall be cut to fit around the obstruction. Care should be taken as to make sure there is no gap between the obstruction and the geocomposite. The geocomposite should be cut in a way that the lower geotextile and geonet core is in contact with the obstruction and the upper geotextile has an excess overhang. There must be enough of the upper geotextile to be able to tuck the upper geotextile back under the geocomposite to protect the exposed geonet core. This will prevent any soil particles from migrating into the geonet core flow channels.

J. It is the CONTRACTOR's responsibility to provide all labor and materials for protection of the product during the period of time prior to installation of overlying soils. The CONTRACTOR's protection method is subject to the approval of the ENGINEER.

3.08 DRAINAGE SAND PLACEMENT

A. CONTRACTOR shall place 24 inches of material meeting the requirements for Select Sand as specified in Section -2220, in the bottom floor of Phase 2 as shown on the Drawings.

B. CONTRACTOR shall construct temporary soil ramps as required to access the floor of the landfill cell to place select sand. An access ramp shall be constructed from the end of the paved ramp into the cell.

C. Low ground pressure equipment shall be used to place and spread the select sand. CONTRACTOR shall use extreme care when working above the geomembrane liner. A minimum of 18 inches of soil shall be between the low ground pressure

equipment and the geomembrane at all times. Any damage to the membrane or geocomposite shall be repaired by CONTRACTOR at no additional cost to OWNER.

D. In applying fill material, no equipment can drive directly across geocomposite. The specified fill material shall be placed and spread utilizing vehicles with a low ground pressure (LGP). The cover soil shall be placed on the geocomposite from the bottom of the slope proceeding upwards and in a manner, which prevents instability of the cover soil or damage to the geocomposite. Placement of the cover soil shall proceed immediately following placement and inspection of the geocomposite. Unless otherwise specified by the Engineer, all equipment for spreading fill material overlying the geocomposite shall comply with the following:

Maximum Equipment Ground Pressure Thickness (psi)	Minimum Separation (inches)
<5	12
5-10	18
>10	24

3.09 REPAIRS

A. Limitations - In general, damaged, soiled, or delaminated products shall be discarded. Products which have major damage, which require extensive repairs or replacement, shall be discarded at the CONTRACTOR's expense.

B. Minor Damage - Minor damage is defined as a hole 2 inches or smaller in diameter in the product. Minor damage shall be repaired by snipping out protruding geonet and machine sewing or thermal bonding a geotextile patch over the hole. The patch shall be a minimum of 12 inches larger that the damaged area in all directions. If thermal bonding is conducted, care shall be taken to prevent excessive heat damage to the surrounding geosythetics.

C. Major Damage - Major damage is defined as a hole 2 inches diameter or larger in diameter through the product. Major damage shall be repaired by replacing the entire panel width.

TABLE 02930-1. GEONET PROPERTIES

Property	Qualifier	Unit	Test Method	Specified Value
Polymer Density, Resin	Min.	g/cm^3	ASTM D 1505	0.930
Polymer Density, Resin Plus Carbon Black	Min	g/cm^3	ASTM D 1505	0.940
Polymer Melt Index	Min	g/10 min.	ASTM D 1238	1.0
Carbon Black	Range	Percent	ASTM D 1603	2-3
Nominal Thickness	Min	Inches	ASTM D 5199	0.275
Mass per Unit Area	Min	$lbs/1000\ ft^2$	ASTM D 5261	270
Tensile Strength (machine direction)	Min	lbs/in	ASTM D 5035	100

TABLE 02930-2 GEOTEXTILE PROPERTIES

Property	Qualifier	Unit	Test Method	Specified Value
Fabric Weight	MARV	oz/yd^2	ASTM D 3776	6.0
Thickness	MARV	Mils	ASTM D 1777	55
Grab Strength	MARV	Lbs	ASTM D 4632	150
Grab Elongation (at break)	MARV	Percent	ASTM D 4632	50
Trapezoid Tear Strength	MARV	Lbs	ASTM D 4533	65
Puncture Resistance	MARV	Lbs	ASTM D 4833	90
Mullen Burst Strength	MARV	psi	ASTM D 3786	325
Water Flow Rate	MARV	gpm/ft^2	ASTM D 4491	110
AOS	Max.	sieve size(mm)	ASTM D 4751	#70 (0.210)

MARV = Minimum Average Roll Value

TABLE 02930-3. GEOCOMPOSITE PROPERTIES

Property	Qualifier	Unit	Test Method	Specified Value
Peel Strength	Average	lbs/inch	GRI GC7	1.0
Transmissivity (Note 1)	Minimum	m^2/s	ASTM D 4716	1.8×10^{-3}
Tensile Strength (MD)	Average	lb/ft	ASTM D 4595	2380
Geocomposite Friction Angle with:				
Geogrid supplied under Section 02950 (Note 2)	Minimum	Degrees	ASTM D 5321	12°
Textured HDPE Geomembrane supplied under Section 02776 (Note 2)	Minimum	Degrees	ASTM D 5321	16.5°

1. Per ASTM D4716-99 with a normal stress of 15,000 psf with a gradient of 0.1; a profile of steel plate, uniform sand, geocomposite, 60 mil HDPE geomembrane, steel plate, and a seating period of 100 hours. Test data from the manufacturer using the identical testing configuration and parameter shall indicate that transmissivity values do not fall below the minimum value of Table 02930-2.
2. Shear box testing conducted under saturated conditions and normal stress of 100, 200, 500 psf.

TABLE 02930-4. GEOCOMPOSITE JOINING METHODS

Location	Layer	Joining Method	Min. Overlap	Tying Frequency
Roll End (See Note 1)	Upper geotextile	Machine sewing	4"	N/A
	Geonet	Nylon ties	6"	2' on center
	Lower geotextile	overlap	6"	N/A
Roll Side	Upper geotextile	Machine sewing	4"	N/A
	Geonet	Nylon ties	4"	5' on center
	Lower geotextile	overlap	6"	N/A
Repair of minor damage (See Note 2)	Upper geotextile	Machine sewing/ thermal bonding	12"	N/A
	Geonet	N/A	N/A	N/A

1. At termination of geocomposite fold over upper geotextile as defined in Part 3.06.
2. Minor damage is defined in Part 3.08.

END OF SECTION

Environmental Consultants

3012 U.S. Highway 301 N
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

January 14, 2003
File No. 09199056.02

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

Subject: Citrus County Central Landfill - Phase 2 Expansion
Permit No.: #21375-004-SC, Citrus County

Dear Mr. Ford:

Enclosed, please find two sets of the following documents related to the above referenced project:

1. Project drawings
2. Project technical specifications
3. Construction quality assurance manual
4. Calculations for the geogrid anchor trench.

Please call if you have any questions related to this submittal.

Sincerely,

1/14/03

John A. Banks, P.E.
Project Director
SCS ENGINEERS

Bruce J. Clark, P.E., DEE
Project Manager
SCS ENGINEERS

JAB/BJC:jab

Enclosures

cc: Susan Metcalfe, P.G., Citrus County (w/enclosures)

D.E.P.
JAN 14 2003
Southwest District Tampa

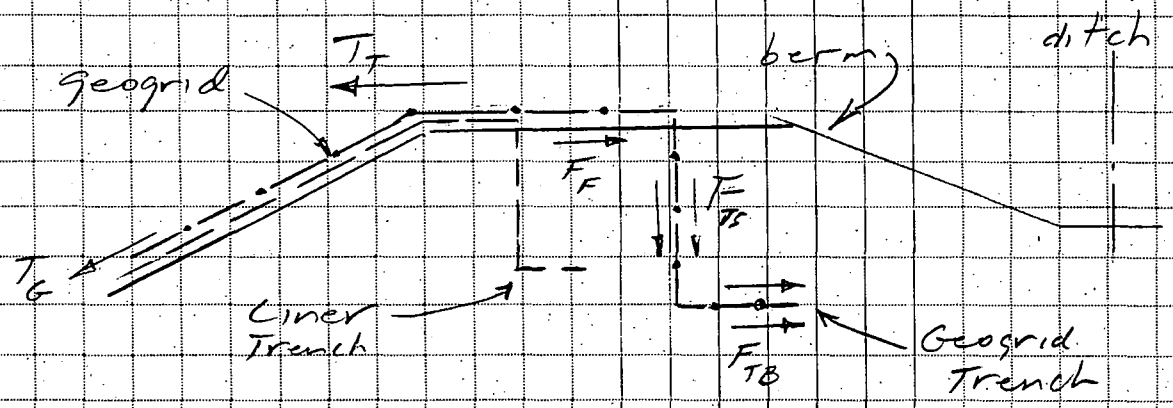
SCS ENGINEERS

CLIENT	PROJECT	JOB NO.
CITRUS	PHASE 2 CELL	09199056.02

SUBJECT	BY	DATE
ANCHOR TRENCH FOR GEOGRID REINFORCING	BTC	1/14/03
	CHECKED JB	DATE 1/14/03

Determine necessary anchor trench configuration to hold geogrid reinforcement.
(REF: TENSAR DESIGN MANUAL)

Typical Configuration



T_T = resulting force on trench

T_G = force acting on geogrid from waste, equipment, etc.

F_F = Overburden friction force on geogrid

F_{TS} = soil friction on geogrid along sides of trench

F_{TB} = soil friction on geogrid along bottom of trench

$$T_T = T_G - F_F$$

$$T_T \leq F_{TS} + F_{TB}$$

$$F_F = \gamma_{soil} Z_{soil} L_1 \tan\phi_c' + 2\left[\gamma_{soil} Z_{soil} L_2 \tan\phi_f' C_i\right]$$

γ_{soil} = unit weight cover soil
Z_{soil} = depth of soil cover
L_1 = length of geogrid over liner
L_2 = length of geogrid beyond liner trench
ϕ_c' = critical interface friction angle

BRUCE J. CLARK
CERTIFICATE NO. 62
STATE OF FLORIDA
PROFESSIONAL ENGINEER

CLIENT	PROJECT	JOB NO.
CITRUS	PHASE 2 CELL	

SUBJECT	BY	DATE
ANCHOR TRENCH FOR	BJC	1/14/03
GEOGRID	CHECKED JB	DATE 1/14/03

ϕ'_f = friction angle of base soil = 25° (conservative)
C_i = soil / geogrid interaction coefficient (Tensar recommends 0.8)

- Friction force acts on both sides of the trench:

$$F_{ST} = 2\left[\gamma_{soil}\left(z_{soil} + \frac{d_{at}}{2}\right)(K_o \tan\phi'_f)(d_{at})(C_i)\right]$$

d_{at} = depth of anchor trench

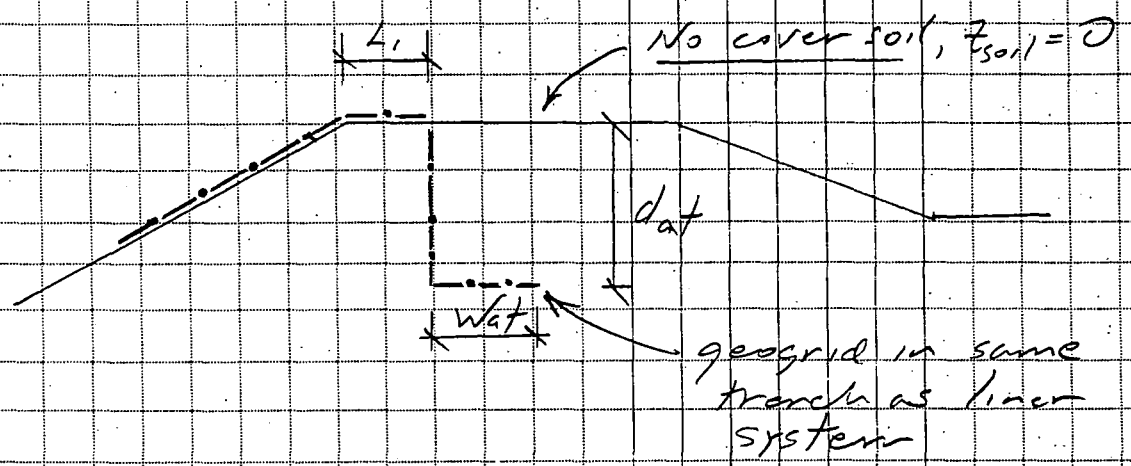
K_o = earth pressure coefficient $(1 - \sin\phi'_f)$

- Friction force at bottom of trench:

$$F_{TB} = 2\left[\gamma_{soil}(z_{soil} + d_{at})(W_{at})(\tan\phi'_f)(C_i)\right]$$

W_{at} = width of anchor trench

Assume $L_2 = 0$ $z_{soil} = 0$



CASE I:

Geogrid in same anchor trench as lining system

$L_1 = 3'$ $W_{at} = 2'$

$d_{at} = 4'$

CLIENT	PROJECT	JOB NO.
CITRUS	PHASE 2 CELL	

SUBJECT	BY	DATE
ANCHOR TRENCH FOR GEOGRID	BJC	1/14/03
	CHECKED	DATE

If $Z_{soil} = 0$, then $F_E = 0$

$T_T = T_G$

$\therefore T_G \leq 2F_{TS} + 2F_{TB}$ (all of the geogrid pull-out force must be resisted by friction force in anchor trench)

$$F_{TS} = 2\left[105\left(0 + \frac{4}{2}\right)(1 - \sin 25^\circ)(\tan 25^\circ)(4)(0.8)\right]$$

$$= 2\left[105(2)(0.58)(0.47)(4)(0.8)\right]$$

$$= 2(183)$$

$$= \underline{366 \text{ lb/ft}}$$

$$F_{TB} = 2\left[105\left(0 + 4\right)(2)(\tan 25^\circ)(0.8)\right]$$

$$= 2\left[105(4)(2)(0.47)(0.8)\right]$$

$$= 2(315)$$

$$= 632 \text{ lb/ft}$$

$$T_T = 3{,}400 \text{ lb/ft}$$

$$T_T > F_{ST} + F_{TB}$$

$\therefore$ Must provide separate anchor trench for geogrid

CLIENT	PROJECT	JOB NO.
CITRUS	PHASE 2 CELL	

SUBJECT	BY	DATE
ANCHOR TRENCH FOR	BJC	1/14/03
GEOGRID	CHECKED	DATE
	JB	1/14/03

CASE II

Geogrid is anchored in separate trench (see sheet 5).

$$F_{TS} = 2[105(0 + 5/2)(1-\sin 25°)(\tan 25°)(5)(0.8)]$$

$$= 2[105(2.5)(0.58)(0.47)(5)(0.8)]$$

$$= 2[286]$$

$$= \underline{572 \text{ lb/ft}}$$

$$F_{TB} = 2[105(0+5)(10)(\tan 25°)(0.8)]$$

$$= 2[1,974]$$

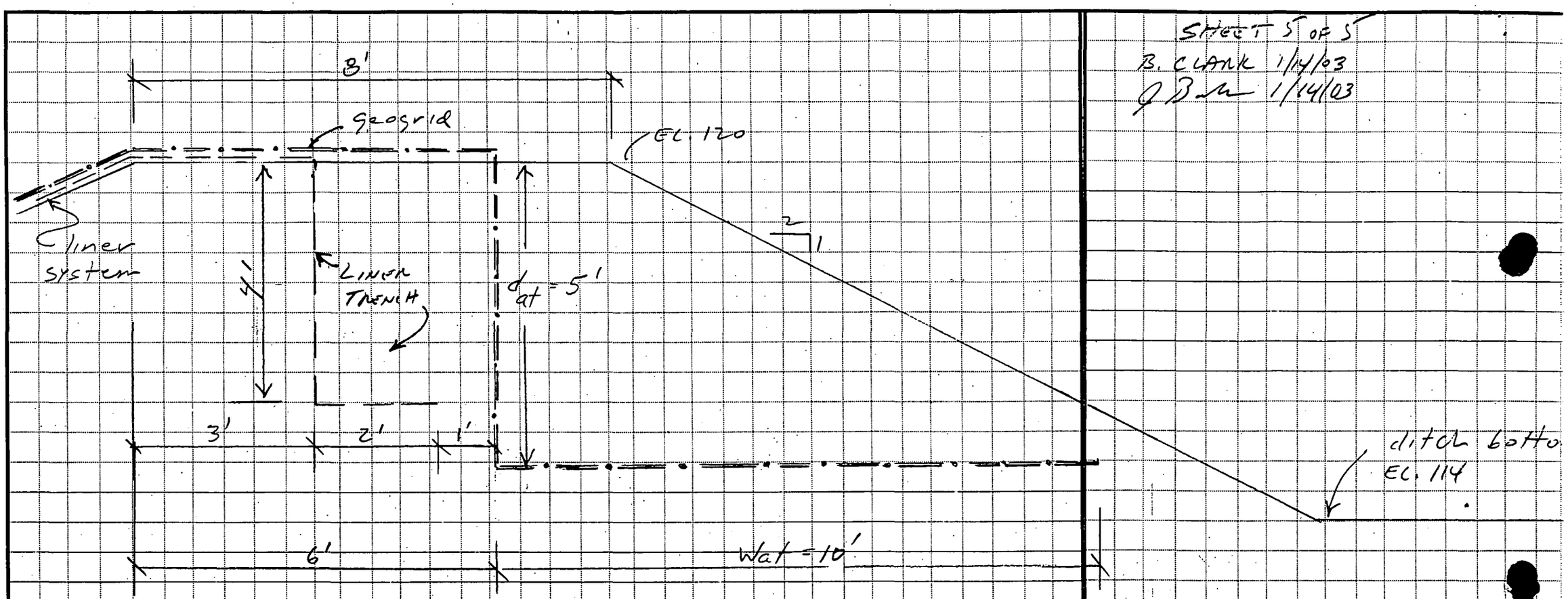
$$= \underline{3,948 \text{ lb/ft}}$$

$$F_{TS} + F_{TB} = 572 + 3948 = \underline{4,520 \text{ lb/ft}}$$

$$\therefore T_T = 3,400 \text{ lb/ft} < F_{TS} + F_{TB} \quad \underline{\text{O.K.}}$$

$$FS = \frac{4,520}{3,400} = \underline{1.33} \quad \underline{\text{O.K.}}$$

SHEET 5 OF 5
B. CLARK 1/14/03
[illegible] 1/14/03



CITRUS COUNTY
PHASE 2 CELL EXPANSION

SCALE:
1" = 2'

GEOGRID REINFORCEMENT ANCHORING

Environmental Consultants

3012 U.S. Highway 301 N.
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

December 16, 2002
File No. 09199056.02

D.E.P.
JAN 0 2 2003
Southwest District Tampa

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

Subject: Citrus County Central Landfill - Phase 2 Expansion
Permit No.: #21375-004-SC, Citrus County

Dear Mr. Ford:

On behalf of Citrus County, SCS Engineers (SCS) submits the following responses to your request for additional information in a letter dated November 15, 2002. For ease of review, each FDEP comment is reiterated in bold type, followed by our response.

We have provided revised submittals, or replacement pages to the submittals, using a ~~strikethrough~~ and <u>underline</u> format, to facilitate review. Enclosed are one original and two copies of all revisions. The following documents are enclosed:

1. Calculations related to Liner Stress on the 2:1 side slopes.

2. Calculations related to the size of the leak detection sump.

3. The following revised specifications sections:

   Section 02212 - Low Permeability Soil
   Section 02220 - Excavation, Backfill, Fill, and Grading
   Section 02776 - HDPE Liner
   Section 02930 - Geocomposite

4. The following new specification section: Section 02950 - Geogrid.

5. Revised Draft Liner CQA Plan.

6. Revised Drawing Sheet Nos. 3,5,7,8,9,10,11,14, and 15.

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

1. **62-701.340(4)(c). Approval of the requested alternate procedure for the reduced setback of less than 100 feet is requested.**

   Response: It is our understanding that approval of the alternate procedure will be received soon. This approval will be provided to you upon receipt.

2. **62-701.320(10). List and reaffirm those referenced parts of the previously provided 1998 and July 2001 groundwater monitoring reports that are still valid. Those parts that are no longer valid should be deleted or replaced.**

   Response: There are no changes to the Groundwater Monitoring Plan submitted by PSB&J on 1998 except as revised by revisions included in biennial reviews. The current revisions were submitted in April, July, September and most recently on October 16, 2001 by Jones Edmonds and Associates.

3. **62-701.320(7)(f)6. Site plan revisions are requested to show the additional information as discussed with SCS and as listed below:**

   a. **Sheet 5, Section B revised to match the detail on Sheet 11;**

   b. **Sheet 7, Detail 1 revised to show the leachate sampling port on the leachate manifold piping;**

   c. **Sheet 8. Detail B revised to note the cutting and opening of the geotextile between the leachate collection piping and the gravel in the stamp, and to show the geotextile between the primary liner and the gravel in the leak detection sump;**

   d. **Sheet 11, Detail F revised to show detail for the geonet overlap at the toe of the east and west side slopes with notes for installation and the geonet orientation;**

   e. **Sheet 14 revised to include all stormwater collection details;**

   f. **Sheet 15, Detail A revised to show the leachate collection and leak detection systems across the internal terrace, with a slope to promote drainage.**

   Response: Please see the revised Construction Drawings that address each of the listed issues.

4. **62-701.400(3)(a)1. The rationale for calculating the factor of safety for the internal sideslopes is unclear. Technical documents are requested that support the assumption that the "resistance" to the downslope force (used for calculating the factor of safety) is the sum of the individual resistances provided by each component rather than the resistance of the weakest component (being the geonet) . A copy of each of the "technical reference reports on the subject of liner analysis on side slopes" mentioned in Section H.2.a.1 are requested. *Each component of the liner system must be able to withstand the stresses imposed by the component's own weight with the weight of the 24-inch sand layer, and any potential down-drag forces from the ongoing compression of the waste, on 2H:IV side slopes with the condition of operating heavy equipment for spreading and compaction. Design calculations must be based on friction angles from published data and confirmed by the actual results from shear box tests for the proposed design.***

Response: Please see the enclosed calculations for liner system stress. We have included the use of a geogrid on the 2:1 sideslopes to add an additional factor of safety. The resulting calculations show that no stress is applied to any of the geosynthetic liner system materials. The geogrid specified can withstand the downward force calculated using methods prescribed by Koerner plus the addition of the landfill compactor and maintain at least a 1.5 FS with only 5-percent strain on the material. A portion of the downward force is transferred to the bottom interface due to frictional forces within the liner system layers. The friction angles of the interface between the geogrid and the geocomposite, geocomposite and textured HDPE 60-mil geomembrane, and the textured geomembrane and the bottom soils will be measured with the actual materials to be used on the project. The resulting values will be compared to the values used in these calculations and the factor of safety will be verified.

5. **62-701.400(3)(c)1. A description of the procedures to be used for constructing the bottom and side slopes of the sump, and the related method and frequency of testing on these slopes, are requested.**

Response: Section 02212 of the Specifications is revised to include the requirement to perform CQC testing specifically in the sump area for liner sub-base. See note 8 on Table 02212-1.

6. **62-701.400(3)(c)2. An Action Leakage Rate (ALR) that is not based on an "average" leakage rate is requested. The referenced specific condition 17 in the current operation permit is not based on an "average" leakage rate.**

Response: The Action Leakage Rate of 100 gallons per day is equivalent to 600 gallons per day based on six acres of lined area. The effective volume of the leak detection sump is 600 gallons when using a 1-ft. operating zone (see attached calculations). Thus if the Action Leakage Rate is exceeded the pump should cycle more than one time in a 24-hour period, thus pumping more than 600 gallons during this period of time. If the actual leakage rate is less than 600 gallons it will take longer to cycle the pump; however, when the pump does come on, it should pump approximately 600 gallons per cycle. In summary, as long as the pump does not pump more than 600 gallons in any 24-hour period, the Action Leakage Rate has not been exceeded.

7. **62-701.400(3)(d) and (e). 1) Revisions to the project specifications are requested to demonstrate compliance with rules 62—701.400(3) (d)7., 10., and 11. 2) Revisions to Section 3.02D are requested to indicate that the test results shall not be averaged unless specified in SRI CMI3. 3) The coefficient of interface friction angle of 25 degrees as provided in Table 02930-2 is less then the 26.6 degree angle for the proposed side slope, therefore the composite geonet appears to be an unstable component of the liner system. Revision to Table 02930-2 to provide the minimum design interface friction angle, and related calculations for its factor of safety, are requested.**

Response: Please see the enclosed revised specifications for geomembrane, geogrid, and geocomposite products that incorporate the requirements of Rule 62-701.400(3)(d) 7., 10., and 11., FAC. Please note that the angle of the slope and the friction angle of the materials are related only by the fact that the steeper the slope angle the lower the

normal load on the material will be. The lower the normal load, the smaller the friction resistance will be. The fact that the slope angle is steeper than a given friction angle does not mean there will necessarily be a failure or stress applied to a material. The entire calculation must be evaluated to make this determination.

8. **62-701.400(4)(a). The design of the leachate collection system and leak detection system over the internal terrace is requested.**

Response: Please see the revised Detail A on Sheet 15 of the Drawings.

9. **62-701.400(4)(b). 1) Specifications including the gradation and maximum percent organic matter for the sand (drainage layer and protective material) to demonstrate chemical compatibility and adequate hydraulic conductivity are requested. 2) The design detail for the geonet overlap at the toe of the east and west side slopes with notes for installation and the geonet orientation are requested.**

Response: 1) The specification Section 2220, Excavation, Backfill, Fill, and Grading has been revised to include a hydraulic conductivity requirement, a maximum fines content, a maximum organics content, and chemical compatibility requirements for the protective sand layer (Select Sand). As discussed, a gradation requirement is not necessary to achieve the desired function. A requirement to remove fines that may accumulate on the surface of the protective sand has also been added. 2) Please see the new detail and notes on Sheet 8 of the Drawings.

10. **62-701.400(7). Revisions to the CQA Plan are requested to provide construction quality assurance procedures including material sampling and conformance testing for each component of the liner system including the composite geonet, leachate piping, gravel, and sand layer.**

Response: Please see the revisions to the enclosed CQA plan.

11. **(62-701.400(9)(b). Revisions to the project specifications are requested to require a site plan (to be submitted by the contractor for approval by the engineer) to show the location of the proposed temporary lined soil dike, including design details with elevations, to prevent stormwater from Phase 1 and 1A from entering Phase 2.**

Response: Please see the notes added to Sheet 3 of the Drawings and revision to the Earthwork specification (Section 02220).

12. **62-709.320. A site plan with the layout and design for the yard trash processing facility to demonstrate compliance with this rule is requested.**

Response: The Yard Waste Processing Area (YWPA) is permitted under a separate registration. The proposed work will not effect the ability for the facility to stay in compliance with the applicable requirements. Future changes to the facility's layout will be address at the time of permit renewal for the YWPA.

Please provide all responses that relate to engineering required for construction signed and sealed by a professional engineer. Responses that relate to the facility operation should be included as part of the Operations Plan.

An original and two copies are provided as requested. Please call if you have any questions.

Sincerely,

12/30/02

John A. Banks, P.E.
Project Director
SCS ENGINEERS

Bruce J. Clark, P.E., DEE
Project Manager
SCS ENGINEERS

JAB/BJC:jlh

Enclosures

cc: Lee Martin, P.E., FDEP Tallahassee (w/o enclosures)
Susan Pelz, P.E., FDEP Tampa (w/enclosures)
Susan Metcalfe, P.G., Citrus County (w/enclosures)

Environmental Consultants

3012 U.S. Highway 301 No.
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

December 16, 2002
File No. 09199056.02

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

Subject: Citrus County Central Landfill - Phase 2 Expansion
Permit No.: #21375-004-SC, Citrus County

Dear Mr. Ford:

On behalf of Citrus County, SCS Engineers (SCS) submits the following responses to your request for additional information in a letter dated November 15, 2002. For ease of review, each FDEP comment is reiterated in bold type, followed by our response.

We have provided revised submittals, or replacement pages to the submittals, using a ~~strikethrough~~ and underline format, to facilitate review. Enclosed are one original and two copies of all revisions. The following documents are enclosed:

1. Calculations related to Liner Stress on the 2:1 side slopes.

2. Calculations related to the size of the leak detection sump.

3. The following revised specifications sections:

   Section 02212 - Low Permeability Soil
   Section 02220 - Excavation, Backfill, Fill, and Grading
   Section 02776 - HDPE Liner
   Section 02930 - Geocomposite

4. The following new specification section: Section 02950 - Geogrid.

5. Revised Draft Liner CQA Plan.

6. Revised Drawing Sheet Nos. 3,5,7,8,9,10,11,14, and 15.

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

1. **62-701.340(4)(c). Approval of the requested alternate procedure for the reduced setback of less than 100 feet is requested.**

   Response: It is our understanding that approval of the alternate procedure will be received soon. This approval will be provided to you upon receipt.

2. **62-701.320(10). List and reaffirm those referenced parts of the previously provided 1998 and July 2001 groundwater monitoring reports that are still valid. Those parts that are no longer valid should be deleted or replaced.**

   Response: There are no changes to the Groundwater Monitoring Plan submitted by PSB&J on 1998 except as revised by revisions included in biennial reviews. The current revisions were submitted in April, July, September and most recently on October 16, 2001 by Jones Edmonds and Associates.

3. **62-701.320(7)(f)6. Site plan revisions are requested to show the additional information as discussed with SCS and as listed below:**

   a. **Sheet 5, Section B revised to match the detail on Sheet 11;**

   b. **Sheet 7, Detail 1 revised to show the leachate sampling port on the leachate manifold piping;**

   c. **Sheet 8. Detail B revised to note the cutting and opening of the geotextile between the leachate collection piping and the gravel in the stamp, and to show the geotextile between the primary liner and the gravel in the leak detection sump;**

   d. **Sheet 11, Detail F revised to show detail for the geonet overlap at the toe of the east and west side slopes with notes for installation and the geonet orientation;**

   e. **Sheet 14 revised to include all stormwater collection details;**

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Sincerely,

12-16-02

John A. Banks, P.E.
Project Director
SCS ENGINEERS

Bruce J. Clark, P.E., DEE
Project Manager
SCS ENGINEERS

JAB/BJC:jlh

Enclosures

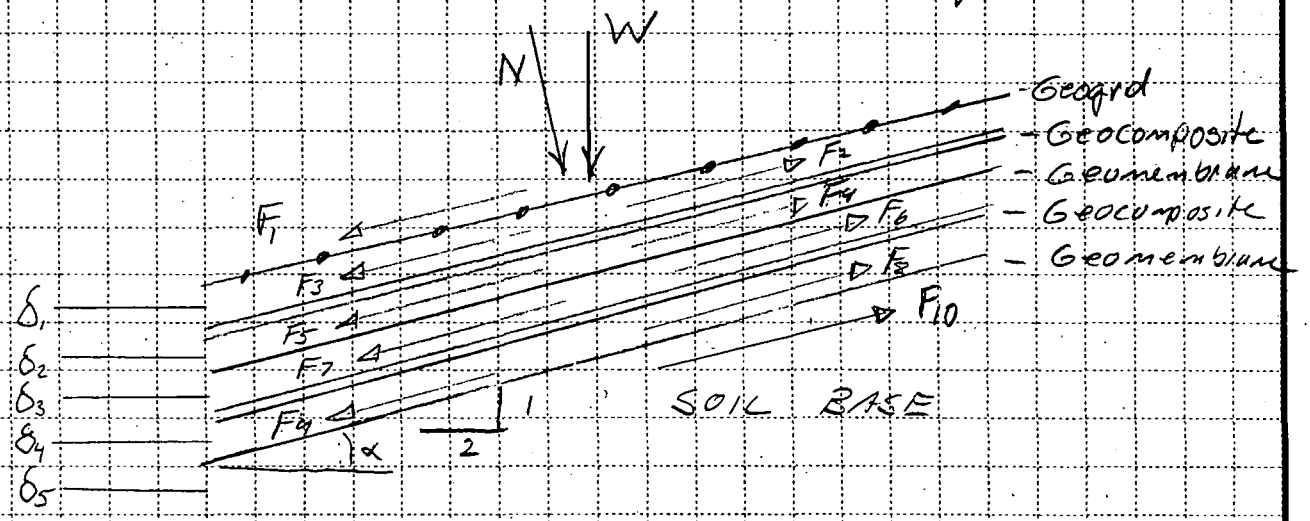
cc: Lee Martin, P.E., FDEP Tallahassee (w/o enclosures)
Susan Pelz, P.E., FDEP Tampa (w/enclosures)
Susan Metcalfe, P.G., Citrus County (w/enclosures)

Liner Stress Analysis - Weight of
Liner, Protective Sand, Refuse, and Equipment Load on Side Slope

JOHN A. BANKS
CERTIFICATE
NO. 39387
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

SCS ENGINEERS

CLIENT Citrus Co.	PROJECT Phase 2 Expansion	JOB NO. 09199056.02
SUBJECT Liner Stress Analysis	BY JAB	DATE 12-6-02
	CHECKED GJS	DATE 12/16/02



Given: Slope angle $\alpha = 26.6°$

δ_1 = Friction Angle Between the Geogrid and the Geocomposite $\approx 12°$

$\delta_2 = \delta_3 = \delta_4$ = Friction Angle Between Geocomposite and Textured HDPE Liner $\approx 15-18°$

δ_5 = Friction Angle Between Textured HDPE the underlying sandy soil $\approx 17-20°$

F_1 on Geogrid $= W \sin 26.6°$

F_2, F_4, F_6, F_8 and F_{10} $= N \tan \delta$
= Resistance Force due to Friction

Because $\delta_2 = \delta_3 = \delta_4$ $\quad F_4 = F_6 = F_8$

$\delta_5 = 17-20°$

$N = \cos \alpha \, W$

Objective: Calculate Forces on the layers

CLIENT	PROJECT	JOB NO.
Citrus Co.	Phase 2 Expansion	09199056.02
SUBJECT: Liner Stress Analysis	BY: JAB	DATE: 11-27-02
	CHECKED: [illegible]	DATE: 12/16/02

Calculations using Residual Friction Angles
Calculate various weight components acting on liner system using one lift of waste (SEE example problem Koerner Second Ed. page 469)

A) Calculated Loads 3rd Ed. page 547

GIVEN: Density of waste = ~~1200~~ 15/cy
= ~~45~~ 15/ft³

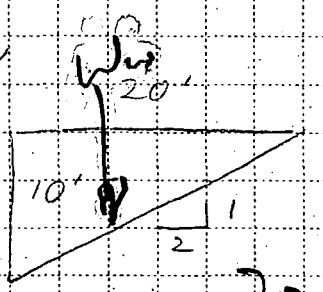
SATURATED? 70 ~~Compact (80)~~

Friction Angle of waste = 32°
(Based on SCS studies)

Waste lift thickness = 10 ft

Side slope = 2:1

Area of waste =



(1) Weight of waste = $\frac{1}{2}(10')(20')\left(\cancel{45}\ 70\ \frac{15}{ft^3}\right)$

$W_w = \cancel{4500}\ 7000\ \frac{15}{ft}$

(2) Calculate shear resistance of waste

$\tau_w = \sigma_H \tan\phi\,(D)$ where $D = 10'$

$= K_o \sigma_v \tan\phi\,(D)$ $\sigma_v = .5\,\sigma_H$

$= (1 - \sin 32°)(.5)\ \cancel{\sigma = 4}\ 1400\ \frac{15}{ft^2} \tan 32°\ (10\,ft)$

$= \cancel{931}\ 1615\ \frac{15}{ft}$

See bottom of next page.

SCS ENGINEERS

CLIENT	PROJECT	JOB NO.
Citrus Co.	Phase 2 Expansion	091990G02

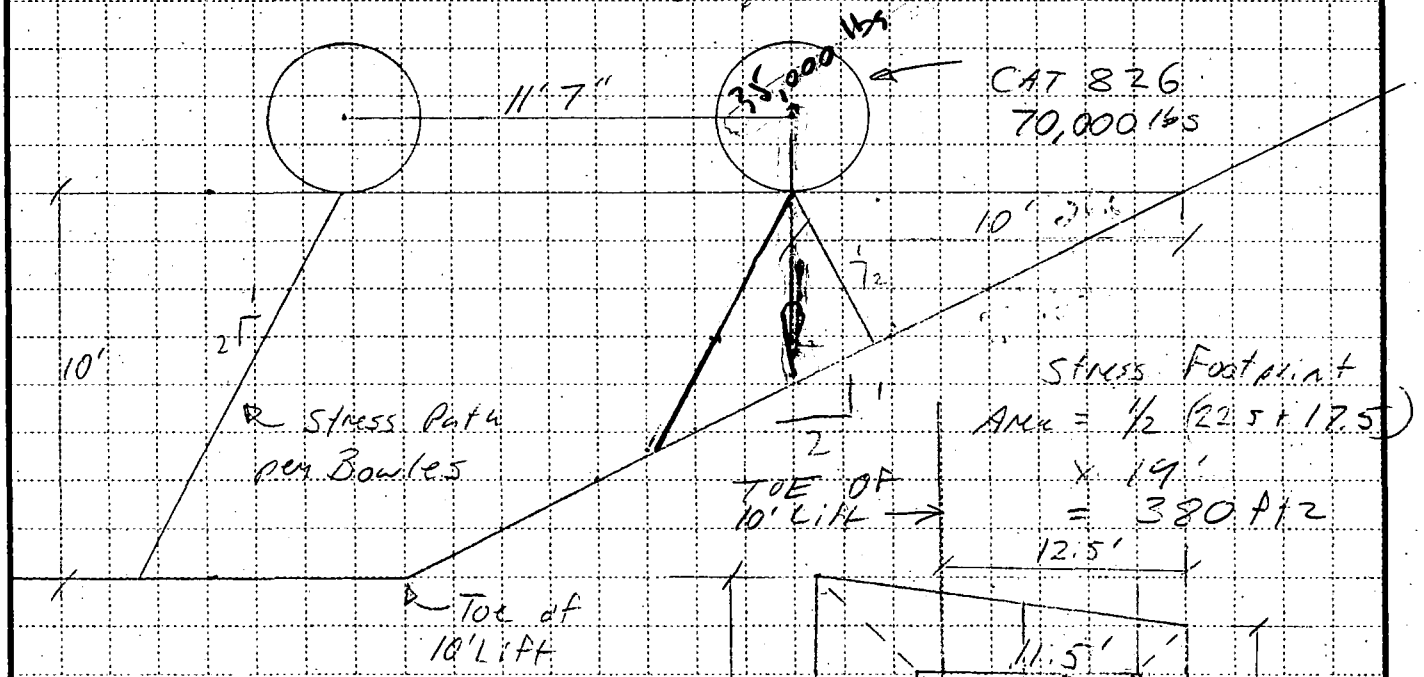
SUBJECT	BY	DATE
Liner Stress Analysis	JAB	11-27-02
	CHECKED	DATE
		12/16/02

③ W_w net = $W_w - T_w$ = ~~4500~~ 7000 − ~~931~~ 1645

= ~~3569~~ 5355 lb/ft

④ Calculate weight of compactor

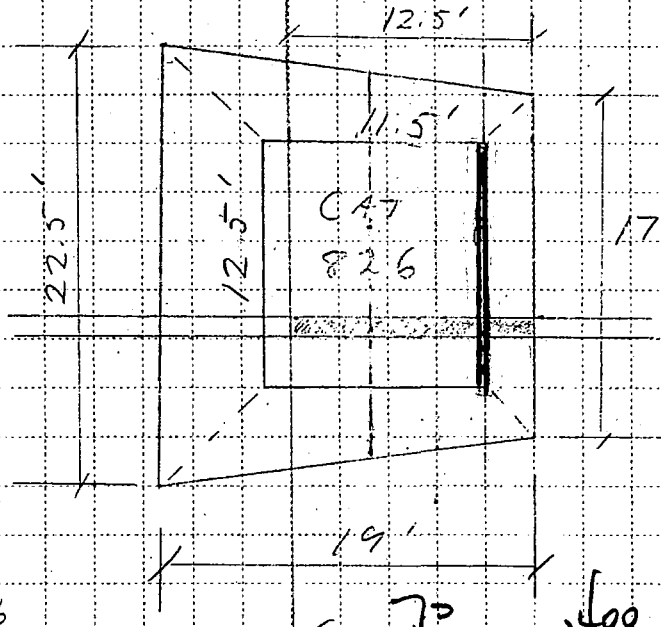
Assume compactor maintains 10 ft from liner slope



Stress Footprint

Area = ½ (22.5 + 17.5) × 19'

= 380 ft²



Load = $\frac{70{,}000 \text{ lb}}{380 \text{ ft}^2}$ = 184 lb/sq ft

Calculate force on sideslope per foot width

Area = 12.5 sq ft/ft

Load = 12.5 sq ft/ft × ~~184~~ 400 lb/sq ft

= ~~2,303~~ 5000 lb/ft

σ_H = (10 × ~~45~~ 70) + ~~184~~ 400 lb/ft²

= ~~634~~ 1100 lb/ft²

SCS ENGINEERS

CLIENT	PROJECT	JOB NO.
Citrus Co.	Phase 2 Expansion	199056.02
SUBJECT: Liner Stress Analysis	BY: JAB	DATE: 11-27-02
	CHECKED: [illegible]	DATE: 12/16/02

(3) Calculate weight of sand layer

$(2\,ft \times 22\,ft \times 110\,lb/ft^3) + (2\,ft \times 10\,ft \times 110\,lb/ft^3)$

$= \underline{7040\,lb/ft}$

(4) Calculate weight of Geosynthetics

Liner @ $0.94\,g/cm^3 \times 0.0361$

$= 0.0339\,\frac{lb}{in^3}$

$V_L = 180\,ft \times 0.005\,ft = 0.9\,ft^2/ft$

$W_L = 0.9\,\frac{ft^3}{ft} \times 0.0339\,\frac{lb}{in^3}\,\frac{12\,in}{ft}\,\frac{144\,in^2}{ft^2}$

$0.9\,\frac{ft^3}{ft} = 58.6\,\frac{lb}{ft^3}$

$W_L = 527\,lb/ft$

Geonet @ $0.51\,lb/ft^2$ Assume 25% Moisture

$W_G = 0.51 \times 1.25 = 64\,lb/ft^2$

Total for 2 Liners + 2 geonets

$(58.6 \times 2) + (64 \times 2) = \underline{\cancel{245}\ 350\,lb/ft}$

(5) Total W is sum of above weights

$\cancel{3569}\ 5385 + \cancel{2,303}\ 5000 + 7040 + \cancel{245}\ 350$

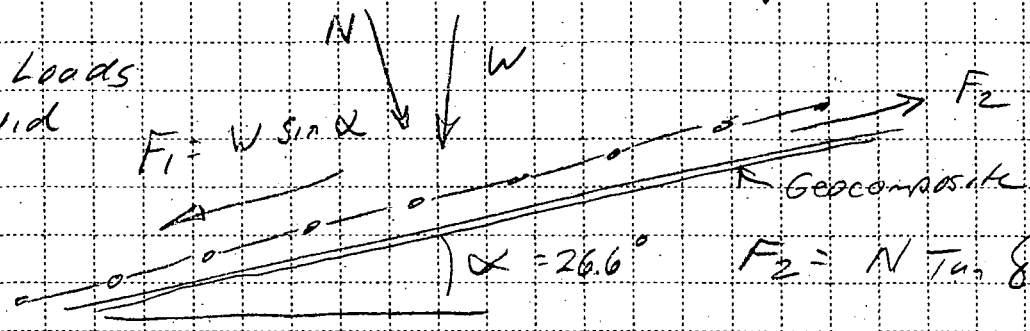
$= \boxed{13,157\,lb/ft}$ 17,775

SCS ENGINEERS

CLIENT	PROJECT	JOB NO.
Citrus Co.	Phase 2 Expansion	09199056.02

SUBJECT	BY	DATE
Liner Stress Analysis	JAB	12-6-02
(B) Calculate Forces	CHECKED	DATE
		12/16/02

① Calculate Loads on Geogrid



$F_2 = N \tan \delta_1$

$W = \cancel{13,157}$ 17775 lb/ft

$\delta_1 = 12°$

$N = W \cos\alpha$

$= \cancel{17,764}$ 15894 lb/ft

$F_2 = \cancel{2501}$ 3378 lb/ft

$F_1 = \cancel{13,157}$ 17775 lb/ft $\sin 26.6° = \cancel{5891}$ 7959 lb/ft

Stress on Geogrid

$\sigma = F_1 - F_2 = \cancel{5891}$ 7959 $- \cancel{2501}$ 3378 $= \cancel{3,390}$ 4581 lb/ft

Use Tensar UX1700HS

Tensile Strength @ 5% Strain = 5,140 lb/ft

$FS = \frac{5140}{\cancel{3390}\ 4581} = \cancel{1.52}\ 1.12$ OK

② Calculate Loads on Underlying Materials

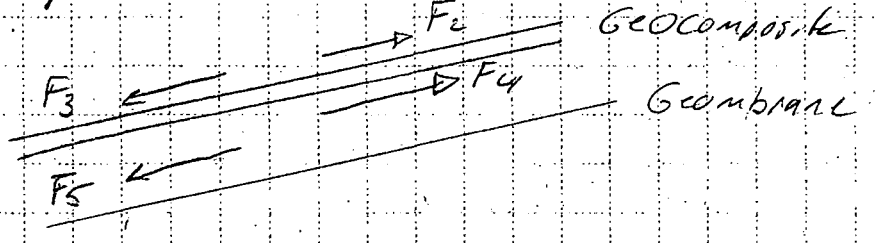
δ_2 = Geocomposite to textured HDPE

= 15 - 18° use 16.5°

$3378 = F_2 = F_3$ $\quad F_4 = N \tan 16.5 = \cancel{3,484}$ 4708 lb/ft

$F_4 > F_3$ No tension F_2 gets transmitted to the next layer $= F_5$

$4708 > 3378$



SCS ENGINEERS

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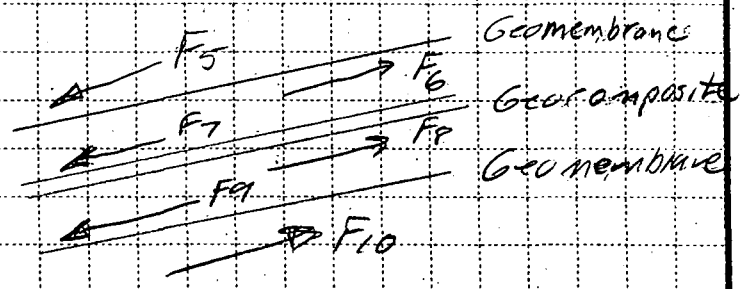
Citrus Co	Phase 2 Expansion	09199056.02

SUBJECT	BY	DATE
Liner Stress Analysis	JAB	12-6-02
	CHECKED	DATE
		12/16/02

Because the friction resistance is greater than the downward force there is no stress on the material and the downward load is transferred to the next layer



$F_5 = F_7 = F_9$

Thus $F_9 = F_2 = \cancel{2501}\ 3378$ lb/ft

$F_{10} = N \tan \delta_5 = \cancel{1764}\ 15894 \frac{lb}{ft} \tan 17°$

Use $\delta_5 = 17°$ as worst case

$F_{10} = \cancel{3597}\ 4859$ lb/ft

$F_{10} > F_9$ $\quad \frac{\cancel{3597}\ 4859}{\cancel{2501}\ 3378} = 1.44$ FS

No stress on bottom liner $\quad$ OK

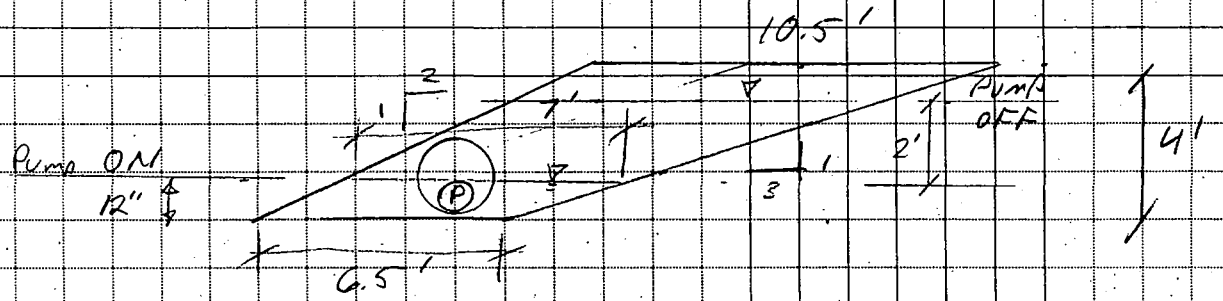
SCS ENGINEERS

SHEET _____ OF _____

CLIENT Citrus Co.	PROJECT Phase 2 Expansion	JOB NO.	
SUBJECT Leachate Detection Sump Volume	BY JAB	DATE 12-02-02	
	CHECKED AJS	DATE 12/11/02	

ALR = 100 gpd/ac = 610 gpd @ 6.1 acres

Effective Sump Volume for Leak Detection @ 30% porosity w/ No. 57 stone



Using 2 ft Operational Range

$A = \frac{1}{2}(7.0' + 9.5') \times 2' = 16.5\ ft^2$

$CL = 20 + \frac{1}{2}(12 \times 2) = 32'$

$\forall = 16.5\ ft^2 \times 32\ ft = 528\ ft^3$

$= 3{,}950\ gal \times .30 = 1{,}185\ gal$

@ 10 gpm pump down = 118 min
= 2 hrs

1,185 gal ≈ 2 days @ 610 gal/day

IF 1 ft Operational Range

$\forall \approx 600$ gal ≈ 1 day max leakage

DAN A. BANKS
CERTIFICATE
NO. 39397
12/16/02
STATE OF FLORIDA
PROFESSIONAL ENGINEER

BOARD OF COUNTY COMMISSIONERS
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION
P.O. Box 340, Lecanto, Florida 34460
(352) 527-7670 FAX (352) 527-7672
Citrus Springs/Dunnellon area Toll Free # (352) 489-2120

January 2, 2003

RECEIVED
JAN 08 2003
D.E.P.
SOUTHWEST DISTRICT

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

Re: Citrus County Central Landfill
Permit No. 21375-003-SO

Dear Mr. Ford:

This facility received about 2.5 inches of rainfall on the evening of December 31, 2002. As a result, the contaminated stormwater sump in the fill area overflowed, however the berm did not fail. Staff estimates that between 1,000 and 4,000 gallons of contaminated stormwater escaped into the clean stormwater system. Approximately 40,000 gallons of contaminated stormwater was pumped out of the sump on January 1 and the berm was reinforced. The location is shown on the attached sketch map.

During the same rainfall event, a washout occurred on the north (fill area) side of the south DRA. The location is shown on the attached map. A diversion berm will be placed today and this washout will be repaired on Monday January 6 with assistance from another county division.

Operation of the leachate collection and treatment system for the landfill has been transferred to the county Utilities Division effective September 2002. For the time being, the same operator has continued with the duties of operating the system. Additional staff members from Utilities are cross training as well.

On December 26, 2002, the Utilities operator discovered that the pump in the east-side lift station on the closed landfill had failed for the second time in a month. Since the spare pump was used during the first replacement, no spare is currently available. The maximum out-of-service period will be 2 weeks.

If you have any questions, please contact me.

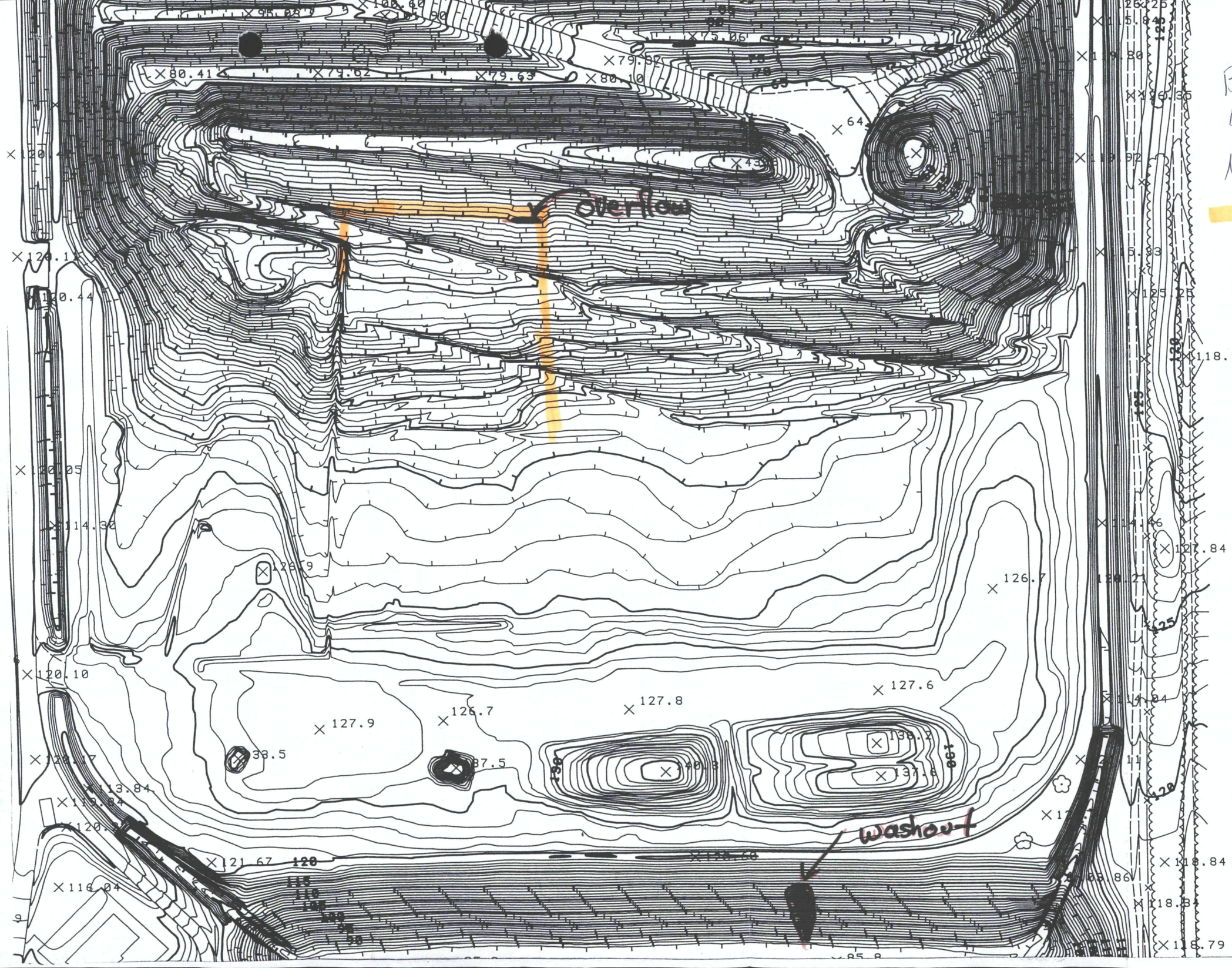
Sincerely,

Susan J Metcalfe

Susan Metcalfe, Director
Solid Waste Management

Attachment: Map

CC: Tom Dick, Assistant Director, Public Works Department
John Banks, SCS Engineers, Tampa
David Keough, JEA, Gainesville
Susan Pelz, Solid Waste Section, FDEP, Tampa


Overflow
washout
80.41
79.62
79.63
80.10
64
127.9
126.7
127.8
127.6
126.7
138.5
137.5
140.3
138.2
137.6
121.67
116.04
120.10
114.30
118.57
118.84
118.79
127.84
125.93
125.25
120.44
120.11
120.05
113.84
Base is aerial topography
10/02
N
1 inch = 100'
Location of fill area berms
washout
overflow

Environmental Consultants

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

813-621-0080
FAX 813-623-6757

SCS ENGINEERS

TO Florida Department of Environmental Protection
Solid Waste Division
3804 Coconut Palm Drive
Tampa, FL 33619

DATE December 26, 2002
JOB NO. 09199056.02
ATTENTION Kim Ford
Re: Response to request for additional information for Citrus County

WE ARE SENDING YOU

☒ Attached ☐ Under separate cover via _____

☐ Shop drawings ☐ Prints

☐ Copy of letter ☐ Change Order

☐ The following items: ☐ Plans ☐ Samples

☐ Specifications ☐ _____

D.E.P.
JAN 0 2 2003
Southwest District Tampa

COPIES	DATE	DESCRIPTION
X 3	12/16/03	Letter dated 12/16/02

THESE ARE TRANSMITTED as check below:

☐ For approval ☐ Approved as submitted ☐ Resubmit _____ Copies for approval

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☐ For review and comment ☐ _____

☐ FOR BIDS DUE _____ 20 _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS Please accept this letter as a replacement for the one submitted on December 16, 2002. There was a sentence repeated on Page 2 and Page 3. Our apologies for the oversight. The attachments remain the same. Please call if you have any questions.

COPY TO Susan Pelz, FDEP,
Susan Metcalfe, Citrus County

SIGNED: John Banks

If enclosures are not as noted, kindly notify us at once.

Environmental Consultants

3012 U.S. Highway 301 Nor
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

December 16, 2002
File No. 09199056.02

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

Subject: Citrus County Central Landfill - Phase 2 Expansion
Permit No.: #21375-004-SC, Citrus County

Dear Mr. Ford:

On behalf of Citrus County, SCS Engineers (SCS) submits the following responses to your request for additional information in a letter dated November 15, 2002. For ease of review, each FDEP comment is reiterated in bold type, followed by our response.

We have provided revised submittals, or replacement pages to the submittals, using a ~~strikethrough~~ and <u>underline</u> format, to facilitate review. Enclosed are one original and two copies of all revisions. The following documents are enclosed:

1. Calculations related to Liner Stress on the 2:1 side slopes.

2. Calculations related to the size of the leak detection sump.

3. The following revised specifications sections:

   Section 02212 - Low Permeability Soil
   Section 02220 - Excavation, Backfill, Fill, and Grading
   Section 02776 - HDPE Liner
   Section 02930 - Geocomposite

4. The following new specification section: Section 02950 - Geogrid.

5. Revised Draft Liner CQA Plan.

6. Revised Drawing Sheet Nos. 3,5,7,8,9,10,11,14, and 15.

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

1. **62-701.340(4)(c). Approval of the requested alternate procedure for the reduced setback of less than 100 feet is requested.**

   Response: It is our understanding that approval of the alternate procedure will be received soon. This approval will be provided to you upon receipt.

Response: Please see the enclosed calculations for liner system stress. We have included the use of a geogrid on the 2:1 sideslopes to add an additional factor of safety. The resulting calculations show that no stress is applied to any of the geosynthetic liner system materials. The geogrid specified can withstand the downward force calculated using methods prescribed by Koerner plus the addition of the landfill compactor and maintain at least a 1.5 FS with only 5-percent strain on the material. A portion of the downward force is transferred to the bottom interface due to frictional forces within the liner system layers. The friction angles of the interface between the geogrid and the geocomposite, geocomposite and textured HDPE 60-mil geomembrane, and the textured geomembrane and the bottom soils will be measured with the actual materials to be used on the project. The resulting values will be compared to the values used in these calculations and the factor of safety will be verified.

5. **62-701.400(3)(c)1. A description of the procedures to be used for constructing the bottom and side slopes of the sump, and the related method and frequency of testing on these slopes, are requested.**

Response: Section 02212 of the Specifications is revised to include the requirement to perform CQC testing specifically in the sump area for liner sub-base. See note 8 on Table 02212-1.

6. **62-701.400(3)(c)2. An Action Leakage Rate (ALR) that is not based on an "average" leakage rate is requested. The referenced specific condition 17 in the current operation permit is not based on an "average" leakage rate.**

Response: The Action Leakage Rate of 100 gallons per day is equivalent to 600 gallons per day based on six acres of lined area. The effective volume of the leak detection sump is 600 gallons when using a 1-ft. operating zone (see attached calculations). Thus if the Action Leakage Rate is exceeded the pump should cycle more than one time in a 24-hour period, thus pumping more than 600 gallons during this period of time. If the actual leakage rate is less than 600 gallons it will take longer to cycle the pump; however, when the pump does come on, it should pump approximately 600 gallons per cycle. In summary, as long as the pump does not pump more than 600 gallons in any 24-hour period, the Action Leakage Rate has not been exceeded.

7. **62-701.400(3)(d) and (e). 1) Revisions to the project specifications are requested to demonstrate compliance with rules 62—701.400(3) (d)7., 10., and 11. 2) Revisions to Section 3.02D are requested to indicate that the test results shall not be averaged unless specified in SRI CMl3. 3) The coefficient of interface friction angle of 25 degrees as provided in Table 02930-2 is less then the 26.6 degree angle for the proposed side slope, therefore the composite geonet appears to be an unstable component of the liner system. Revision to Table 02930-2 to provide the minimum design interface friction angle, and related calculations for its factor of safety, are requested.**

Response: Please see the enclosed revised specifications for geomembrane, geogrid, and geocomposite products that incorporate the requirements of Rule 62-701.400(3)(d) 7., 10., and 11., FAC. Please note that the angle of the slope and the friction angle of the materials are related only by the fact that the steeper the slope angle the lower the

normal load on the material will be. The lower the normal load, the smaller the friction resistance will be. The fact that the slope angle is steeper than a given friction angle does not mean there will necessarily be a failure or stress applied to a material. The entire calculation must be evaluated to make this determination.

8. **62-701.400(4)(a). The design of the leachate collection system and leak detection system over the internal terrace is requested.**

   Response: Please see the revised Detail A on Sheet 15 of the Drawings.

9. **62-701.400(4)(b). 1) Specifications including the gradation and maximum percent organic matter for the sand (drainage layer and protective material) to demonstrate chemical compatibility and adequate hydraulic conductivity are requested. 2) The design detail for the geonet overlap at the toe of the east and west side slopes with notes for installation and the geonet orientation are requested.**

   Response: 1) The specification Section 2220, Excavation, Backfill, Fill, and Grading has been revised to include a hydraulic conductivity requirement, a maximum fines content, a maximum organics content, and chemical compatibility requirements for the protective sand layer (Select Sand). As discussed, a gradation requirement is not necessary to achieve the desired function. A requirement to remove fines that may accumulate on the surface of the protective sand has also been added. 2) Please see the new detail and notes on Sheet 8 of the Drawings.

10. **62-701.400(7). Revisions to the CQA Plan are requested to provide construction quality assurance procedures including material sampling and conformance testing for each component of the liner system including the composite geonet, leachate piping, gravel, and sand layer.**

    Response: Please see the revisions to the enclosed CQA plan.

11. **(62-701.400(9)(b). Revisions to the project specifications are requested to require a site plan (to be submitted by the contractor for approval by the engineer) to show the location of the proposed temporary lined soil dike, including design details with elevations, to prevent stormwater from Phase 1 and 1A from entering Phase 2.**

    Response: Please see the notes added to Sheet 3 of the Drawings and revision to the Earthwork specification (Section 02220).

12. **62-709.320. A site plan with the layout and design for the yard trash processing facility to demonstrate compliance with this rule is requested.**

    Response: The Yard Waste Processing Area (YWPA) is permitted under a separate registration. The proposed work will not effect the ability for the facility to stay in compliance with the applicable requirements. Future changes to the facility's layout will be address at the time of permit renewal for the YWPA.

Please provide all responses that relate to engineering required for construction signed and sealed by a professional engineer. Responses that relate to the facility operation should be included as part of the Operations Plan.

An original and two copies are provided as requested. Please call if you have any questions.

Sincerely,

12/30/02

John A. Banks, P.E.
Project Director
SCS ENGINEERS

Bruce J. Clark, P.E., DEE
Project Manager
SCS ENGINEERS

JAB/BJC:jlh

Enclosures

cc: Lee Martin, P.E., FDEP Tallahassee (w/o enclosures)
Susan Pelz, P.E., FDEP Tampa (w/enclosures)
Susan Metcalfe, P.G., Citrus County (w/enclosures)

Static and Seismic Stability of Landfill Slopes

By Timothy Stark, Philip O'Leary and Patrick Walsh

This is the 11th lesson in the independent learning correspondence course on municipal solid waste (MSW) landfills. One lesson in this 12-part series will be published in Waste Age *each month throughout the year.*

If you are interested in taking the course for two continuing education credits (CEUs), send a check (payable to the University of Wisconsin) for $149 to Phil O'Leary, Department of Engineering Professional Development, University of Wisconsin, 432 N. Lake Street, Madison, WI 53706. Phone (608) 262-0493. E-mail: oleary@engr.wisc.edu. Website: www.wasteage.com. Course registration can occur at anytime until December 2006. Previous lessons will be sent to you.

ALTHOUGH THE MAJORITY of landfills are constructed and operated safely, several slope failures have occurred in U.S. and international landfills. U.S. failures have occurred at under-construction, operating and closed landfills. Internationally, widely known failures have been at uncontrolled dumps and led to significant loss of life. The most notable accidents were in Turkey and the Philippines. The largest U.S. landfill slope failure occurred in Ohio. Smaller incidents have been associated with earthquakes [See picture of slope failure on page 83].

It's important to understand static and seismic slope stability, and how to handle a failure. For example, if a liner is damaged, the waste above that area must be removed and a new liner must be installed. A cover failure requires reinstallation. When a large quantity of waste becomes unstable, it must be moved over the lined area and re-covered. These remedial actions are expensive.

Design Considerations

To design a landfill for slope stability, examine the elements that influence stability. Foundation soils must be capable of supporting the landfill's weight. Failures occur when foundation soils beneath or adjacent to the landfill yield because of the applied load. The applied load corresponds to the material weight above the foundation soils, e.g., the liner system and waste. The placed waste magnitude is determined by the unit weight, height and incline. The susceptibility of foundation soils to failure under the applied load can be assessed by routine soil borings and laboratory testing, which measures the shear soil strength. Shear strength refers to the ability of the material to resist structural damage when a force is applied to it, and can be used in stability analyses.

Landfill liner system construction is important to slope stability. An earthen berm can be constructed at the base of a landfill slope to provide resistance to lateral slope movement in an adjacent cell or undeveloped area. Some slope failures have occurred when the berm was removed during new cell construction and when the berm was not large enough to provide sufficient resistance to lateral slope movement.

A liner system generally consists of one or more soil and/or geosynthetic materials such as geomembranes, geosynthetic clay liners, geonets and geotextiles. Between or above these liners are layers of drainage media comprised of soil or constructed materials. These materials' shear strength and the interface friction between the layers determine how susceptible the slope is to lateral movement along a geosynthetic interface in response to forces generated by the waste's weight.

Sliding along a geosynthetic interface can harm the liner system's containment function. If sliding occurs below the geomembrane at a compacted clay liner/geomembrane interface, the geomembrane will stretch and possibly tear. This has occurred in static slope stability failures and in at least one seismic event.

If the geomembrane tears, a leak at the landfill base could occur. This tear may not be detectable from a landfill's

surface if the slope does not undergo large, lateral movement. This occurred at a Midwest facility in which the damaged geomembrane would not have been uncovered and remediated if the slope toe had not been excavated to connect the geosynthetics of the adjacent cell to the geosynthetics in the existing cell. With large, lateral slope movement, geomembrane damage may be observable without excavating waste.

Another potential interface failure occurs when one geosynthetic layer of the liner system slides over another geosynthetic layer. Forces on a geonet placed over a geomembrane liner may cause the geonet to slide along the geomembrane. The sliding potential can be evaluated by measuring the interface shear strength between the landfill liner using standard direct shear testing [See "Cross Section of Liner System" below]. Each liner system component can slide, depending on the forces applied to it. This can result in material tears or wrinkles. A soil/geosynthetic or a geosynthetic/geosynthetic interface can slide if the interface shear resistance is less than the shear forces induced by the materials above the interface.

The landfill's top cover system faces similar stability concerns. Some or all of the cover may slide off the waste. As slope incline and length increases, the shear forces caused by gravity increase. The shear forces must be resisted by the shear strength of the weakest soil/geosynthetic or a geosynthetic/geosynthetic interface in the cover system. If the shear forces are greater than the friction of the weakest interface, sliding will occur and lead to geosynthetic tears or slope failure.

It's important to consider the effectiveness of the drainage layer above the cover system geomembrane to prevent rainfall- or seepage-induced cover system failure.

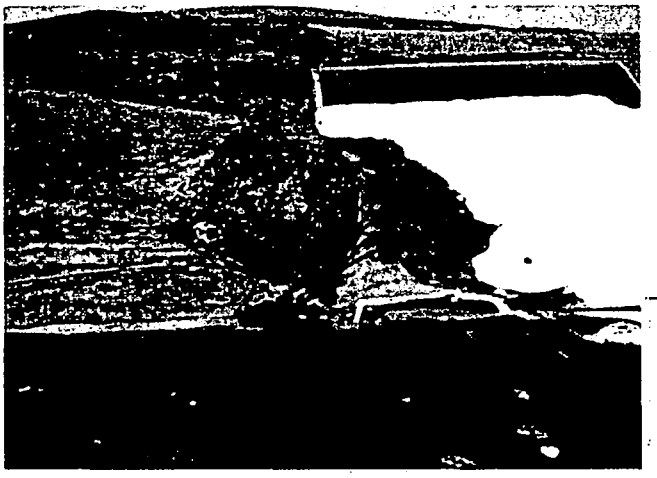
Additionally, sliding can occur because of the landfill slope height and steepness, and the presence of a weak waste layer, such as sludge. However, the shear strength of municipal solid waste (MSW) generally is high, and the shear forces generated by the waste's weight rarely overcomes the strength of MSW and leads to waste slope failure. Thus, stability analyses during design should focus on the shear resistance of the soil and geosynthetic materials underlying the waste.

Liner Slope Stability

When calculating slope stability, owners should consider the shear strength of the materials in the foundation and the landfill. The soil liner, granular drainage media and waste each exhibit a shear strength. Shear strength can be measured in a laboratory by placing a representative normal stress on the test specimen and shearing the specimen into two pieces. The force required to shear the sample is measured and combined with the shear stress measured on identical specimens at other normal stresses. These values are graphed to obtain the material's failure envelope of [See graph of "Shear Stress Values" on page 84]. If the slope applies shear and normal stress values above the failure envelope, the materials will stretch and/or fail in the field.

Measure the shear resistance of each soil/geosynthetic, soil/waste and geosynthetic/geosynthetic interface in the liner system. This is the available shear resistance to stresses imposed by the overlying landfill slope. For example, each of the liner's several layers should be tested to determine which is the weakest. Sliding will occur on the weakest interface, so the slope should be designed with an adequate safety factor. The evaluation should include the shear resistance or friction between the waste and the liner system's top layer.

To increase interface strength, manufacturers have added rough surfaces or textures into liners. Standard laboratory direct shear devices also can measure shear resistance.

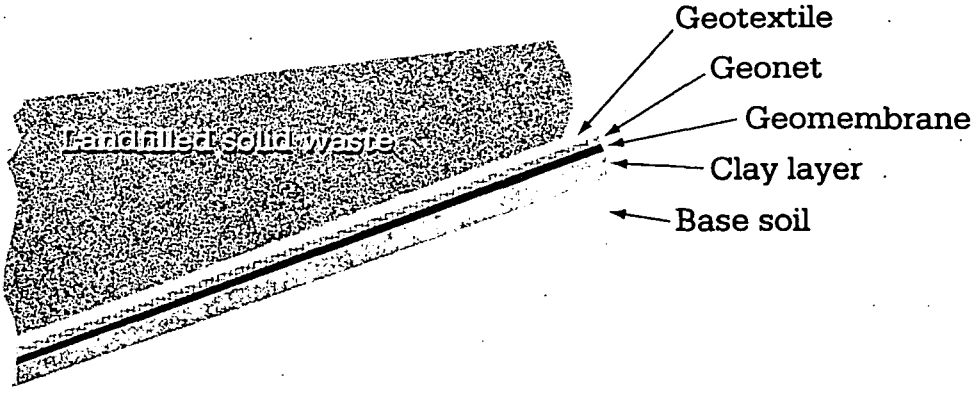


SLOPE FAILURE: The largest landfill slope failure in the United States occurred in Ohio.

To determine the landfill's geometry, consider the landfill height and slope angle. The slope of the ground upon which the landfill is placed also is important. Increasing height, steeper cover angles, and construction and steeper slopes must be compensated for to insure stability. Berms placed at a landfill's edge resist waste movement. Increasing berm size can provide more stability. Owners also can specify liner materials that are stronger and more resistant to sliding to increase stability. Slope failure-resistant geometry, such as intermediate steps on landfill side slopes, also increase stability.

Leachate level is a considerable concern during leachate

CROSS-SECTION OF LINER SYSTEM



recirculation. A conservative estimate of the leachate level should be used in stability analysis.

Cover Slope Stability

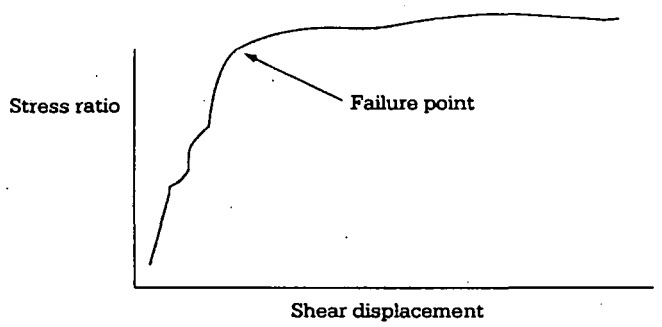
The first three steps identified for evaluating liner system stability — measuring the foundation and landfill materials' shear strength; measuring the shear resistance of each soil/geosynthetic, soil/waste and geosynthetic/geosynthetic interface in the liner system, and analyzing landfill geometry — also are used in evaluating cover system stability.

Landfill covers where rainfall-induced seepage accumulates over a geomembrane also should be considered. Accumulated water increases the weight of the soil above the geomembrane and reduces the effective stress and shear resistance of the interfaces and materials above the geomembrane. Because the stress applied by the cover soil is small, usually 3 feet of soil, small liquid increases above the geomembrane can quickly cause instability.

To reduce the potential for liquid buildup on the geomembrane, drainage media that moves infiltrating water from the top of the geomembrane to an outlet should be provided. Drainage material should be resistant to clogging over the cover system's life.

Small increases in landfill gas pressure can accumulate under a geomembrane in a landfill cover, reduce the shear resistance between the soil and the overlying geomembrane, and cause slope failure. To prevent this, gas must be properly vented so that the geomembrane cap does not act like a balloon. Wells to withdraw gas and porous media placed under the landfill cover can provide a gas escape route.

SHEAR STRESS VALUES



Regulations

Several federal and state regulations are related to slope stability and seismic design. U.S. Environmental Protection Agency (EPA), Washington, D.C., rules specify that a landfill may not be constructed or expanded within 200 feet of a fault that has had displacement in Holocene time (i.e., the past 11,000 years). States in seismic impact zones are the most interested in how a landfill may respond during an earthquake. A state is in a seismic impact zone if the horizontal bedrock acceleration exceeds 0.1 grams with a 10 percent probability of exceedance and a return period of 250 years.

In the past 10 years, state agencies have become more concerned about slope stability primarily because landfills are being constructed with steeper side slopes and higher elevation top grades to allow for leachate recirculation and vertical expansions. But this could potentially cause larger landfill landslides. State agencies may require slope stability and seismic analysis studies.

Analysis Methods

Several stability analysis methods can help to determine whether a proposed landfill design will be stable and exhibit an adequate safety factor. The safety factor can be calculated by hand. But owners generally input data that describes the landfill's cross-section, the unit weight of the landfill materials, and the shear and interface strength of the materials in and under the landfill into a computer program to locate the critical failure mode.

The failure mode is the option that exhibits the lowest safety factor and usually involves the material or interface with the lowest shear resistance. If the safety factor is less than desired (the regulated value usually is 1.5), then the facility design can be modified and a new safety factor can be computed. This is repeated until an appropriate design and safety factor is achieved.

Computer analysis can be conducted two or three dimensions. A two-dimensional model looks at a vertical cross-section. To fully understand the landfill design, it is necessary to locate the critical cross-section, which is the cross-section that exhibits the lowest safety factor. Three-dimensional models can evaluate complex landfill geometries, shear strength conditions (e.g., part of the landfill overlying geosynthetics and part not) and leachate conditions. However, most stability evaluations use two-dimensional analyses because they yield conservative safety factor estimates.

Seismic Considerations

The two methods for considering seismic effects can be calculated using a seismic safety factor and the deformation that might be induced in or along the weakest material or interface. Computer programs can calculate the seismic safety factor by simulating an earthquake as a permanent horizontal force. These inputs are identical to static analyses, except the user inputs a seismic coefficient for the earthquake's strength.

The deformation induced in or along the weakest material or interface uses a different procedure but has the same input parameters as described for static stability analyses. However, earthquake magnitude and acceleration are used instead of a seismic coefficient. This helps to predict the amount of permanent displacement that will occur because of an earthquake. Displacement information usually is more beneficial than the seismic safety factor when geosynthetics are used because geosynthetics cannot withstand large, if any, displacements. Therefore, the design can be modified to ensure that little, if any, permanent displacement occurs with geosynthetics. Permanent displacement analysis can be used to predict whether the displacement will exceed the landfill components' ability to withstand earthquake-induced elongation.

Operational Considerations

Landfills should be constructed to approved design specifications, but several failures have occurred because waste was placed at a steeper grade or higher elevation than anticipated or designed.

Excavation or construction adjacent to a landfill's base also must be carefully planned and executed. Stability

analysis should be conducted before the base is removed or excavated to ensure that structural integrity is maintained. Additionally, excavation should be limited and filled in prior to extending the excavation along the slope's toe.

Water will influence slope stability. Increasing water quantities increase the waste's unit weight, which means more driving force pushes on the liner system and foundation soils. Additional liquid could result in effective stress reductions. Waste with higher moisture content may reduce shear strength.

How waste is placed in a landfill also influences slope stability. High-density waste will increase the forces on the liner and foundation soils. Vertical expansions can lead to slope failure by inducing too high driving forces along a geosynthetic interface or through a foundation soil. A simple scenario for this type of overloading is placing a large amount of material over the landfill in a short period for stockpiling purposes or prior to final closure. Over-filling (placing waste in excess of the permitted volume) can cause slope failure.

Site Inspection

Slope failure may occur without warning, but sometimes cracks in landfill cover soils or materials are observed prior to failure. Generally, cracks in landfill cover soils result from settlement and are associated with waste decomposition and consolidation. Tension cracks can occur when waste moves due to instability. Astute field personnel must distinguish between settlement cracks, which do not threaten stability, and tension cracks, which are indicative of slope instability.

In general, settlement cracks do not reappear in the same location in a short period, whereas tension cracks can. Tension cracks should be monitored to assess the slope's behavior to determine whether the sliding rate is increasing or decreasing. Owners should look for these cracks at the crest (the point where the side and cover meet) of the landfill cells. Another warning sign is when gas wells move out of alignment.

If the ground next to the landfill appears to be rising upward slowly, this could indicate that slope movement or failure is occurring.

Emergency Actions

In some cases, potential slope failure can be prevented by reducing risk. The options may be limited, but certain procedures can help. First, immediately stop placing waste in the area that may be involved in the failure. If practical, move the waste to reduce additional loading on the failing slope. Waste should be removed after soil material that is adding to the downward forces on the slope and to buttress the base of the slope is removed. Add soil at the landfill base to prevent landfill movement.

If a slope stability failure is a concern, immediately seek advice from an expert because slope failures usually occur rapidly and with little or no warning. Thus, personnel and equipment can be adversely impacted. WA

Phil O'Leary and Patrick Walsh are solid waste specialists with the University of Wisconsin-Madison. Timothy Stark is with the University of Illinois' department of civil engineering.

BOARD OF COUNTY COMMISSIONERS
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION

P.O. Box 340, Lecanto, Florida 34460
(352) 527-7670 FAX (352) 527-7672
Citrus Springs/Dunnellon area Toll Free # (352) 489-2120

RECEIVED
DEC 23 2002
D.E.P.
SOUTHWEST DISTRICT

December 20, 2002

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

Re: Citrus County Central Landfill
Permit No. 21375-003-SO

Dear Mr. Ford:

During the early morning hours of Friday December 13, 2002, our facility received over two inches of rainfall, including the overnight period. Upon arriving in the morning, staff members discovered that the berm between the lower end of the fill area and the stormwater system had been breached in one area. As a result, we estimate that 3,500 gallons of contaminated stormwater was released into the stormwater system at the location shown on the attached map. The berm was replaced immediately. When the berm is dried out, it will be reinforced with stormwater ditch liner material on the inside.

If you have any questions, please contact me.

Sincerely,

Susan J. Metcalfe

Susan Metcalfe, Director
Solid Waste Management

Attachment: Map

CC: Tom Dick, Assistant Director, Public Works Department
John Banks, SCS Engineers, Tampa
David Keough, JEA, Gainesville
Susan Pelz, Solid Waste Section, FDEP, Tampa

AREA of
breach.

JRM 12/16/02
KBF

BOARD OF COUNTY COMMISSIONERS
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION

P.O. Box 340, Lecanto, Florida 34460
(352) 527-7670 FAX (352) 527-7672
Citrus Springs/Dunnellon area Toll Free # (352) 489-2120

December 13, 2002

John Morris, P.G.
Solid Waste Section
Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DEC 16 2002
SOUTHWEST DISTRICT TAMPA

Re: Citrus County Central Landfill
Permit No. 21375-003-SO

Dear Mr. Morris:

The attached memo from the leachate plant operator describes the events that resulted in release of approximately 2,600 gallons of treated leachate that did not meet permit criteria on November 29, 2002. The standard for ammonia (10 ppm) was exceeded with treated effluent having ammonia levels at 12.6 ppm. The out-of compliance discharge was due to an electrical failure that was not recognized due to the Thanksgiving holiday. The item was fixed the next day. We are considering budgeting for a system that would detect such failures and notify the operator, however, even if it is approved, implementation would be at least a year in the future. Please contact me if you have any questions.

Sincerely,

Susan J Metcalfe

Susan Metcalfe, Director
Solid Waste Management

Attachment: Utilities memo

CC: Tom Dick, Assistant Director, Public Works Department
Robert Merkel, Assistant Director, Utilities Division
John Banks, SCS Engineers, Tampa
David Keough/John Locklear, JEA, Gainesville
Susan Pelz, Solid Waste Section, FDEP, Tampa

MEMORANDUM

DATE: DECEMBER 10, 2002

TO: JIM CONLEY, CHIEF OPERATOR, UTILITIES DIVISION JC

FROM: JIM BRUNSWICK, OPERATOR II, UTILITIES DIVISION

SUBJECT: LANDFILL LEACHATE TREATMENT FACILITY

In follow-up of operational notes made in the Plant Logbook, following are the chronological events for Friday November 29, 2002:

Note: Plant had been in automatic mode with no operator monitoring due to the Thanksgiving Holiday, Thursday November 28, 2002.

I receive a phone call from Dave Vance who was assigned to operate the plant on that day, requesting assistance with plant operations. I advised him to secure effluent filter feed pumps to chlorine contact chamber and I proceed to the Landfill.

Upon arrival, I reviewed the plant problems with Dave and found that the effluent ammonia levels to be at 12.6 ppm. Permit standard for on-site discharge is 10 ppm.

We proceeded to drain the chlorine contact chamber; re-circulated remainder of effluent batch and back washed sand filters.

I have estimated 2,600 gallons of non-compliance leachate had been discharged prior to testing.

After troubleshooting the plant operation, we found that the problem was due to a power failure, which tripped #1 SBR blower. We also reset alarm , LCD's, checked blower breaker and collected samples for additional analysis.

All other parameters were in compliance with permit standards.

JB

813 621-0080
FAX 813 623-6757

[redacted]

Department of Environmental Protection

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619-8318

RECEIVED
DEC 16 2002
D.E.P.
SOUTHWEST DISTRICT

INFORMATION REQUEST

TO: Lee Martin
Solid Waste Section
Tallahassee

[redacted]

[redacted]e pleased [redacted] send the c[redacted]ed information you [redacted]sted.

[redacted] can be of [redacted] service, please contact:

[redacted]. Ford, P.E.
[redacted] Waste Section
Waste Management Division
Tampa, FL 33619-8318
(813) 744-6100, ext. 382

COMMENTS: Citrus Lake Expansion
ENTIRE RESPONSE
DATED 12/16/02 w/ enclosures
EH
12/17/02

[redacted]owing responses to your [redacted]02. For ease of review, [redacted]ponse.

[redacted]ubmittals, using a [redacted]re one original and two

Geogrid.

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

1. **62-701.340(4)(c). Approval of the requested alternate procedure for the reduced setback of less than 100 feet is requested.**

   Response: It is our understanding that approval of the alternate procedure will be received soon. This approval will be provided to you upon receipt.

Environmental Consultants

3012 U.S. Highway 301 No
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

December 16, 2002
File No. 09199056.02

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

Subject: Citrus County Central Landfill - Phase 2 Expansion
Permit No.: #21375-004-SC, Citrus County

Dear Mr. Ford:

On behalf of Citrus County, SCS Engineers (SCS) submits the following responses to your request for additional information in a letter dated November 15, 2002. For ease of review, each FDEP comment is reiterated in bold type, followed by our response.

We have provided revised submittals, or replacement pages to the submittals, using a ~~strikethrough~~ and <u>underline</u> format, to facilitate review. Enclosed are one original and two copies of all revisions. The following documents are enclosed:

1. Calculations related to Liner Stress on the 2:1 side slopes.

2. Calculations related to the size of the leak detection sump.

3. The following revised specifications sections:

   Section 02212 - Low Permeability Soil
   Section 02220 - Excavation, Backfill, Fill, and Grading
   Section 02776 - HDPE Liner
   Section 02930 - Geocomposite

4. The following new specification section: Section 02950 - Geogrid.

5. Revised Draft Liner CQA Plan.

6. Revised Drawing Sheet Nos. 3,5,7,8,9,10,11,14, and 15.

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

1. **62-701.340(4)(c). Approval of the requested alternate procedure for the reduced setback of less than 100 feet is requested.**

   Response: It is our understanding that approval of the alternate procedure will be received soon. This approval will be provided to you upon receipt.

2. **62-701.320(10). List and reaffirm those referenced parts of the previously provided 1998 and July 2001 groundwater monitoring reports that are still valid. Those parts that are no longer valid should be deleted or replaced.**

   Response: There are no changes to the Groundwater Monitoring Plan submitted by PSB&J on 1998 except as revised by revisions included in biennial reviews. The current revisions were submitted in April, July, September and most recently on October 16, 2001 by Jones Edmonds and Associates.

3. **62-701.320(7)(f)6. Site plan revisions are requested to show the additional information as discussed with SCS and as listed below:**

   a. **Sheet 5, Section B revised to match the detail on Sheet 11;**

   b. **Sheet 7, Detail 1 revised to show the leachate sampling port on the leachate manifold piping;**

   c. **Sheet 8. Detail B revised to note the cutting and opening of the geotextile between the leachate collection piping and the gravel in the stamp, and to show the geotextile between the primary liner and the gravel in the leak detection sump;**

   d. **Sheet 11, Detail F revised to show detail for the geonet overlap at the toe of the east and west side slopes with notes for installation and the geonet orientation;**

   e. **Sheet 14 revised to include all stormwater collection details;**

   f. **Sheet 15, Detail A revised to show the leachate collection and leak detection systems across the internal terrace, with a slope to promote drainage.**

   Response: Please see the revised Construction Drawings that address each of the listed issues.

4. **62-701.400(3)(a)1. The rationale for calculating the factor of safety for the internal sideslopes is unclear. Technical documents are requested that support the assumption that the "resistance" to the downslope force (used for calculating the factor of safety) is the sum of the individual resistances provided by each component rather than the resistance of the weakest component (being the geonet) . A copy of each of the "technical reference reports on the subject of liner analysis on side slopes" mentioned in Section H.2.a.1 are requested. *Each component of the liner system must be able to withstand the stresses imposed by the component's own weight with the weight of the 24-inch sand layer, and any potential down-drag forces from the ongoing compression of the waste, on 2H:IV side slopes with the condition of operating heavy equipment for spreading and compaction. Design calculations must be based* on *friction angles from published data and confirmed by the actual results from shear box tests for the proposed design.***

   Response: Please see the enclosed calculations for liner system stress. We have

Response: Please see the enclosed calculations for liner system stress. We have included the use of a geogrid on the 2:1 sideslopes to add an additional factor of safety. The resulting calculations show that no stress is applied to any of the geosynthetic liner system materials. The geogrid specified can withstand the downward force calculated using methods prescribed by Koerner plus the addition of the landfill compactor and maintain at least a 1.5 FS with only 5-percent strain on the material. A portion of the downward force is transferred to the bottom interface due to frictional forces within the liner system layers. The friction angles of the interface between the geogrid and the geocomposite, geocomposite and textured HDPE 60-mil geomembrane, and the textured geomembrane and the bottom soils will be measured with the actual materials to be used on the project. The resulting values will be compared to the values used in these calculations and the factor of safety will be verified.

5. **62-701.400(3)(c)1. A description of the procedures to be used for constructing the bottom and side slopes of the sump, and the related method and frequency of testing on these slopes, are requested.**

Response: Section 02212 of the Specifications is revised to include the requirement to perform CQC testing specifically in the sump area for liner sub-base. See note 8 on Table 02212-1.

6. **62-701.400(3)(c)2. An Action Leakage Rate (ALR) that is not based on an "average" leakage rate is requested. The referenced specific condition 17 in the current operation permit is not based on an "average" leakage rate.**

Response: The Action Leakage Rate of 100 gallons per day is equivalent to 600 gallons per day based on six acres of lined area. The effective volume of the leak detection sump is 600 gallons when using a 1-ft. operating zone (see attached calculations). Thus if the Action Leakage Rate is exceeded the pump should cycle more than one time in a 24-hour period, thus pumping more than 600 gallons during this period of time. If the actual leakage rate is less than 600 gallons it will take longer to cycle the pump; however, when the pump does come on, it should pump approximately 600 gallons per cycle. In summary, as long as the pump does not pump more than 600 gallons in any 24-hour period, the Action Leakage Rate has not been exceeded.

7. **62-701.400(3)(d) and (e). 1) Revisions to the project specifications are requested to demonstrate compliance with rules 62—701.400(3) (d)7., 10., and 11. 2) Revisions to Section 3.02D are requested to indicate that the test results shall not be averaged unless specified in SRI CMl3. 3) The coefficient of interface friction angle of 25 degrees as provided in Table 02930-2 is less then the 26.6 degree angle for the proposed side slope, therefore the composite geonet appears to be an unstable component of the liner system. Revision to Table 02930-2 to provide the minimum design interface friction angle, and related calculations for its factor of safety, are requested.**

Response: Please see the enclosed revised specifications for geomembrane, geogrid, and geocomposite products that incorporate the requirements of Rule 62-701.400(3)(d) 7., 10., and 11., FAC. Please note that the angle of the slope and the friction angle of the materials are related only by the fact that the steeper the angle the lower the normal

be. The fact that the slope angle is steeper than a given friction angle does not mean there will necessarily be a failure or stress applied to a material. The entire calculation must be evaluated to make this determination.

8. **62-701.400(4)(a). The design of the leachate collection system and leak detection system over the internal terrace is requested.**

   Response: Please see the revised Detail A on Sheet 15 of the Drawings.

9. **62-701.400(4)(b). 1) Specifications including the gradation and maximum percent organic matter for the sand (drainage layer and protective material) to demonstrate chemical compatibility and adequate hydraulic conductivity are requested. 2) The design detail for the geonet overlap at the toe of the east and west side slopes with notes for installation and the geonet orientation are requested.**

   Response: 1) The specification Section 2220, Excavation, Backfill, Fill, and Grading has been revised to include a hydraulic conductivity requirement, a maximum fines content, a maximum organics content, and chemical compatibility requirements for the protective sand layer (Select Sand). As discussed, a gradation requirement is not necessary to achieve the desired function. A requirement to remove fines that may accumulate on the surface of the protective sand has also been added. 2) Please see the new detail and notes on Sheet 8 of the Drawings.

10. **62-701.400(7). Revisions to the CQA Plan are requested to provide construction quality assurance procedures including material sampling and conformance testing for each component of the liner system including the composite geonet, leachate piping, gravel, and sand layer.**

    Response: Please see the revisions to the enclosed CQA plan.

11. **(62-701.400(9)(b). Revisions to the project specifications are requested to require a site plan (to be submitted by the contractor for approval by the engineer) to show the location of the proposed temporary lined soil dike, including design details with elevations, to prevent stormwater from Phase 1 and 1A from entering Phase 2.**

    Response: Please see the notes added to Sheet 3 of the Drawings and revision to the Earthwork specification (Section 02220).

12. **62-709.320. A site plan with the layout and design for the yard trash processing facility to demonstrate compliance with this rule is requested.**

    Response: The Yard Waste Procession Area (YWPA) is permitted under a separate registration. The proposed work will not effect the ability for the facility to stay in compliance with the applicable requirements. Future changes to the facility's layout will be address at the time of permit renewal for the YWPA.

Please provide all responses that relate to engineering required for construction signed and sealed by a professional engineer. Responses that relate to the facility operation should be included as part of the Operations Plan.

An original and two copies are provided as requested. Please call if you have any questions.

Sincerely,

12-16-02

John A. Banks, P.E.
Project Director
SCS ENGINEERS

Bruce J. Clark, P.E., DEE
Project Manager
SCS ENGINEERS

JAB/BJC:jlh

Enclosures

cc: Lee Martin, P.E., FDEP Tallahassee (w/o enclosures)
Susan Pelz, P.E., FDEP Tampa (w/enclosures)
Susan Metcalfe, P.G., Citrus County (w/enclosures)

WASTE MGT TAMPA SWD :8137446125

** Transmit Conf.Report **

P.1 Dec 6 2002 11:35

Telephone Number	Mode	Start	Time	Pages	Result	Note
818502458811	NORMAL	6,11:18	17'02"	10	* O K	

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

FAX

Date: 12/6/02

Number of pages including cover sheet: 10

To: Lee Martin

Solid Waste Section

Phone: (850) 245 8734

Fax phone: (850) 245 8811

CC:

From: Tim Ford

Phone: (813) 744-6100 x 382

Fax phone: (813) 744-6125

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

Citrus RAI letters

Sept 13

Nov 15

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

FAX

Date: 12/6/02

Number of pages including cover sheet: 10

To: Lee Martin

Solid Waste Section

Phone: (850) 245 8734

Fax phone: (850) 245 8811

CC:

From: Tim Ford

Phone: (813) 744-6100 x 382

Fax phone: (813) 744-6125

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

Citrus RAI Letters
Sept 13
Nov 15

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

November 15, 2002

Ms. Susan Metcalfe, P.G.
Citrus County
P.O. Box 340
Lecanto, FL 34460

Re: Citrus County Central Landfill - Phase 2 Expansion
Permit No.: #21375-004-SC, Citrus County

Dear Ms. Metcalfe:

This is to acknowledge receipt of the additional information in support of your permit application, received October 16, 2002 to construct a new disposal area (Phase 2) as an expansion of the existing Class I landfill.

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

Your permit application remains incomplete. This is the Department's 2nd request for additional information. 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 62-701, Florida Administrative Code (F.A.C.)]. Please provide:

1. **62-701.340(4)(c).** Approval of the requested alternate procedure for the reduced setback of less than 100 feet is requested.

2. **62-701.320(10).** List and reaffirm those referenced parts of the previously provided 1998 and July 2001 groundwater monitoring reports that are still valid. Those parts that are no longer valid should be deleted or replaced.

3. **62-701.320(7)(f)6.** Site plan revisions are requested to show the additional information as discussed with SCS and as listed below:

   a) Sheet 5, Section B revised to match the detail on Sheet 11;
   b) Sheet 7, Detail 1 revised to show the leachate sampling port on the leachate manifold piping;
   c) Sheet 8, Detail B revised to note the cutting and opening of the geotextile between the leachate collection piping and the gravel in the sump, and to show the geotextile between the primary liner and the gravel in the leak detection sump;
   d) Sheet 11, Detail F revised to show detail for the geonet overlap at the toe of the east and west side slopes with notes for installation and the geonet orientation;
   e) Sheet 14 revised to include all stormwater collection details;
   f) Sheet 15, Detail A revised to show the leachate collection and leak detection systems across the internal terrace, with a slope to promote drainage.

4. **62-701.400(3)(a)1.** The rationale for calculating the factor of safety for the internal sideslopes is unclear. Technical documents are requested that support the assumption that the "resistance" to the downslope force (used for calculating the factor of safety) is the sum of the individual resistances provided by each component rather than the resistance of the weakest component (being the geonet). A copy of each of the "technical reference reports on the subject of liner analysis on side slopes" mentioned in Section H.2.a.1 are requested. *Each component of the liner system must be able to withstand the stresses imposed by the component's own weight with the weight of the 24-inch sand layer, and any potential down-drag forces from the ongoing compression of the waste, on 2H:1V side slopes with the condition of operating heavy equipment for spreading and compaction. Design calculations must be based on friction angles from published data and confirmed by the actual results from shear box tests for the proposed design.*

5. **62-701.400(3)(c)1.** A description of the procedures to be used for constructing the bottom and side slopes of the sump, and the related method and frequency of testing on these slopes, are requested.

6. **62-701.400(3)(c)2.** An Action Leakage Rate (ALR) that is not based on an "average" leakage rate is requested. The referenced specific condition 17 in the current operation permit is not based on an "average" leakage rate.

7. **62-701.400(3)(d) and (e).** 1) Revisions to the project specifications are requested to demonstrate compliance with rules 62-701.400(3)(d)7., 10., and 11. 2) Revisions to Section 3.02D are requested to indicate that the test results shall not be averaged unless specified in GRI GM13. 3) The coefficient of interface friction angle of 25 degrees as provided in Table 02930-2 is less then the 26.6 degree angle for the proposed side slope, therefore the composite geonet appears to be an unstable component of the liner system. Revision to Table 02930-2 to provide the minimum design interface friction angle, and related calculations for its factor of safety, are requested.

8. **62-701.400(4)(a).** The design of the leachate collection system and leak detection system over the internal terrace is requested.

9. **62-701.400(4)(b).** 1) Specifications including the gradation and maximum percent organic matter for the sand (drainage layer and protective material) to demonstrate chemical compatibility and adequate hydraulic conductivity are requested. 2) The design detail for the geonet overlap at the toe of the east and west side slopes with notes for installation and the geonet orientation are requested.

10. **62-701.400(7).** Revisions to the CQA Plan are requested to provide construction quality assurance procedures including material sampling and conformance testing for each component of the liner system including the composite geonet, leachate piping, gravel, and sand layer.

11. **62-701.400(9)(b).** Revisions to the project specifications are requested to require a site plan (to be submitted by the contractor for approval by the engineer) to show the location of the proposed temporary lined soil dike, including design details with elevations, to prevent stormwater from Phase 1 and 1A from entering Phase 2.

12. **62-709.320.** A site plan with the layout and design for the yard trash processing facility to demonstrate compliance with this rule is requested.

Please provide all responses that relate to engineering required for construction signed and sealed by a professional engineer. Responses that relate to the facility operation should be included as part of the Operations Plan.

All replacement pages should be numbered and include the document title with the revision date as part of the header and footer on each revised page. **To expedite the review process, on one set of the revisions to the narrative reports, deletions may be struckthrough (~~struckthrough~~) and additions may be shaded (shaded) or a similar notation method may be used.**

"NOTICE! Pursuant to the provisions of Section 120.60, F.S., if the Department does not receive a response to this request for information within 90 days of the date of this letter, the Department may issue a final order denying your application. You need to respond within 30 days after you receive this letter, responding to as many of the information requests as possible and indicating when a response to any unanswered questions will be submitted. If the response will require longer than 30 days to develop, you should develop a specific time table for the submission of the requested information for Department review and consideration. Failure to comply with a time table accepted by the Department will be grounds for the Department to issue a Final Order of Denial for lack of timely response. A denial for lack of information or response will be unbiased as to the merits of the application. The applicant can reapply as soon as the requested information is available."

You are requested to arrange a meeting with FDEP staff to discuss the items in this letter prior to responding. Please submit your response to this letter as one complete package with an original and two copies of all correspondence (with one copy sent to Ms. Susan Pelz). If you have any questions you may call me at (813) 744-6100, extension 382.

Sincerely,

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

KBF/ab

cc: John Banks, P.E., SCS Engineers
Lee Martin, P.E., FDEP Tallahassee
Susan Pelz, P.E., FDEP Tampa

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

September 13, 2002

Ms. Susan Metcalfe, P.G.
Citrus County
P.O. Box 340
Lecanto, FL 34460

Re: Citrus County Central Landfill - Phase 2 Expansion
Permit No.: #21375-004-SC, Citrus County

Dear Mr. Metcalfe:

This is to acknowledge receipt of your permit application received August 14, 2002 to construct a new disposal area (Phase 2) as an expansion of the existing Class I landfill.

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

Your permit application is incomplete. This is the Department's 1st request for additional information. 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 62-701, Florida Administrative Code (F.A.C.)]. Please provide:

1. **62-701.320(7)(f)5. and (g).** A boundary survey and proof of ownership are requested.

2. **62-701.320(8)(a).** Proof of publication of notice of application (see attached notice) is requested.

3. **62-701.330(3)(c).** A site plan with the location of soil borings is requested. The referenced plot plan in Appendix E-1 was not found. Appendix E-1 was not provided.

4. **62-701.340(4)(c).** Approval of the requested alternate procedure for the reduced setback of less than 100 feet is requested.

5. **62-701.320(10).** List and reaffirm those referenced parts of the previously provided reports and documentation that provide information appropriate for this pending permit application and that are still valid. Those parts that are no longer valid should be deleted or replaced.

6. **62-701.320(7)(f)6.** Site plan revisions are requested to show the additional information listed below:

   a) Sheet 6 revisions to show the bottom slopes without abrupt changes in grade, and to show flatter sump side slopes.

b) Sheet 8 revisions to relocate the geotextile from between the leachate collection system and the sump to above the leachate collection system and the sump, and to show flatter sump side slopes;
c) Sheet 10 revision to show the sub-base (not the "subgrade") with a permeability of less than $1X10^{-5}$ cm/sec on Detail 3;
d) Sheet 15 revision to show the sub-base on Detail A.

7. **62-701.400(3)(a)1.** a) A copy of each of the "technical reference reports on the subject of liner analysis on side slopes" mentioned in Section H.2.a.1 are requested. b) Revisions to Appendix C and Appendix O are requested to demonstrate that each component of the liner system is able to withstand the stresses imposed by the component's own weight with the weight of the 24-inch sand layer, and any potential down-drag forces from the ongoing compression of the waste, and including worst case site conditions (using worst case interface friction angles and worst case moisture content expected during construction and during operation), on 2H:1V side slopes with the condition of operating heavy equipment for spreading and compaction. These additional calculations should be based on friction angles from published data and the actual results from shear box tests for the proposed design for a 2H:1V slope. Appendix C and Appendix O (with revisions) should be signed and sealed by a Florida professional engineer. c) A description of the method to be used to hold down the liner system onto the internal terrace on the east side slope, and related calculations, are requested.

8. **62-701.400(3)(c)1.** a) A description of construction procedures for the slopes in the sump, and related testing on these slopes, are requested. 3H:1V slopes in the sump should be considered and the sump sub-base design supplemented with a GCL. b) A site plan showing the locations of all areas of the liner system where the $1x10^{-5}$ cm/sec sub-base has been excluded is requested. c) Approval of the requested alternate procedure for the sub-base design allowing the proposed hydraulic conductivity greater than $1x10^{-5}$ cm/sec is requested.

9. **62-701.400(3)(c)2.** An Action Leakage Rate (ALR) is requested to establish a standard by which one can compare the actual leakage through the primary liner for determining when corrective action is needed.

10. **62-701.400(3)(d) and (e).** 1) The locations of each project specification that demonstrates compliance for each of the standards described in 62-701.400(3)(d) are requested. 2) Table 02776-1 references "smooth" liner and should be revised. 3) The rationale for allowing "averaged test results" as stated is Section 3.02D. is requested. 4) The transmissivity value referenced in Note 1 of Table 02930-2 is requested. 5) Clarification is requested regarding source of the coefficient of interface friction angle of 25 degrees as provided in Table 02930-2. Since this 25 degree angle is less then the 26.6 degree angle for the proposed side slope, the composite geonet appears to be an unstable component of the liner system. 6) Revisions to Section 15060 are requested to include all specifications for each type of leachate piping. These specifications should include the type of materials and pipe strength, size of perforations, and the use of rub sheets under pipe bends and couplings.

11. **62-701.400(4)(a).** 1) The location of the perforated corrugated 8-inch diameter pipe is requested. 2) The rationale for choosing corrugated pipe with small perforations rather than smooth-walled pipe with larger perforations is requested. 3) Documentation to demonstrate that all leachate pipes can be completely cleaned and video inspected is requested. The documentation should confirm that the video camera and all related equipment for cleaning and inspections will pass through all pipe bends.

12. **62-701.400(4)(b).** 1) Specifications for the course sand (drainage layer and protective material) to demonstrate chemical compatibility and adequate hydraulic conductivity are requested. The ".5X10^{-3} cm/sec" mentioned in Section H.3.b. is less than the hydraulic conductivity value required by rule. 2) The design detail for the geonet overlap at the toe of the east and west side slopes, and related calculations and specifications, are requested. Since the maximum flow carrying capacity of the geonet is based on its orientation, and its orientation changes at the toe of the east and west side slopes, a description of the method of providing adequate flow carrying capacity at the change in orientation is requested.

13. **62-701.400(7).** Revisions to the CQA Plan are requested to provide construction quality assurance procedures for each component of the liner system including the composite geonet, leachate piping, gravel, and sand layer.

14. **62-701.400(9)(b).** A site plan with the location of the proposed temporary lined soil dike to be used to prevent stormwater from Phase 1 and 1A from entering Phase 2, including design details with elevations, is requested.

15. **62-701.410(2).** A comprehensive geotechnical report is requested. Some information required as part of the geotechnical site investigation was not found in the Universal Geotechnical Report (Appendix F) and additional information is requested as listed below.

    a) A table of all top of ground elevations for each boring is requested.

    b) A current lineament survey (as a site-specific drawing) including adjacent off-site areas in the vicinity is requested. Conclusions regarding sinkholes based on a literature search and the lineament survey is requested.

    c) Calculations for subgrade settlements, both total and differential, are requested.

    d) Calculations for subgrade slope stability based on the actual design configuration and worst case site conditions are requested, using the worst case soil internal friction angle and moisture content expected during construction of the 2H:1V side slopes with the condition of operating heavy equipment for excavation and compaction. Recommendations for excavating, compacting, maintaining and repairing the side slopes during construction are requested.

    e) Please provide the comprehensive geotechnical report and supporting information, including detailed description of the methods, calculations, and interpretations used, signed and sealed by a professional engineer.

16. **62-701.500.** A permit modification of the existing operations permit is required upon project completion to include all revisions of the Operations Plan (Appendix B) that may be necessary for Phase 2 operations.

17. **62-701.630.** Cost estimates for Phase 2 closure and long-term care (signed and sealed by a professional engineer), and related proof of financial assurance, is not required until construction is completed and prior to operation of Phase 2.

18. **62-709.320.** A site plan with the layout and design for the yard trash processing facility to demonstrate compliance with this rule is requested.

19. List of any other permits required for the site.

Please provide all responses that relate to engineering required for construction signed and sealed by a professional engineer. Responses that relate to the facility operation should be included as part of the Operations Plan. All replacement pages should be numbered, and with revision date. To expedite the review process, on one set of the revisions to the narrative reports, deletions may be struckthrough (~~struckthrough~~) and additions may be shaded (shaded) or a similar notation method used.

"NOTICE! Pursuant to the provisions of Section 120.60, F.S., if the Department does not receive a response to this request for information within 90 days of the date of this letter, the Department may issue a final order denying your application. You need to respond within 30 days after you receive this letter, responding to as many of the information requests as possible and indicating when a response to any unanswered questions will be submitted. If the response will require longer than 30 days to develop, you should develop a specific time table for the submission of the requested information for Department review and consideration. Failure to comply with a time table accepted by the Department will be grounds for the Department to issue a Final Order of Denial for lack of timely response. A denial for lack of information or response will be unbiased as to the merits of the application. The applicant can reapply as soon as the requested information is available."

You are requested to arrange a meeting with FDEP staff to discuss the items in this letter prior to responding. Please submit your response to this letter as one complete package with an original and two copies of all correspondence (with one copy sent to Ms. Susan Pelz). If you have any questions you may call me at (813) 744-6100, extension 382.

Sincerely,

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

KBF/ab
Attachments
cc: John Banks, P.E., SCS Engineers
John Morris, P.G., FDEP Tampa
Susan Pelz, P.E., FDEP Tampa

62-110.106(5). Notices: General Requirements.
Each person who files an application for a Department permit or other notice as may publish or be required to publish a notice of application or other notice as set forth below in this section. Except as specifically provided otherwise in this paragraph, each person publishing such a notice under this section shall do so at his own expense in the legal advertisements section a newspaper of general circulation (i.e., one that meets the requirements of sections 50.011 and 50.031 of the Florida Statutes) in the county or counties in which the activity will take place or the effects of the Department's proposed action will occur, and shall provide proof of the publication to the Department within seven days of the publication.

62-110.106(6). Notice of Application. Publication of a notice of application shall be required for those projects that, because of their size, potential effect on the environment or natural resources, controversial nature, or location, or reasonably expected by the Department to result in a heightened public concern or likelihood of request for administrative proceedings. If required, the notice shall be published by the applicant one time only within fourteen days after a complete application is filed and shall contain the name of the applicant, a brief description of the project and its location, the location of the application file, and the times when it is available for public inspection. The notice shall be prepared by the Department and shall comply with the following format:

State of Florida
Department of Environmental Protection
Notice of Application

The Department announces receipt of a permit application from Citrus County Board of County Commissioners, c/o Ms. Susan Metcalfe, for construction of a new disposal area (approximately 6 acres) referred to as Phase 2 as an expansion to the existing Citrus County Central Landfill, located south of State Road 44 between Lecanto and Inverness, Citrus County, Florida.

This application is being processed and is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department of Environmental Protection, Southwest District Office, 3804 Coconut Palm Drive, Tampa, Florida 33619-1352.

Cirrus

Total

$130 \times 260 = .781$ AC

$\left(\frac{260 + 180}{2}\right) \times 893 = 4.51$

$108 \times 178 = .44$

5.73 AC

Not 211

$\left(\frac{106 + 180}{2}\right) \times 805 = 2.64$ AC

$\Rightarrow$ $5.73 - 2.64 = 3.09$ AC @ 211

Department of
Environmental Protection

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619-8318

INFORMATION REQUEST

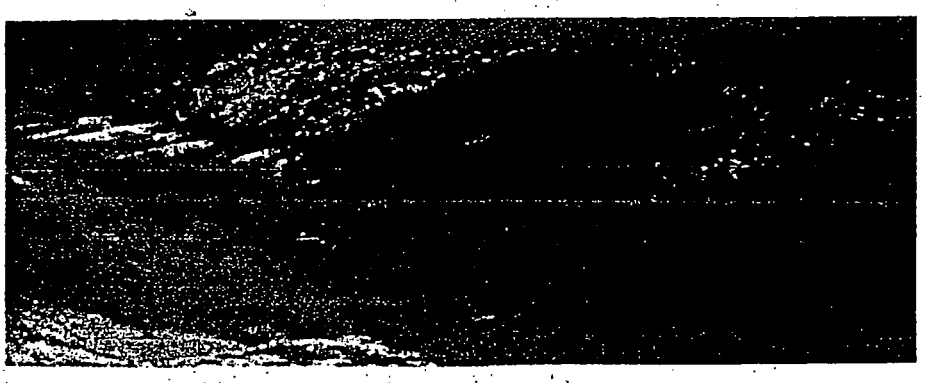
TO: John Banks
SCS
3012 US Highway 301 North
Suite 700
Tampa FL 33619-2242

We are pleased to send the enclosed information you requested.

If we can be of further service, please contact:

Kim B. Ford, P.E.
Solid Waste Section
Waste Management Division
3804 Coconut Palm Drive
Tampa, FL 33619-8318
(813) 744-6100, ext. 382

COMMENTS: RT article on
friction angle test
Kim



of landfill designs and liner

new test requirements for

ductivity of GCLs. The specific language is contained in Rule 62-701.400(3)(d), F.A.C., and reads:

"7. Interface shear strength of the actual components which will be used in the liner system shall be tested with method ASTM D5321 or an equivalent test method. However, when testing geosynthetic clay liners, method ASTM D6243, or an equivalent test method, shall be used. Unless it can be justified otherwise, the interface shall be tested in a water-saturated state. For the purposes of this test, clays compacted in the test apparatus during setup which have a water content wet of optimum shall be considered water saturated.

"8. The transmissivity of geonets shall be tested with method ASTM D4716, or an equivalent test method, to demonstrate that the design transmissivity will be maintained for the design period of the facility. The testing for the geonet in the liner system shall be conducted using actual boundary materials intended for the geonet at the maximum design normal load for the landfill, and at the design load expected from one lift of waste. At the maximum design normal load, testing shall be conducted for a minimum period of 100 hours unless data equivalent to the 100-hour period is provided, in which case the test shall be conducted for a minimum period of one hour. In the case of the design load from one lift of waste, the minimum period shall be one hour. For geonets used in final covers, only one test shall be conducted for a minimum period of one hour using the expected maximum design normal load from the cover soils and the actual boundary materials intended for the geonet.

"9. The hydraulic conductivity of geosynthetic clay liners shall be tested with method ASTM D5887, or an equivalent test method. First, the GCL test specimen shall be hydrated with the fluid which is expected

Florida augments testing requirements

The increasing complexity of landfill designs and liner systems prompts the state of Florida to add three new test requirements for geosynthetics in landfill applications.

The Florida Department of Environmental Protection began requiring liner systems for landfills in 1985. Since then, liner system designs have become much more complex and usually include a variety of geosynthetic components. In addition, due to a shortage of space and difficulty siting new landfills, existing landfills are expanding vertically to gain airspace. This places additional burdens on the landfill design and the underlying geosynthetics. Bioreactor landfills, where liquids and perhaps gases are injected into the wastes to accelerate the decomposition process, can have impacts on the liner system design by changing the loading forces, shear strengths of the waste, and pore water pressure conditions in the landfill. Wastes, such as waste-to-energy (WTE) ash from the combustion of municipal solid waste (MSW), can generate leachates with high cation concentrations which may decrease the performance of geosynthetic clay liners (GCLs) when they are used in liner systems.

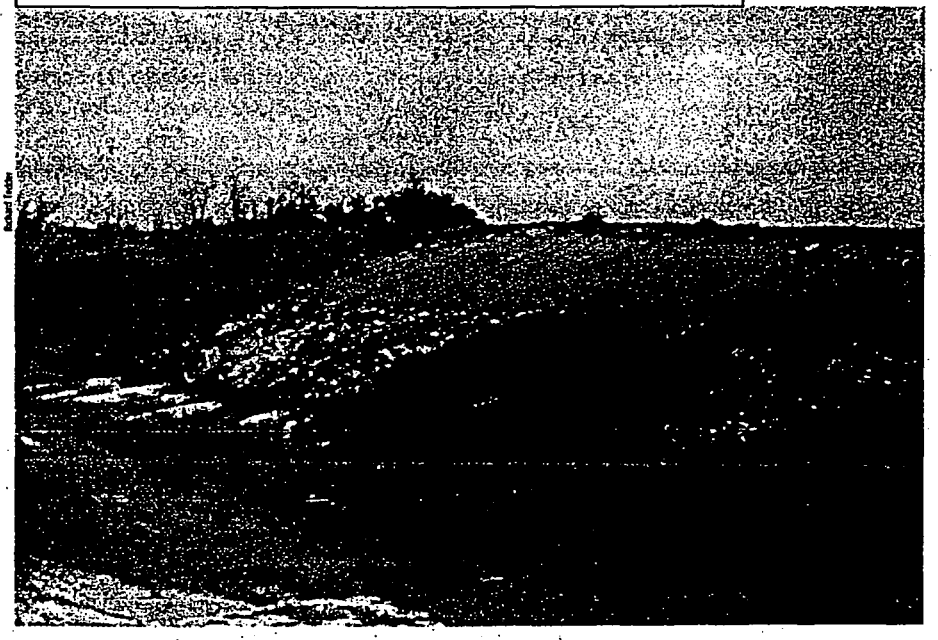
While many engineering firms do excellent work designing landfills, the Department became concerned that some designs were simply based on published performance or index data for the geosynthetic components rather than on actual test results, at the expected landfill conditions, for the components intended in the liner system. As the liner systems and landfill designs become more complex, the potential for failure increases if the designer has not properly considered the possible effects of the landfill design and operation on the liner components and the interactions between them. To help guard against these kinds of errors, the Department added three more test requirements to its Solid Waste Management Facilities Rule, Chapter 62-701, Florida Administrative Code (F.A.C.). These changes, along with many others, became effective on 27 May 2001. The new requirements include testing for interface shear strength, transmissivity of geonets, and hydraulic conductivity of GCLs. The specific language is contained in Rule 62-701.400(3)(d), F.A.C., and reads:

"7. Interface shear strength of the actual components which will be used in the liner system shall be tested with method ASTM D5321 or an equivalent test method. However, when testing geosynthetic clay liners, method ASTM D6243, or an equivalent test method, shall be used. Unless it can be justified otherwise, the interface shall be tested in a water-saturated state. For the purposes of this test, clays compacted in the test apparatus during setup which have a water content wet of optimum shall be considered water saturated.

"8. The transmissivity of geonets shall be tested with method ASTM D4716, or an equivalent test method, to demonstrate that the design transmissivity will be maintained for the design period of the facility. The testing for the geonet in the liner system shall be conducted using actual boundary materials intended for the geonet at the maximum design normal load for the landfill, and at the design load expected from one lift of waste. At the maximum design normal load, testing shall be conducted for a minimum period of 100 hours unless data equivalent to the 100-hour period is provided, in which case the test shall be conducted for a minimum period of one hour. In the case of the design load from one lift of waste, the minimum period shall be one hour. For geonets used in final covers, only one test shall be conducted for a minimum period of one hour using the expected maximum design normal load from the cover soils and the actual boundary materials intended for the geonet.

"9. The hydraulic conductivity of geosynthetic clay liners shall be tested with method ASTM D5887, or an equivalent test method. First, the GCL test specimen shall be hydrated with the fluid which is expected

Photo 1: Failure of landfill veneer cover soil.



to cause hydration in the field, or a similar fluid, for a minimum of 48 hours using sufficient backpressure to achieve a minimum B coefficient of 0.9 and using a confined effective consolidation stress not exceeding five pounds per square inch. Then, the hydraulic conductivity test on the GCL specimen shall be conducted, using the appropriate permeant fluid, at a confined effective consolidation stress not exceeding five pounds per square inch. The hydraulic conductivity test shall continue until steady state conditions are reached or a minimum of two pore volumes of permeant fluid have passed through the test specimen. The permeant fluid shall be either leachate from the landfill (or a similar landfill) if the GCL is used in a liner system, or water if the GCL is used as a barrier layer in a final cover."

Interface shear strength

The Department has experienced some limited failures of veneer cover soils in landfill closures (Photo 1). Fortunately, Florida has not experienced large waste slides such as the failure that occurred on 19 March 1988 at the Kettleman Hills Landfill near Kettleman City, Calif. Byrne et al. (1992) determined that the mechanism of this failure consisted of slippage along multiple interfaces within the liner system. One way to minimize this problem is to require interface shear strength testing of the actual combinations of geosynthetics and soils that will be used in the liner system. Once the weakest interface is identified, the design engineer can take the necessary steps to ensure that the landfill will be stable. This should also include consideration of the operation of the landfill to ensure that instabilities are not created after construction. While published friction angle values may be helpful in a preliminary design, the Department agrees with Koerner (1997) that they should never be used for final design purposes.

To address these concerns, the Department now requires design engineers to use the direct shear box test from method ASTM D-5321 (or method ASTM D-6243 for GCLs) to evaluate shear strength of the actual landfill liner components. Also, due to the high rainfall in Florida and the increased use of leachate recirculation for bioreactor landfills, these tests must normally be conducted in a water-saturated condition.

Transmissivity of geonets

Geonets can provide excellent planar drainage of liquids from a landfill. Their use in a leachate collection system can significantly reduce the leachate head over the liner. A lower head, of course, has the benefit of minimizing the driving force for leakage through a defect in the liner. The use of geonets may also allow for the construction of a liner system with fewer leachate collection laterals than would be required using drainage sand alone. But the Department became concerned with potential reductions in flow that can occur in geonets due to compressive creep, intrusion of geotextiles into the apertures of the geonet, and roll-over tendencies of some products' ribs when exposed to high compressive stresses. These flow reductions may also eliminate the benefits of using geonets.

Campbell et al. (1994) and Allen (2000) both report significant reductions in planar flows within 100 hours when some geonets are subjected to compressive loads of 15,000 lb./ft.^{2} (720 kPa). This reduction in flow was due to compressive creep. Allen (2000) also provides data on flow reduction due to geotextile intrusion effects and indicates the intrusion occurs relatively quickly. Thus, this effect can probably be measured in short-term tests.

When discussing designing with geonets, Koerner (1997) shows that some solid rib biaxial geonets exhibit roll-over at approximately 16,700 lb./ft.^{2} (800 kPa). This effect can also reduce the geonet's planar flow properties. Assuming an in-place density of 60 lb./ft.^{3} for well-compacted, wet MSW, this roll-over load would be equal to a waste height of approximately 278 ft. (84.7 m). While Florida's landfills have not disposed of waste this high, it is likely they will need to in the future, due to the difficulty of siting new landfills. The Department, for example, has not permitted a new greenfield landfill since 1994. In these cases, landfill owners may be forced to expand vertically at their existing facilities.

To address these concerns, the Department now requires the transmissivity of geonets used in landfills be tested with method ASTM D-4716. The geonets must be tested, using the actual boundary materials intended in the design, at both the maximum design normal load and the load expected from one lift of waste. Requiring actual boundary materials for the testing will prohibit the use of available index test data, where the test specimen is simply tested between two rigid plates, and should provide more realistic data for the landfill design. In addition, the Department requires the test be conducted for a minimum of one hour in the one-lift-of-waste case and a minimum of 100 hours in the maximum load case unless data equivalent to the 100 hour test are available (in which case the test is only required to run for one hour). This longer required seating time is a deviation from the minimum 15-minute seating time allowed by method ASTM D-4716, but it is needed to show the effects of compressive creep.

The 100-hour test at maximum load conditions should provide a reasonable estimate of the reduction effects expected from compressive creep. While compressive creep continues beyond 100 hours, the Department does not believe that requiring the test to continue for 10,000 hours is practical for landfill construction. Available test data also indicate that for many biaxial geonets, most of the flow reduction has occurred by 100 hours of seating time and their thickness vs. time curves are approaching an asymptote.

During rulemaking, landfill owners objected to having only a single geonet transmissivity test at the maximum load for the landfill. The Department recognized that the loading of the landfill early in its life would be very different than at its maximum load, and these differences may affect the geonet's performance. Also, since the impingement rate on a geonet in a liner system with only one lift of waste may be much greater than

the rate expected at the maximum design height of the landfill, the Department agreed that the owner should be allowed to test the geonet at a low load case. This was defined in the rule as one lift of waste.

Hydraulic conductivity of GCLs

GCLs are one of the newest geosynthetic materials used in Florida's landfills. Many areas of the state lack sufficient volumes of suitable clay to construct a landfill liner system. GCLs can be very helpful in this application. In fact, the double composite liner which uses GCLs as the soil component of the composite liners is becoming the state-of-the-art liner design in Florida today.

With typical MSW leachate, it is not uncommon to see GCLs with a hydraulic conductivity as low as $1x10^{-9}$ cm/sec. However, GCLs are subject to attack by calcium and magnesium cations if they are exposed to a leachate or ground water that has these cations in sufficient concentrations to substitute for the sodium in the sodium bentonite. Florida has 13 WTE facilities which burn approximately 5 million tons of MSW per year and generate approximately 1.4 million tons of WTE ash per year. Most of these facilities are using lime scrubbers to control the acid gas emissions from the combustion process. The sludges from the air pollution control equipment are normally added to the WTE ash from the boiler. This results in a leachate from WTE ash disposal units that is very high in calcium. For example, Figure 1 shows the results of one case where a GCL sample was hydrated with high-calcium leachate and then tested for hydraulic conductivity with that leachate in a flexible wall permeameter. The GCL had a hydraulic conductivity of around $1x10^{-6}$ cm/sec, which was much higher than is typically seen with GCLs and would normally be unacceptable for use in the liner system. To deal with this problem, manufacturers have developed a "contaminant resistant clay" that can perform well under these hostile conditions. Figure 2 shows the successful results of this improved clay in the identical test conditions used for the GCL in Figure 1.

Figure 1: GCL performance in one high-calcium leachate test.

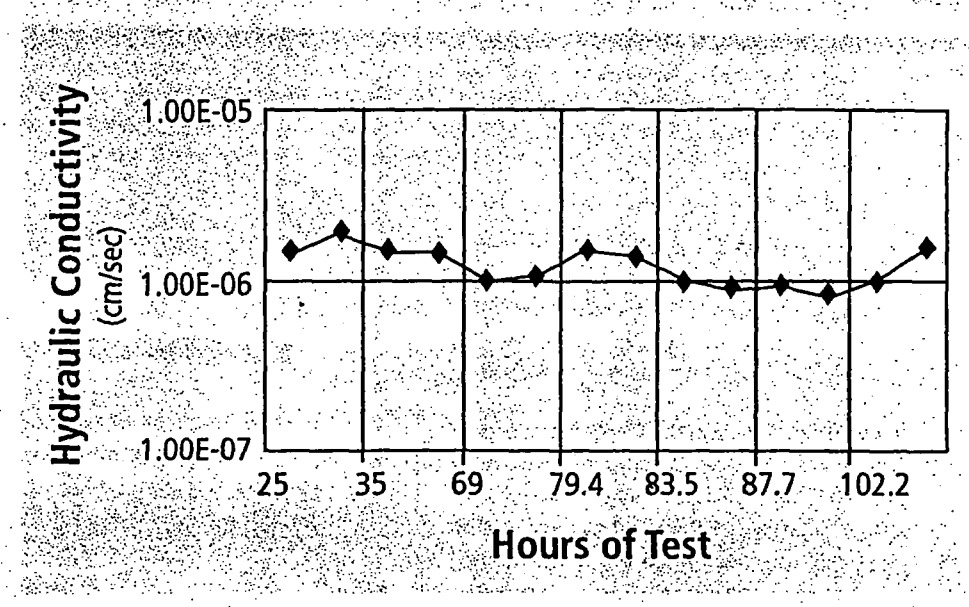
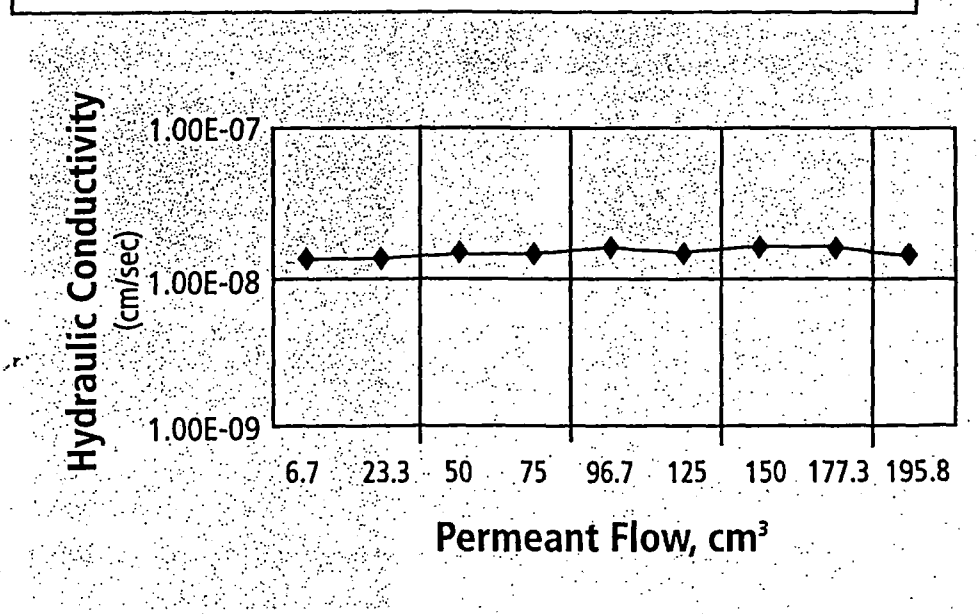


Figure 2: Treated GCL performance in one high-calcium leachate test.



To address these concerns, the Department decided to require hydraulic conductivity testing of GCLs with method ASTM D-5887. The design engineer is required to first hydrate the GCL with the fluid it is expected to see in the landfill application. Then, the hydraulic conductivity test on the GCL shall be conducted with either leachate, for liner applications, or water, for final covers. The Department also requires that the hydration and testing be conducted with an effective consolidation stress not exceeding 5 lb./in.^{2} This is approximately equal to the combined weight from a 2-ft. (0.61-m)-thick layer of cover/drainage soils and one 10-ft. (3.0-m) lift of MSW.

Impacts on the permitting process

During rulemaking, some landfill owners raised two questions about how these new

test requirements would be integrated with the permitting process. The first question concerned the timing of the testing. Did the data from this testing have to be submitted with the construction permit application, or could the data be included with the construction quality assurance documentation at the completion of the project? The second question concerned the frequency of the testing. Did the Department expect this testing to be conducted as part of the landfill design only, or were they also expected to be added to the conformance testing requirements during construction of the landfill? In response to these concerns, the Department added some additional language in Rule 62-701.400(3)(d), F.A.C. which reads:

"10. If not submitted as part of the permit application to the Department, then the testing required in subparagraphs (3)(d)7, 8 and 9 of this section for the materials used in the liner construction shall be conducted as part of the construction quality assurance activities, and the results of these tests shall be included in the completion of construction documents required in subsection (7) of this section.

"11. The testing required in subparagraphs (3)(d)7, 8 and 9 of this paragraph are single-point tests required either as part of the permit application phase of a landfill project or prior to liner construction. The purpose of these tests is to confirm that the components selected for the liner construction meet the design criteria used in the permit application."

Regarding the first question, the Department prefers that the test results be submitted along with the landfill permit application. However, it also recognized that there may be occasions when the specific geonet, GCL or other geosynthetic for the construction project will not have been selected at the time the permit application is being prepared. For example, landfill owners indicated that allowing flexibility in the materials selected for a project was desirable since it could reduce the proposed construction costs during the bid process.

To provide this flexibility, the Department agreed that the test results could be

submitted either in the permit application or along with the completion of construction documentation. If submitted with the completion of construction documents, then the tests must be conducted before construction begins to ensure the liner components tested meet the design criteria which were used in the permit application. If the test results do not show that the selected materials meet the design criteria of the permit, then the landfill owner must either select alternate materials that are demonstrated to be satisfactory or contact the Department and modify his permit before preceding with construction. Obviously, a permit modification at this point in a project is not desirable. So, if this approach is used, it is important the owner's engineer be very careful when selecting the design criteria that are used in the permit application.

Regarding the second question, the Department considered these tests to be part of the design requirements for the landfill and are to be used in support of, or confir-

mation of, the design criteria used in the permit application. The construction quality assurance engineer may choose to include these tests in his conformance testing, but the rule does not require it. It is obvious, for example, that requiring a 100-hour transmissivity test for every 100,000 ft.^{2} (9,295 m^2) of geonet installed is not practical during construction.

Conclusions

Landfills and their liner systems are becoming more complex. The use of geosynthetics in liner systems must be properly tested to ensure they are suitable for these applications. The Department hopes that adding these three additional tests to our Solid Waste Rule will help provide the necessary minimum design information needed to protect against major landfill failures that have been experienced in other states. As has been well stated by Giroud (1999), "engineers who do not learn from the mistakes made by others will learn from their own mistakes." GFR

References

Allen, S. R. 2000. "Issues regarding the measurement of the planar flow of geocomposite drains used in waste containment applications." *Proceedings From the 5th Annual Landfill Symposium*. Solid Waste Association of North America. 193-201.

ASTM Method D-5321. "Standard Test Method for Determining the Coefficient of Soil and Geosynthetic or Geosynthetic and Geosynthetic Friction by the Direct Shear Method." October 15, 1992.

ASTM Method D-4716. "Test Method for Determining the (In-Plane) Flow Rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Head." June 10, 1999.

ASTM Method D-5887. "Standard Test Method for Measurement of Index Flux Through Saturated Geosynthetic Clay Liner Specimens Using a Flexible Wall Permeameter." December 10, 1995.

ASTM Method D-6243-98. "Standard Test Method for Determining the Internal and Interface Shear Resistance of Geosynthetic Clay Liner by the Direct Shear Method." March 10, 1998.

Byrne, R.J., Kendall, J., and Brown, S. 1992. "Causes and mechanism of failure Kettleman Hills landfill B-19, phase IA." *Proceedings, ASCE Specialty Conference on Stability and Performance of Slopes and Embankments II*. 1188-1215.

Campbell, R. P. and Wu, J. T. H. 1994. "In-plane flow of four geosynthetics for landfill drainage." *Geotechnical Testing Journal (GTJODJ)*. Vol. 17, No. 1. 3-16.

Giroud, J.P. 1999. "Lessons learned from failures associated with geosynthetics." *Geosynthetics Conference 1999 Proceedings*. Volume 1.

Koerner, R.M. 1997. *Designing with Geosynthetics*. Fourth Edition. Prentice Hall, N.J.

Richard B. Tedder, P.E., was trained as a chemical engineer and works for the Florida Department of Environmental Protection, Tallahassee, Fla. He has over 19 years experience there, with 10 of those years in the area of solid waste management. He assists in the development of rules and guidance for managing municipal solid waste, and specializes in landfill engineering and liner designs.

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

November 15, 2002

Ms. Susan Metcalfe, P.G.
Citrus County
P.O. Box 340
Lecanto, FL 34460

Re: Citrus County Central Landfill - Phase 2 Expansion
Permit No.: #21375-004-SC, Citrus County

Dear Ms. Metcalfe:

This is to acknowledge receipt of the additional information in support of your permit application, received October 16, 2002 to construct a new disposal area (Phase 2) as an expansion of the existing Class I landfill.

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

Your permit application remains incomplete. This is the Department's 2nd request for additional information. 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 62-701, Florida Administrative Code (F.A.C.)]. Please provide:

1. **62-701.340(4)(c).** Approval of the requested alternate procedure for the reduced setback of less than 100 feet is requested.

2. **62-701.320(10).** List and reaffirm those referenced parts of the previously provided 1998 and July 2001 groundwater monitoring reports that are still valid. Those parts that are no longer valid should be deleted or replaced.

3. **62-701.320(7)(f)6.** Site plan revisions are requested to show the additional information as discussed with SCS and as listed below:

   a) Sheet 5, Section B revised to match the detail on Sheet 11;
   b) Sheet 7, Detail 1 revised to show the leachate sampling port on the leachate manifold piping;
   c) Sheet 8, Detail B revised to note the cutting and opening of the geotextile between the leachate collection piping and the gravel in the sump, and to show the geotextile between the primary liner and the gravel in the leak detection sump;
   d) Sheet 11, Detail F revised to show detail for the geonet overlap at the toe of the east and west side slopes with notes for installation and the geonet orientation;
   e) Sheet 14 revised to include all stormwater collection details;
   f) Sheet 15, Detail A revised to show the leachate collection and leak detection systems across the internal terrace, with a slope to promote drainage.

4. **62-701.400(3)(a)1.** The rationale for calculating the factor of safety for the internal sideslopes is unclear. Technical documents are requested that support the assumption that the "resistance" to the downslope force (used for calculating the factor of safety) is the sum of the individual resistances provided by each component rather than the resistance of the weakest component (being the geonet). A copy of each of the "technical reference reports on the subject of liner analysis on side slopes" mentioned in Section H.2.a.1 are requested. *Each component of the liner system must be able to withstand the stresses imposed by the component's own weight with the weight of the 24-inch sand layer, and any potential down-drag forces from the ongoing compression of the waste, on 2H:1V side slopes with the condition of operating heavy equipment for spreading and compaction. Design calculations must be based on friction angles from published data and confirmed by the actual results from shear box tests for the proposed design.*

5. **62-701.400(3)(c)1.** A description of the procedures to be used for constructing the bottom and side slopes of the sump, and the related method and frequency of testing on these slopes, are requested.

6. **62-701.400(3)(c)2.** An Action Leakage Rate (ALR) that is not based on an "average" leakage rate is requested. The referenced specific condition 17 in the current operation permit is not based on an "average" leakage rate.

7. **62-701.400(3)(d) and (e).** 1) Revisions to the project specifications are requested to demonstrate compliance with rules 62-701.400(3)(d)7., 10., and 11. 2) Revisions to Section 3.02D are requested to indicate that the test results shall not be averaged unless specified in GRI GM13. 3) The coefficient of interface friction angle of 25 degrees as provided in Table 02930-2 is less then the 26.6 degree angle for the proposed side slope, therefore the composite geonet appears to be an unstable component of the liner system. Revision to Table 02930-2 to provide the minimum design interface friction angle, and related calculations for its factor of safety, are requested.

8. **62-701.400(4)(a).** The design of the leachate collection system and leak detection system over the internal terrace is requested.

9. **62-701.400(4)(b).** 1) Specifications including the gradation and maximum percent organic matter for the sand (drainage layer and protective material) to demonstrate chemical compatibility and adequate hydraulic conductivity are requested. 2) The design detail for the geonet overlap at the toe of the east and west side slopes with notes for installation and the geonet orientation are requested.

10. **62-701.400(7).** Revisions to the CQA Plan are requested to provide construction quality assurance procedures including material sampling and conformance testing for each component of the liner system including the composite geonet, leachate piping, gravel, and sand layer.

11. **62-701.400(9)(b).** Revisions to the project specifications are requested to require a site plan (to be submitted by the contractor for approval by the engineer) to show the location of the proposed temporary lined soil dike, including design details with elevations, to prevent stormwater from Phase 1 and 1A from entering Phase 2.

12. **62-709.320.** A site plan with the layout and design for the yard trash processing facility to demonstrate compliance with this rule is requested.

Please provide all responses that relate to engineering required for construction signed and sealed by a professional engineer. Responses that relate to the facility operation should be included as part of the Operations Plan.

All replacement pages should be numbered and include the document title with the revision date as part of the header and footer on each revised page. **To expedite the review process, on one set of the revisions to the narrative reports, deletions may be struckthrough (~~struckthrough~~) and additions may be shaded (shaded) or a similar notation method may be used.**

"NOTICE! Pursuant to the provisions of Section 120.60, F.S., if the Department does not receive a response to this request for information within 90 days of the date of this letter, the Department may issue a final order denying your application. You need to respond within 30 days after you receive this letter, responding to as many of the information requests as possible and indicating when a response to any unanswered questions will be submitted. If the response will require longer than 30 days to develop, you should develop a specific time table for the submission of the requested information for Department review and consideration. Failure to comply with a time table accepted by the Department will be grounds for the Department to issue a Final Order of Denial for lack of timely response. A denial for lack of information or response will be unbiased as to the merits of the application. The applicant can reapply as soon as the requested information is available."

You are requested to arrange a meeting with FDEP staff to discuss the items in this letter prior to responding. Please submit your response to this letter as one complete package with an original and two copies of all correspondence (with one copy sent to Ms. Susan Pelz). If you have any questions you may call me at (813) 744-6100, extension 382.

Sincerely,

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

KBF/ab

cc: John Banks, P.E., SCS Engineers
Lee Martin, P.E., FDEP Tallahassee
Susan Pelz, P.E., FDEP Tampa

SOLID WASTE ROUTING TE: 10/29/02

Lindsay McCoy 10-30 [✓]

Kim Ford → file [✓]

Steve Morgan 10/30 [✓]

John Morris 10/30/02 [✓]

Lora Ross 10/30 [✓]

~~Vanessa~~ Stephanie Petrie 11/5/02 [✓]

DEPOSITION AFTER REVIEW

FILE [] **SUSAN PELZ** 10/29 **[]**

DEP ROUTING AND TRANSMITTAL SLIP

TO: (NAME, OFFICE, LOCATION)

1. Bob Stetler
2. Bill Kutash
3. _____
4. _____
5. _____

PLEASE PREPARE REPLY FOR:

____ SECRETARY'S SIGNATURE

____ DIV/DIST DIR SIGNATURE

____ MY SIGNATURE

____ YOUR SIGNATURE

____ DUE DATE _____

ACTION/DISPOSITION

____ DISCUSS WITH ME

____ COMMENTS/ADVISE

____ REVIEW AND RETURN

____ SET UP MEETING

X FOR YOUR INFORMATION

X HANDLE APPROPRIATELY

____ INITIAL AND FORWARD

____ SHARE WITH STAFF

____ FOR YOUR FILES

COMMENTS:

FROM: Tim Parker DATE: 10/29/02 PHONE: x407

DEP 15-026 (12/93)

Betty Strifler

Clerk of the Circuit Court
Citrus County

110 North Apopka Avenue, Room 101, Inverness, Florida 34450-4299 Telephone (352) 637-9410

RECEIVED
OCT 28 2002
D.E.P.
SOUTHWEST DISTRICT

October 23, 2002

Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619-8318

To Whom It May Concern:

Re: Resolution No. 2002-232

Enclosed are three certified copies of Citrus County Resolution No. 2002-232, adopted by the Board at its meeting held October 22, 2002, authorizing certain County officials to sign applications for Florida Department of Environmental Protection permits, and a certified copy of the Certificate of Incumbency and Authority.

Respectfully,
BETTY STRIFLER, CLERK

By: Glenda Brown
Glenda Brown, Deputy Clerk

Enclosure

RESO[illegible]ION NO. 2002- 232

A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF CITRUS COUNTY, FLORIDA TO REPLACE RESOLUTION NO. 97-159 AUTHORIZING CERTAIN COUNTY OFFICIAL TO SIGN APPLICATIONS FOR FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION PERMITS.

RECEIVED
OCT 28 2002
D.E.P.
SOUTHWEST DISTRICT

WHEREAS, it is necessary from time to time that the County sign applications for Florida Department of Environmental Protection permits, and

WHEREAS, Citrus County wishes to designate those individuals on its County staff who are authorized by this Resolution to sign applications for the Florida Department of Environmental Protection, and

WHEREAS, Citrus County waives the placement of the Citrus County seal on all documents signed by the undersigned representatives and agrees to be bound as fully as if the Citrus County seal were affixed;

NOW, THEREFORE, BE IT RESOLVED by the Board of County Commissioners of Citrus County, Florida, in a regular meeting this October 22, 2002 as follows:

1. The Board of County Commissioners does hereby authorize the following individuals to sign applications for Florida Department of Environmental Protection permits on behalf of the County:

A. Kenneth L. Frink, P.E. Director
Department of Public Works

B. Thomas H. Dick, Assistant Director,
Department of Public Works

C. James K. Cheek Jr., P.E., Director
Division of Engineering

D. Susan J. Metcalfe, P.G., Director
Division of Solid Waste Management

E. Robert Knight, Interim Director
Division of Utilities

F. Robert G. Merkel, Assistant Director
Division of Utilities

2. The Clerk of the Board of County Commissioners is hereby directed to forward three (3) certified copies of this Resolution to the Florida Department of Environmental Protection, 3804 Coconut Palm Drive, Tampa, Florida 33619-8318.

ATTEST:

for Glenda Brown, D.C.
BETTY STRIFLER, CLERK

BOARD OF COUNTY COMMISSIONERS
OF CITRUS COUNTY, FLORIDA

BY: Jim Fowler
JIM FOWLER, CHAIRMAN

APPROVED AS TO FORM
AND CORRECTNESS

ROBERT B. BATTISTA
COUNTY ATTORNEY

CIRCUIT COURT CLERK CITRUS CO.

CERTIFIED TO BE A TRUE COPY
BETTY STRIFLER
CLERK OF CIRCUIT COURT
By: Glenda Brown D.C.
This 23 Day of October AD 2002.

CERTIFICATE OF INCUMBENCY AND AUTHORITY

1. JIM FOWLER, Chairman of the Board of County Commissioners of Citrus County, Florida do hereby certify that the person(s) whose name, title, position and signature appears below is a duly elected or appointed, qualified and acting representative of CITRUS COUNTY, a political subdivision of the State of Florida, and holds, on the date of this Certificate, the office set beneath his/her name: that the signature appearing opposite his/her name is the genuine signature of the representative: that the representative is duly authorized for and on behalf of CITRUS COUNTY to execute and deliver any application for permits and all instruments between CITRUS COUNTY and the DEPARTMENT OF ENVIRONMENTAL PROTECTION, STATE OF FLORIDA, in connection therewith: and that the execution and delivery of any such permit and all instruments in connection therewith, for and on behalf of CITRUS COUNTY are not prohibited by, or in any manner restricted by, the terms of CITRUS county's Certification of Incorporation, its bylaws, or of any loan agreement, indenture or contract to which CITRUS COUNTY is a party or under which it is bound.

I do further certify that the foregoing authority shall remain in full force and effect, and said DEPARTMENT OF ENVIRONMENTAL PROTECTION, STATE OF FLORIDA, shall be entitled to reply upon same, until written notice of the modification, rescission, or revocation of same, in whole or in part, has been delivered to said DEPARTMENT OF ENVIRONMENTAL PROTECTION, STATE OF FLORIDA, but no such modification, rescission, or revocation shall, in an event, be effective with respect to any permit documents executed or actions taken in reliance upon the foregoing authority prior to the delivery to said DEPARTMENT OF ENVIRONMENTAL PROTECTION, STATE OF FLORIDA, written notice to said modifications, rescission, or revocation, CITRUS COUNTY hereby waives the CITRUS COUNTY Seal on all permit documents signed by the representative and agrees to be bound as fully as if the CITRUS COUNTY Seal were affixed. Attached is a Resolution to this effect.

Names of Representative/ Title(s)/Position(s) of Representative	Signature of Representative
Kenneth L. Frink, P.E. Director, Department of Public Works	
Thomas H. Dick Assistant Director, Department of Public Works	
James K. Cheek, Jr., P.E. Director, Division of Engineering	
Susan J. Metcalfe, P.G. Director, Division of Solid Waste Management	
Robert Knight Interim Director, Division of Utilities	
Robert G. Merkel Assistant Director, Division of Utilities	

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Seal of CITRUS COUNTY this October 22, 2002.

ATTEST:

for BETTY STRIFLER, CLERK

BOARD OF COUNTY COMMISSIONERS OF CITRUS COUNTY, FLORIDA

BY: JIM FOWLER, CHAIRMAN

APPROVED AS TO FORM AND CORRECTNESS

ROBERT B. BATTISTA
COUNTY ATTORNEY

Environmental Consultants

3012 U.S. Highway 301 N
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

October 16, 2002
File No. 09199056.02

Kim B. Ford, P.E.
Solid Waste Section
Division of Waste Management
Florida Department of Environmental Protection
3805 Coconut Palm Drive
Tampa, Florida 33619

Subject: Citrus County Central landfill – Phase 2 Expansion
Permit No.: #21375-004-SC, Citrus County

Dear Kim:

On behalf of Citrus County, SCS Engineers (SCS) submits the following responses to your request for additional information in a letter dated September 13, 2002. For ease of review, each FDEP comment is reiterated in bold type, followed by our response.

We have provided revised submittals, or replacement pages to the submittals, using a ~~strikethrough~~ and <u>underline</u> format, to facilitate review. Enclosed are one original and two copies of all revisions.

1. **62-701.320(7)(f)5. and (g). A boundary survey and proof of ownership are requested.**

   Response: A copy of the landfill Boundary Survey and Proof of Ownership (Deed) are attached.

2. **62-701.320(8)(a). Proof of publication of notice of application (see attached notice) is requested.**

   Response: A copy of the proof of publication of the notice of application is attached.

3. **62-701.330(3)(c). A site plan with the location of soil borings is requested. The referenced plot plan in Appendix E-1 was not found. Appendix E-1 was not provided.**

   Response: A site plan with the locations of soil borings taken is included in Appendix B of Universal Engineering's Geotechnical Report located in Appendix F of SCS' report (Volume 2 of 2). The reference to the soil boring layout also is provided in Section F (attached) of the SCS' engineering report. A plot plan of the landfill is

provided on Sheet No. 2 of the construction drawings in Appendix A of SCS' report. The reference to Appendix E-1 was in error.

4. **62-701.340(4)(c). Approval of the requested alternate procedure for the reduced setback of less than 100 feet is requested.**

   Response: SCS submitted a request for an alternate procedure for a setback less than 100 feet to the FDEP in Tallahassee. Based on initial conversation with FDEP in Tallahassee at the time of submittal, we anticipate that they will approve this request. Once the County receives confirmation SCS will forward that to you for your file.

5. **62-701.340(1). List and reaffirm those referenced parts of the previously provided reports and documentation that provide information appropriate for this pending permit application and that are still valid. Those parts that are no longer valid should be deleted or replaced.**

   Response: There are no changes proposed at this time to the following previously submitted landfill documents that are still valid:

   - Operations and Closure Plan.
   - Contingency Plan.
   - Expansion Ground Water Monitoring Plan / August 1988 / by PBS&J.
   - Ground Water and Leachate Monitoring Plan Review / July 2001 / by JE&A.

6. **62-701.320(7)9f)6. Site plan revisions are requested to show the additional information listed below.**

   a) **Sheet 6 revisions to show the bottom slopes without abrupt changes in grade, and to show flatter sump side slopes.**

      Response: The side slopes of the sump have been flattened from 2:1 to 3:1 (see attached plan set – sheet 8).

   b) **Sheet 8 revisions to relocate the geotextile from between the leachate collection system and the sump to above the leachate collection system and the sump, and to show flatter sump side slopes;**

      Response: The geotextile was removed from beneath the leachate collection pipe at the sump. Geotextile is not needed above the leachate collection pipe as the graded stone cover provides an effective filter for the protective sand layer. The side slopes of the sump have been flattened from 2:1 to 3:1 (see attached plan set – sheet 8).

c) **Sheet 10 revision to show the sub-base (not the "subgrade") with a permeability of less than $1x10^{-5}$ cm/sec on Detail 3;**

Response: The requested revision has been made (see plan set – sheet 10).

d) **Sheet 15 revision to show the sub-base on Detail A.**

Response: Special sub-base notation has been added under the flat portion of the intermediate terrace detail (see attached plan set – sheet 15).

7. **62-701.400(3)(a)1.**

a) **A copy of each of the "technical reference reports on the subject of liner analysis on side slopes" mentioned in Section H.3.a.1 are requested.**

Response: See SCS' response to comment b), following, for more information on the approach to liner analysis on the side slopes.

b) **Revisions to Appendix C and Appendix O are requested to demonstrate that each component of the liner system is able to withstand the stresses imposed by the component's own weight with the weight of the 24-inch sand layer, and any potential down-drag forces from the ongoing compression of the waste, and including worst case site conditions using worst case interface friction angles and worst case moisture content expected during construction and during operation, on 2:H:1V side slopes with the condition of operating heavy equipment for spreading and compaction. These additional calculations should be based on friction angles from published data and the actual results from shear box tests for the proposed design for a 2H:1V slope. Appendix C and Appendix O (with revisions) should be signed and sealed by a Florida professional engineer.**

Response:

<u>Liner Analysis</u> – SCS assessed the following liner side slope stress analysis cases;

a) Weight of the liner components after installation and before application of sand, refuse and equipment load.

b) Weight of the liner components after application of phased sand layer but before application of refuse (Sand layer extends 10 feet vertically above waste).

c) Initial operating scenario including loads from sand layer, the refuse, and compaction equipment.

SCS' approach to liner analysis is based on our understanding and actual operating experience with similar liner systems at the Citrus County landfill. It is important to note that the Phase 1A liner at the County landfill is similar in composition to the proposed Phase 2 cell and has been successfully constructed and operated using the same materials and equipment as proposed in this design phase.

Also, the performance of liner systems is heavily dependent on operational practices. The construction of well-compacted lifts of refuse, building from the bottom of the landfill and proceeding up the slope is imperative and functions as a buttress to help relieve much of the stress imposed on the liner system from subsequent layers of sand and refuse and compaction equipment as these progress up the slope.

SCS' analytical approach is based on the principle that the geomembranes and geonets are in intimate contact with each other and the sub-base from the weight of protective sand and refuse and have similar contact friction angles within the range of approximately 18 to 22 degrees. This intimate contact forces the liner components to strain a similar and compatible amount in reaction to the tensile force imparted by the sand, refuse and compaction equipment. As a result, the lining system can be modeled as a single unit, with strain compatibility, not as independent layers. The stability of the lining system is provided by friction between lining components and the sub-base and the top-of-slope anchor trench.

SCS has included in the analysis all of the significant loads anticipated to occur in the field. In SCS' opinion, the most critical load condition occurs as the initial lift of refuse is placed, which results in the maximum stress from the compaction equipment. The compactor load has been conservatively increased 50% to account for the dynamic application of the load. Once the lift height increases, the stress from the compaction equipment is dissipated through the refuse layers and becomes less of a concern. SCS also has factored a 2/3 reduction in the contributing strength of the geocomposites due to the strength limitation of the fastening method used to connect the sheets.

The result of our liner and operations analysis indicates that the lining system components will be stable for the cases as follows:

a) Liner weight alone: the resisting tensile strength is approximately 5 times the applied tensile stress (i.e. a factor of safety of 5).

b) Liner weight plus sand layer: the resisting tensile strength is approximately 2.6 times the applied load (i.e. a factor of safety of 2.6 was calculated). By design, the sand layer will not exceed a height of approximately 10 feet up the slope and extending beyond the last compacted refuse lift. The sand layer and refuse shall not be placed on the slope unless there is a continuous and substantial, well-compacted buttress of refuse in place at a lower elevation to place it against.

c) Initial operation scenario: the resisting tensile strength of the lining system was estimated at 1.5 times the applied force (i.e. a factor of safety of 1.5 was calculated). The same filling recommendation provided in b) above, applies in this case.

A copy of the liner stress calculations are provided in revised Appendix C.

Soil Slope Stability - The soil side slope stability analyses have been supplemented to include the condition of heavy equipment loading at the top of the slope. The results of the additional analyses indicate that the factor of safety against instability was 1.61. A copy of the model analysis outputs are provided in an updated, attached Appendix O.

c) **A description of the method to be used to hold down the liner system onto the internal terrace on the east side slope, and related calculations, are requested.**

Response: We do not anticipate development of tensile stress in the liner to the extent that it would pull it off the sub-base of the internal terrace, given that appropriate slack will be provided during liner seaming to ensure it lays flat against the sub-base when filling begins, and the added weight from the soil berm on top of the liner. However, a liner anchor trench has been added at the lower slope break to further ensure that the liner system across terrace remains stable and is not pulled (see attached plan set – sheet 15).

8. **62-701.400(3)(c)1.**

a) **A description of construction procedures for the slopes in the sump, and related testing on these slopes, are requested. 3H:1V slopes in the sump should be considered and the sump subbase design supplemented with a GCL.**

Response: The side slopes of the sump have been flattened from 2:1 to 3:1(plan set sheet 8) so special construction procedures are not required. Considering the installation problems of GCLs if they become wet, SCS

believes that the additional leak prevention benefits of a GCL liner under the sump are more than offset by the potential installation difficulties.

b) **A site plan showing the locations of all areas of the liner system where the $1x10^{-5}$ cm/sec has been excluded is requested.**

Response: Refer to Sheet 5 of the attached plan set for the cell layout plan showing all areas of the liner system where the $1X10^{-5}$ cm/sec subbase has been excluded.

c) **Approval of the requested alternate procedure for the sub-base design allowing the proposed hydraulic conductivity greater than $1x10^{-5}$ cm/sec is requested.**

Response: SCS submitted a request for an alternate procedure for a side slope sub-base design to the FDEP in Tallahassee. Based on initial conversation with FDEP in Tallahassee at the time of submittal, we anticipate that they will approve this request. Once the County receives confirmation SCS will forward that to you for your file.

9. **62-701.400(3)(c)2. An Action Leakage Rate (ALR) is requested to establish a standard by which one can compare the actual leakage through the primary liner for determining when corrective action is needed.**

Response: The liner system for the proposed Phase 2 cell is substantially similar to that constructed in Phase 1A. Therefore, the County is proposing an Action Leakage Rate (ALR) of 100 gallons per acre per day (with actual leakage rate averaged over a monthly period), that is the same as the value previously established with the FDEP in Special Condition 17, Item (e) of the current operations permit.

10. **62-7601.400(3)(d) and (e). (1). The locations of each project specification that demonstrates compliance for each of the standards described in 62-701.400(3)(d) are requested.**

Response: For convenience, SCS has provided a copy of the entire section, including all revisions, as follows:

62-701.400(3)(d) 1. – Refer to pages 02776-15 and 16 of the technical specifications found in Appendix E for geomembrane seam shear strength testing and seam failure characteristics. Refer to pages 02776-17 and 18 of the technical specifications for visual inspection, pressure and vacuum testing of geomembrane field seams.

62-701.400(3)(d) 2. – Refer to page 02776-7 of the technical specifications for the requirement of continuous spark testing by the manufacturer.

62-701.400(3)(d) 3. – Refer to page 02776-21, part 3.09 of the technical specifications for protecting the geomembrane with a minimum 24-inch thick protective sand layer. This requirement is also referenced on page 2-8 of the Citrus County Central Class I Landfill Operations Plan in Appendix B.

62-701.400(3)(d) 4. – Refer to page 2.8 of the Citrus County Central Class I Landfill Operations Plan in Appendix B.

62-701.400(3)(d) 5. – Refer to page 02776-9 of the technical specifications located in Appendix E for the requirement of high density polyethylene (HDPE) geomembranes to meet the specification contained in method GRI GM13.

62-701.400(3)(d) 6. – PVC geomembranes are not proposed for use on this project. Therefore this requirement is not applicable.

62-701.400(3)(d)7. – Refer to pages 02776-15 and 16 of the technical specifications found in Appendix E for the interface shear strength testing procedure. This procedure is also referenced on page 17 of the Liner CQA Plan found in Appendix J.

62-701.400(3)(d) 8. – Refer to pages 02930-1 and 9 of the technical specifications found in Appendix E for testing the transmissivity of geonets.

62-701.400(3)(d) 9. – Geosynthetic clay liners are not proposed for use on this project. Therefore this requirement is not applicable.

2) **Table 02776-1 references "smooth" liner and should be revised.**

Response: Table 02776-1 of the technical specifications located in Appendix E has been corrected. The corrected table can be found on page 02776-10 of the technical specifications (attached).

3) **The rationale for allowing "averaged test results" as stated is Section 3.02D. is requested.**

Response: As stated in Section 3.02 D of the technical specifications found in Appendix E, averaged test results of the geomembrane samples are allowed. The rationale behind this allowance is that the technical specifications found in Appendix E follow the Geosynthetic Research Institute (GRI) Standard GM13. See part 7.3 on page 5 of the GRI GM13 for the allowance of averaged test results.

4) **The transmissivity value referenced in Note 1 of Table 02930-2 is requested.**

Response: That value would be 1.8 x 10^{-3} cm/sec. The note 1. of Table 02930-2 incorrectly referred to Table 02930-3, which has been changed to 02930-2. A copy of the corrected table is attached.

5) **Clarification is requested regarding source of the coefficient of interface friction angle of 25 degrees as provided in Table 02930-2. Since this 25 degree angle is less then the 26.6 degree angle for the proposed side slope, the composite geonet appears to be an unstable component of the liner system.**

Response: This value is not applicable to the proposed design because it relates to a design case, such as a landfill top cover, where the geocomposite is in contact with soil. That is not the case in the proposed bottom liner design for the County landfill.

6) **Revisions to Section 15060 are requested to include all specifications for each type of leachate piping. These specifications should include the type of materials and pipe strength, size of perforations, and the use of rub sheets under pipe bends and couplings.**

Response: The type of materials and pipe strength for each type of leachate piping can be found on page 15060-2 of the technical specifications (attached) located in Appendix E. The size of perforations for the leachate piping is referenced on page 15060-2 of the technical specifications and is shown on Sheet 10 of the Drawings located in Appendix A. Rub sheets are not proposed for this project since there is a geocomposite layer above the upper liner that will provide the needed protection.

11. **62-701.400(4)(a).**

1) **The location of the perforated corrugated 8-inch diameter pipe is requested.**

Response: No corrugated pipe is proposed for use in leachate collection system. The reference to corrugated pipe in the leachate collection system has been corrected.

2) **The rationale for choosing corrugated pipe with small perforations rather than smooth-walled pipe with larger perforations is**

requested.

Response: No corrugated piping is proposed, see the response above.

3) **Documentation to demonstrate that all leachate pipes can be completely cleaned and video inspected is requested. The documentation should confirm that the video camera and all related equipment for cleaning and inspections will pass through all pipe bends.**

Response: SCS does not believe any additional documentation is needed because SCS' design and sizing of leachate piping is similar to the previous designs in Phases 1 and 1A, which have been and continue to be successfully inspected and cleaned by the County. The County also will require that the Contractor demonstrate that standard video inspection and cleaning equipment can be inserted through and retrieved without difficulty from all leachate collection system pipe bends prior to covering and/or final acceptance. This requirement has been added to the revised Liner CQA Plan on page 26.

12. 62-701.400(4)(b).

1) **Specifications for the coarse sand (drainage layer and protective material) to demonstrate chemical compatibility and adequate hydraulic conductivity are requested. The ".5x10^{-3} cm/sec" mentioned in Section H.3.b. is less than the hydraulic conductivity value required by rule.**

Response: Silica sand composed of quartz grains, as specified for DOT highway underdrain facilities will be used for the protective and secondary leachate drainage layer and is required to be laboratory tested to meet a minimum hydraulic conductivity of 1x10^{-3} cm/sec. SCS is not aware of any leachate characteristic that would be react adversely with this type of sand. Revisions to Section 02220 of the Technical Specifications have been made and are attached.

The rule only requires a 12-inch layer over the liner to meet the 1x10^{-3} cm/sec requirement when the layer is the primary leachate drainage medium. However, as per the rule, our design substitutes for the sand a tri-planar geocomposite meeting this requirement for the primary leachate drainage medium over the liner.

Section H.3.b of the report has been corrected to specify the hydraulic conductivity of the 24-inch thick protective sand to be $1X10^{-3}$ cm/sec. Thus, the protective soil also will provide a viable leachate flow medium in addition to the geocomposite layer. A copy of the entire Section H is attached.

2) **The design detail for the geonet overlap at the toe of the east and westside slopes, and related calculations and specifications, are requested. Since the maximum flow carrying capacity of the geonet is based on its orientation, and its orientation changes at the toe of the east and west side slopes, a description of the method of providing adequate flow carrying capacity at the change in orientation is requested.**

Response: A calculation is attached assessing the flow capacity of the geocomposite at this transition. The result is that supplemental geocomposite is needed. Accordingly, the design plans have been modified with details (sheet 5 and sheet 11-Detail F) to indicate that two supplemental layers of geocomposite will be installed over the primary geocomposite in this area to carry the additional side slope flow contribution to the leachate collection pipe.

13. **62-701.400(7). Revisions to the CQA Plan are requested to provide construction quality assurance procedures for each component of the liner system including the composite geonet, leachate piping, gravel, and sand layer.**

Response: The Liner CQA Plan has been revised to include construction quality assurance language for the composite geonet, leachate piping, gravel, and sand. A revised Liner CQA Plan is attached.

Quality assurance procedures for the composite geonet, leachate piping, gravel, and sand layer can be found on pages 21 through 33 in the revised Liner CQA plan in Appendix J (attached).

14. **62-701.400(9)(b). A site plan with the location of the proposed temporary lined soil dike to be used to prevent stormwater from Phase 1 and 1A from entering Phase 2, including design details with elevations, is requested.**

Response: The construction of temporary storm water diversion dikes on Phase 1A to divert water from Phase 2 construction will be the responsibility of the Contractor to coordinate and install so that they are compatible with the County operations as noted on the design drawings (sheets 3,4, and 5). In addition, the condition of the

construction contract will require that the Contractor submit for the Engineer's review a Storm Water Temporary Management Plan for the work.

15. **62-701.410(2). A comprehensive geotechnical report is requested. Some information required as part of the geotechnical site investigation was not found in the Universal Geotechnical Report (Appendix F) and additional information is requested as listed below.**

a) **A table of all top of ground elevations for each boring is requested.**

Response: Site boring logs that include the top of land surface are provided in the revised Geotechnical Report. A copy of the revised report is attached.

b) **A current lineament survey (as a site –specific drawing) including adjacent off-site areas in the vicinity is requested. Conclusions regarding sinkholes based on a literature search and the lineament survey is requested.**

Response: A lineament study of the landfill site was conducted as part of the Ground Water Monitoring Plan prepared by Post Buckley Schuh & Jernigan (PBS&J) in 1988 as an update to a lineament study done by Seaburn & Robertson at the site in 1985. The studies indicated no discernible structural trends that would indicate active solution features at or near the landfill. A copy of the PBS&J study (excerpted from the Groundwater Monitoring Plan) is attached. SCS believes that an update to the lineament study would not be useful and that a current sinkhole assessment would be of value.

Accordingly, SCS has attached a letter dated October 14, 2002, from our Geotechnical Engineer in response to this request. Universal indicates that to their knowledge there have been no sinkholes recorded at the project site since the previous studies done in 1988. Sinkhole activity in Citrus County has been limited to the coastal region, which would not have any bearing on this project.

c) **Calculation for subgrade settlements, both total and differential, are requested.**

Response: The requested calculations are attached in the revised Geotechnical Report.

d) **Calculations for subgrade slope stability based on the actual design configuration and worst case site conditions are requested, using the worst case soil internal friction angle and moisture content expected during construction of the 2H:1V side slopes with the condition of operating heavy equipment for excavation and compaction. Recommendations for**

excavating, compacting, maintaining and repairing the side slopes during construction are requested.

Response: The soil side slope stability analyses has been supplemented to include the condition of heavy equipment loading at the top of the slope. The results of the additional analyses indicate that the factor of safety against instability was 1.61, which in SCS' opinion is satisfactory. A copy of the model analysis outputs are provided in an updated Slope Stability Analysis - Appendix O (attached).

e) **Please provide the comprehensive geotechnical report and supporting information, including detailed description of the methods, calculations, and interpretations used, signed and sealed by a professional engineer.**

Response: A copy of the revised Geotechnical Report including requested supporting information and documentation is attached.

16. **62-701.500. A permit modification of the existing operations permit is required upon project completion to include all revisions of the Operations Plan (Appendix B) that may be necessary for Phase 2 operations.**

Response: Comment is noted and will be scheduled as appropriate.

17. **62-701.630. Cost estimates for Phase 2 closure and long-term care (signed and sealed by a professional engineer), and related proof of financial assurance, is not required until construction is completed and prior to operation of Phase 2.**

Response: Comment is noted and will be scheduled as appropriate.

18. **62-709.320. A site plan with the layout and design for the yard trash processing facility to demonstrate compliance with this rule is requested.**

Response: The County does not anticipate a conflict between the proposed cell construction and the existing mulch pile areas, however, if a conflict occurs, the County will operate with a reduced pile size to accommodate the cell.

19. **List of any other permits required for this site.**

Response: Other permits for the site include; Southwest Florida Water Management District – MSSW, FDEP - yard waste processing area, FDEP – Tire Processing, and FDEP – mining.

Please call if you have any questions.

Sincerely,

10-16-02

John A. Banks, P.E.
Project Director
SCS ENGINEERS

Bruce J. Clark, P.E., DEE
Project Manager
SCS ENGINEERS

JAB/BJC:jlh

cc: Susan Pelz, P.E.

Enclosures

CITRUS COUNTY LANDFILL - PHASE 2 EXPANSION
CLARIFICATION OF REPLACEMENT DOCUMENTS PREVIOUSLY SUBMITTED IN RESPONSE TO FDEP LETTER DATED SEPTEMBER 13, 2002

ITEM	ACTION	COMMENT
Geotechnical Report by Universal E.S. dated October 14, 2002 ok	Replace entire previous submittal	• Signed/sealed report • Added Land Surface Elevations to Boring Logs, Appendix B (pgs. B2-B17) • Added Settlement Calculations - Appendix D (pgs. 1-3)
Section F Landfill Permit Requirements - Permit Application ok	Replace entire previous submittal	• Added text in item F.3, pg. F-1
Appendix C - liner System Stress Analysis on Sideslopes	Replace entire previous submittal ok	• Added text pgs. 1,2,3 • Added Analysis of weight of liner, sand, waste equipment on side slope
Slope Stability Analysis Report - Appendix O.	Replace entire previous submittal ok	• Added text pg. 3. • Modified Table in Item 4.1, pg. 5
Technical Specifications Section 02776 - HDPE Geomembrane Liner	Replace entire previous submittal ok	• Clarification on textured liner - pg 1 • Added spark testing - pg. 7 • Added Std. GM-13, pg. 9 • Revised table from smooth to textured - pg. 10
Section 02930 - Geocomposite	Replace entire previous submittal	• Reference correction Item 1.03, pg. 1 • Reference correction Table 02930-2, pg. 9
Section 15060 - Piping	Replace entire previous submittal	• Corrected pipe SDR, pgs. 2, 3 • Added reference, pg. 2
Section 02220 - Excavation, Backfill, Fill & Grading	Replace entire previous submittal	• Revised drainage layer sand; Item 2.04, pg. 5
Liner CQA Plan	Replace entire previous submittal	• Added requirements for LCRS components, pgs. 23-33
Section H - Landfill Construction Requirements, Permit Application Text	Replace entire previous submittal ok	• Added reference to alternate sideslope, Item H.2.c.3, pg. H-10

November 14, 2002

ITEM	ACTION	COMMENT
		• Removed perforation Item H.3.a.2, pg. H-13 • Added sand criteria, Item H.3.b., pg. H-14 • Corrected hydraulic conductivity of drainage sand, Item H.3.b., pg. H-14 • Added calculation for geonet capacity, pgs. 1, 2

LANDFILL BOUNDARY SURVEY
AND
PROOF OF OWNERSHIP

DEED OF CONVEYANCE

THIS DEED made this 30th day of October, 1987, by Citrus County, Florida, c/o County Administrator, 110 North Apopka Avenue, Inverness, Florida 32650, party of the first part; and the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida, c/o Division of State Lands, 3900 Commonwealth Boulevard, Room 412, Tallahassee, Florida 32399, party of the second part,

W I T N E S S E T H:

That the said party of the first part for and in consideration of the sum of Ten Dollars ($10.00) to it in hand paid by the party of the second part and other valuable consideration, receipt whereof is hereby acknowledged, has granted, bargained and sold to the party of the second part, its heirs and assigns forever, the following described land lying and being in Citrus County, Florida to wit:

A parcel of land being the Southeast ¼ of the Northwest ¼ and the Northeast ¼ of the Southwest ¼ of Section 15, Township 19 South, Range 18 East, more particularly described as follows:

Begin at a concrete monument on the Northwest corner of the Southeast ¼ of the Northwest ¼ of Section 15, Township 19 South, Range 18 East, thence S. 88° 27' 10" E. along the northerly line of the Southeast ¼ of the Northwest ¼ of said Section 15, 1,319.75 feet to the Northeast corner of the Southeast ¼ of the Northwest ¼ of said Section 15; thence S. 02° 30' 11" W. along the easterly line of the Southeast ¼ of the Northwest ¼ of said Section 15, 1,341.27 feet to the Southeast corner of the Southeast ¼ of the Northwest ¼ of said Section 15; thence S. 02° 23' 32" W. 1,336.82 feet to the Southeast corner of the Northeast ¼ of the Southwest ¼ of said Section 15; thence N. 88° 34' 05" W. along the southerly line of the Northeast ¼ of the Southwest ¼ of said Section 15, 1,313.58 feet to the Southwest corner of the Northeast ¼ of the Southwest ¼ of said Section 15; thence N. 02° 15' 39" E. along the westerly line of the Northeast ¼ of the Southwest ¼ of said Section 15, 1,335.81 feet to the Southwest corner of the Southeast ¼ of the Northwest ¼ of said Section 15; thence N. 02° 22' 07" E. along the westerly line of the Southeast ¼ of the Northwest ¼ of said Section 15, 1,344.84 feet to the Northwest corner of the Southeast ¼ of the Northwest ¼ of said Section 15, being the Point of Beginning.

The above described lands lying in Citrus County, Florida and encompassing 80.98 acres, more or less.

IN WITNESS WHEREOF, the said party of the first part has caused these presents to be executed in its name by its Board of County Commissioners acting by the Chairman or Vice Chairman of said Board the day and year aforesaid.

ATTEST:

WALT CONNORS CLERK

[OFFICIAL SEAL]

CITRUS COUNTY, FLORIDA BY ITS BOARD OF COUNTY COMMISSIONERS

BY: F. Alex Griffin

F. ALEX GRIFFIN, CHAIRMAN
BOARD OF COUNTY COMMISSIONERS
CITRUS COUNTY, FLORIDA

This Instrument Prepared by:
James A. Neal, Jr., Assistant County Attorney
Citrus County Courthouse
110 North Apopka Ave.
Inverness, FL 32650

RETURN TO CITRUS TITLE CO. FILE 58,00

FILED & RECORDED
87 NOV 11 59

516163

BOOK 759 PAGE 888

BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND

QUITCLAIM DEED

No. 28007

THIS QUITCLAIM DEED, Made this 30th day of October, A.D. 19 87, between the BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND of the State of Florida, hereinafter call Grantor, and CITRUS COUNTY, a political subdivision of the State of Florida, c/o County Administrator, 110 North Apopka Avenue, Inverness, Florida 32560, hereinafter call Grantee,

WITNESSETH, that the Grantor, for and in consideration of the sum of Ten Dollars ($10.00) and other valuable consideration to it in hand paid by the Grantee, the receipt of which is hereby acknowledged, has remised, released and quitclaimed unto the Grantee, their successors and assigns forever, all of the right, title, interest, claim and demand which the Grantor has in and to the following described land situate lying and being in Citrus County, Florida, to-wit:

A portion of Section 1, Township 19 South, Range 18 East, Citrus County, Florida Described as follows:

Commence at the Southwest corner of Lot 9, Block A, New Mayfield Acres, as recorded in Plat Book 2, page 42, public records of Citrus County, Florida, thence S 89 degrees 43'25" E on an Easterly projection of the South line of said Lot 9, Block A, a distance of 640.22 feet, thence S 0 degrees 16'35" W 20.00 feet to the Point of Beginning, said point being on the North line of the SE1/4 of said Section 1, thence continue S 0 degrees 16'35" W 2630.05 feet, thence S 89 degrees 43'25" E parallel to said North line a distance of 1325.00 feet, thence N 0 degrees 16'35" E 2630.05 feet to a point on said North line, thence N 89 degrees 43'25" W along the said North line, a distance of 1325.00 feet to the Point of Beginning. Containing 80 acres more or less.

TO HAVE AND TO HOLD the same, for the purpose of developing a landfill, together with all and singular the appurtenances thereunto belonging or in anywise appertaining, and all of the estate, right, title, interest and claim whatsoever of the Grantor, either in law or in equity, to the only proper use, benefit and behoof of the Grantee, its successors and assigns forever, subject to all outstanding easements, reservations, restrictions and other interests appearing of record.

PROVIDED, HOWEVER, that the Grantee will (1) comply with all state and local standards for landfills; and, (2) allow the State of Florida Department of Agriculture and Consumer Services, Division of Forestry to use the landfill free of charge.

No. 28007

Title to the described lands will revert to the Grantor, at the option of the Grantor, to be reclaimed for forestry purposes at such time as the site has expended its capacity as a landfill, or at such time as the Grantor has determined that the described property is not being used as a landfill. Grantee shall have six (6) months from the date of notification to remedy any violation of the conditions of this conveyance.

IN TESTIMONY WHEREOF, the Trustees, for and on behalf of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida have hereunto subscribed their names and have caused the official seal of said Board of Trustees of the Internal Improvement Trust Fund of the State of Florida to be hereunto affixed, in the City of Tallahassee, Florida, on the day and year first above written.

Governor

Secretary of State

Attorney General

Comptroller

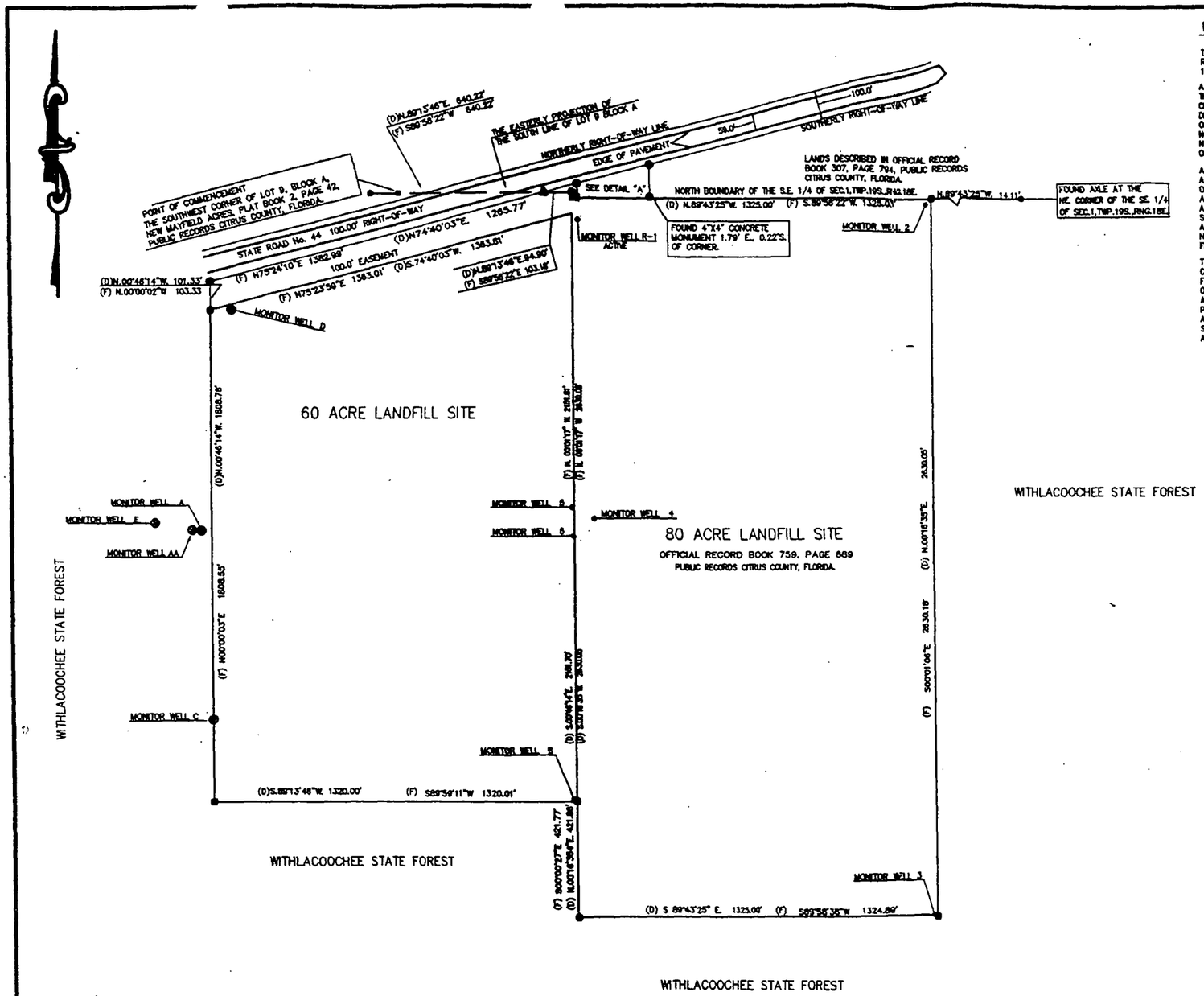
Treasurer

Commissioner of Education

Commissioner of Agriculture

As and Constituting the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida

Approved as to Form and legality



DESCRIPTIONS AS FURNISHED

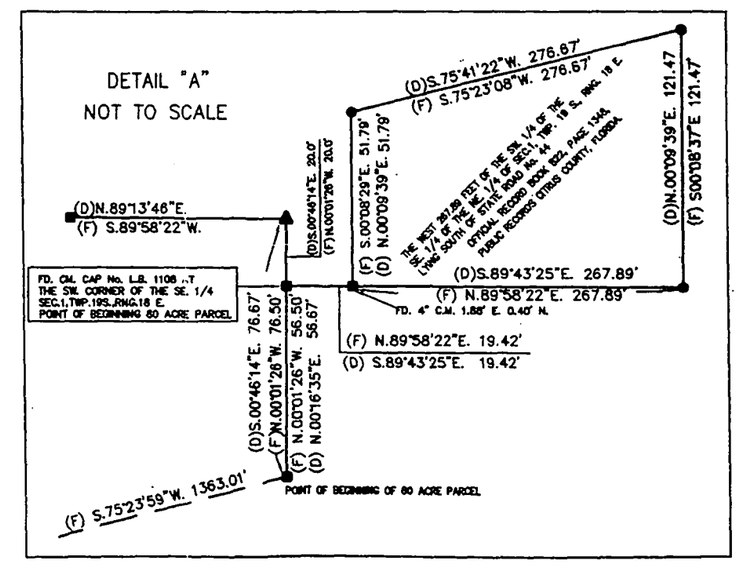
THE WEST 287.89 FEET OF THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 1, TOWNSHIP 19 SOUTH, RANGE 18 EAST LYING SOUTH OF STATE ROAD No. 44, CITRUS COUNTY, FLORIDA. AS RECORDED IN OFFICIAL RECORD BOOK 822, PAGE 1348, PUBLIC RECORDS CITRUS COUNTY, FLORIDA.

A PORTION OF SECTION 1, TOWNSHIP 19 SOUTH, RANGE 18 EAST, CITRUS COUNTY, FLORIDA DESCRIBED AS FOLLOWS: COMMENCE AT THE SOUTHWEST CORNER OF LOT 9, BLOCK A, NEW MAYFIELD ACRES, AS RECORDED IN PLAT BOOK 2, PAGE 42, PUBLIC RECORDS OF CITRUS COUNTY, FLORIDA, THENCE S.89°43'25"E AN AN EASTERLY PROJECTION OF THE SOUTH LINE OF SAID LOT 9, BLOCK A, A DISTANCE OF 640.22 FEET, THENCE S.00°16'35"W 20.00 FEET TO THE POINT OF BEGINNING, SAID POINT BEING ON THE NORTH LINE OF THE SE 1/4 OF SAID SECTION 1. THENCE CONTINUE S00°16'35"W 2630.05 FEET, THENCE S 89°43'25" E PARALLEL TO SAID NORTH LINE A DISTANCE OF 1325.00 FEET, THENCE N 00°16'35" E 2630.05 FEET TO A POINT ON SAID NORTH LINE, THENCE N 89°43'25" W ALONG SAID NORTH LINE A DISTANCE OF 1325.00 FEET TO THE POINT OF BEGINNING. CONTAINING 80 ACRES MORE OR LESS.

A PORTION OF SECTION 1, TOWNSHIP 19 SOUTH, RANGE 18 EAST BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT THE SOUTHWEST CORNER OF LOT 9, BLOCK A, NEW MAYFIELD ACRES AS RECORDED IN PLAT BOOK 2, PAGE 42, PUBLIC RECORDS OF CITRUS COUNTY, FLORIDA. THENCE N 89°13'46" E ON AN EASTERLY PROJECTION OF THE SOUTH LINE OF SAID LOT 9, BLOCK A, A DISTANCE OF 640.22 FEET, THENCE S 00°46'14" E A DISTANCE OF 76.67 FEET TO A POINT THAT IS 150 FEET FROM, MEASURED AT A RIGHT ANGLES TO, THE CENTERLINE OF STATE ROAD No. 44, SAID POINT ALSO BEING THE POINT OF BEGINNING, THENCE CONTINUE S 00°46'14" E A DISTANCE OF 2151.70 FEET, THENCE S 89°13'48" W A DISTANCE OF 1320.00 FEET, THENCE N 00°46'14" W A DISTANCE OF 1508.76 FEET TO A POINT 150 FEET FROM, MEASURED AT A RIGHT ANGLE TO, THE CENTERLINE OF SAID STATE ROAD No. 44, THENCE N 74°40'03" E. PARALLEL TO AND 150 FEET FROM THE CENTERLINE OF STATE ROAD No. 44 A DISTANCE OF 1363.81 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH AN EASEMENT FOR INGRESS AND EGRESS OVER THE FOLLOWING DESCRIBED LANDS: COMMENCE AT THE SOUTHWEST CORNER OF LOT 9, BLOCK A, NEW MAYFIELD ACRES, AS RECORDED IN PLAT BOOK 2, PAGE 42, PUBLIC RECORDS OF CITRUS COUNTY, FLORIDA, THENCE N 89°13'46" E ON AN EASTERLY PROJECTION OF THE SOUTH LINE OF SAID LOT 9, BLOCK A, A DISTANCE OF 640.22 FEET, THENCE S 00°46'14" E A DISTANCE OF 76.67 FEET TO A POINT THAT IS 150 FEET FROM, MEASURED AT A RIGHT ANGLE TO, THE CENTERLINE OF STATE ROAD No. 44, SAID POINT ALSO BEING THE POINT OF BEGINNING, THENCE S 74°40'03" W PARALLEL TO AND 150 FEET FROM THE CENTERLINE OF STATE ROAD No. 44, A DISTANCE OF 1383.81 FEET, THENCE N 00°46'14" W A DISTANCE OF 101.33 FEET TO THE SOUTHERLY RIGHT-OF-WAY LINE OF STATE ROAD No. 44, THENCE N 74°40'03" E ALONG SAID RIGHT-OF-WAY LINE A DISTANCE OF 1265.77 FEET, THENCE N 89°13'46" E A DISTANCE OF 94.90 FEET, THENCE S 00°46'14" E A DISTANCE OF 76.67 FEET TO THE POINT OF BEGINNING.

MONITOR WELL No.		X COORDINATE	Y COORDINATE	LATITUDE	LONGITUDE	ELEVATION TOP OF WELL CASING
A	ABANDONED 3-22-94	514339.520	1842944.584	82°26'34.75084" W.	28°51'09.22841" N.	105.33'
B	ACTIVE	515703.188	1841952.201	82°26'19.59919" W.	28°50'58.45084" N.	111.94
C	ACTIVE	514387.562	1842247.058	82°26'34.29378" W.	28°51'02.32191" N.	115.18'
D	ACTIVE	514472.380	1843753.584	82°26'33.51556" W.	28°51'17.24014" N.	109.77'
R-1	ABANDONED 9-26-94	515746.387	1844088.835	82°26'19.20718" W.	28°51'20.60614" N.	118.25'
2	ACTIVE	517018.947	1844134.0121	82°26'04.91534" W.	28°51'21.09989" N.	136.29'
3	ACTIVE	517028.689	1841528.493	82°26'04.69852" W.	28°50'55.30387" N.	120.47'
AA	ACTIVE	514330.1915	1842944.6948	82°26'35.08066" W.	28°51'09.22643" N.	106.11
5	ACTIVE	515706.7139	1843027.5870	82°26'19.60416" W.	28°51'10.09772" N.	121.14
6	ACTIVE	515710.6712	1842921.8177	82°26'19.55309" W.	28°51'09.05065" N.	118.48
4	ACTIVE	515787.5197	1842967.7443	82°26'18.69384" W.	28°51'09.70125" N.	122.62
R-1	ACTIVE	515734.4675	1844075.0314	82°26'19.33566" W.	28°51'20.46904" N.	118.08
1	ABANDONED 2-09-94	515745.434	1844077.441	82°26'19.21242" W.	28°51'20.49330" N.	117.37



FIELD DATE: MARCH 14,1994
REVISION DATE: MARCH 22,1994
ADD MONITOR WELLS No. AA, 4, 5 & 6

FIELD DATE:JUNE 15, 1994
REVISION DATE: JUNE 16,1994
DELETE MONITOR WELL No. 1, ADD MONITOR WELL No. R-1
CHANGE MONITOR WELL No. 4 TO MONITOR WELL No. 5
CHANGE MONITOR WELL No. 5 TO MONITOR WELL No. 6
CHANGE MONITOR WELL No. 6 TO MONITOR WELL No. 4

FIELD DATE: SEPTEMBER 29,1994
REVISION DATE: SEPTEMBER 30,1994
DELETE MONITOR WELL R-1 ABANDONED, ADD MONITOR WELL R-1 ACTIVE

FIELD DATE: NOVEMBER 18,1994
REVISION DATE: NOVEMBER 21,1994
ADD MONITOR WELL No. E

1. THIS SURVEY IS OF VISIBLE SURFACE FEATURES ONLY, UNDERGROUND ENCROACHMENTS, IF ANY, WERE NOT LOCATED.
2. THIS SURVEY IS BASED ON EXISTING MONUMENTATION FOUND IN PLACE, RECORDS OF WHICH ARE MAINTAINED IN THIS OFFICE.
3. LANDS SHOWN HEREON WERE NOT ABSTRACTED FOR DEED EASEMENTS OR RIGHTS-OF-WAY OF RECORD.
4. ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION THIS MUST BE CONSIDERED WHEN OBTAINING SCALE DATA.
5. REFERENCE BENCHMARK, FLORIDA DEPARTMENT OF TRANSPORTATION BENCHMARK No. 54, ELEVATION 113.05' N.G.V.D. 1929
6. THERE ARE INTERAL IMPROVEMENTS THAT WAS NOT LOCATED BY THIS SURVEY.
7. BEARINGS AND DISTANCES SHOWN HEREON ARE MEASURED AND BASED ON THE STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83 UNLESS OTHERWISE SHOWN, THE NORTH BOUNDARY OF THE SOUTHEAST 1/4 OF SECTION 1, TOWNSHIP 19 SOUTH, RANGE 18 EAST, BEING N. 89°58'22" E.

A BOUNDARY SURVEY FOR CITRUS COUNTY, FLORIDA
OF PROPERTY IN THE SOUTHEAST 1/4 OF SECTION 1, TOWNSHIP 19 SOUTH, RANGE 18 EAST, CITRUS COUNTY, FLORIDA.

Job No. 89-815
Drawn by: P.J.H.
Checked by:
Scale: 1" = 200'
Sheet No. 1 OF 1
Field Book/Page: 18
Last Date: 11-18-1994
Field Book: R-8 R-9
Drawn: 11-18 1-3
Last Date: 11-18 11-21

Citrus County

Department of Technical Services
Division of Engineering
P.O. BOX 440 Lecanto, FL 34461
Phone: (904)746-2694

SURVEYOR'S CERTIFICATION

I hereby certify that the herein described land survey and plat are true and correct and was prepared under my direction and supervision and conforms to the minimum technical standards and forth by the Florida Board of Professional Land Surveyors in Chapter 61G17-6, Florida Administrative Code, pursuant to Section 472.027, Florida Statutes.

Dated this 21 day of NOVEMBER 1994

Patrick L. Hanson Florida Registered Surveyor & Mapper No. 4247
Not valid without an original signature and seal.

FOUND 4"x4" CONCRETE MONUMENT
SET 4"x4" CONCRETE MONUMENT COUNTY CAP
DESCRIPTIVE POINT
FOUND IRON ROD
SET 5/8" DIA. IRON ROD COUNTY CAP.
ELEVATION
R/W INSET-IN-GRAVEL
CENTERLINE
FOUND POLE
= BENCHMARK
= WELL
= GUY POLE

P.O.B. = POINT OF BEGINNING
P.O.C. = POINT OF COMMENCEMENT
P.R.C.P. = PLANE RECTANGULAR OF CITRUS COUNTY, FLORIDA
(F)= PLAT, (D) = DEED, (F) FIELD
O.R.B. = OFFICIAL RECORD BOOK
P.B. = PLAT BOOK
P.R.M. = PERMANENT REFERENCE MONUMENT
T.B.M. = TEMPORARY BENCHMARK
P.C.P. = PERMANENT CONTROL POINT
C.B.S. = CONCRETE BLOCK STRUCTURE
C/S = CONCRETE SLAB

PROOF OF PUBLICATION

Proof of Publication

from the

CITRUS COUNTY CHRONICLE

Crystal River, Citrus County, Florida

PUBLISHED DAILY

STATE OF FLORIDA

COUNTY OF CITRUS

Before the undersigned authority personally appeared

Karen McDaniel

Of the Citrus County Chronicle, daily at Crystal River, in Citrus C attached copy of advertisement b matter of the

342-0929 SUCRN State of Flori Environmental Protection Notice Advertisement A/R #071-22350

Court, was published in said new

September 29th, 2002,

Affiant further says that the C Newspaper published at Crystal Florida, and that the said newspaper has heretofore been continuously published in Citrus County, Florida, each week and has been entered as second class mail matter at the post office in Inverness in said Citrus County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Karen McDaniel

The forgoing instrument was acknowledged before me

This 29th day of September, 2002

By: Karen McDaniel

who is personally known to me and who did take an oath.

Jeanette A Schmidt

Notary Public

NOTARY PUBLIC STATE OF FLORIDA
JEANETTE A. SCHMIDT
MY COMMISSION # DD 049734
EXPIRES: August 16, 2005
1-800-3-NOTARY FL Notary Service & Bonding, Inc.

342 - 0929 SUCRN

State of Florida
Department of Environmental Protection
Notice of Application

The Department announces receipt of a permit application from Citrus County Board of County Commissioners, c/o Ms. Susan Metcalfe, for construction of a new disposal area (approximately 6 acres) referred to as Phase 2 as an expansion to the existing Citrus County Landfill, located south of State Road 44 between Lecanto and Inverness, Citrus County, Florida.

This application is being processed and is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department of Environmental Protection, Southwest District Office, 3804 Coconut Palm Drive, Tampa, Fl 33619-1352.

Proof of Publication

from the

CITRUS COUNTY CHRONICLE

Crystal River, Citrus County, Florida

PUBLISHED DAILY

STATE OF FLORIDA
COUNTY OF CITRUS
Before the undersigned authority personally appeared

Karen McDaniel

Of the Citrus County Chronicle, a newspaper published daily at Crystal River, in Citrus County, Florida, that the attached copy of advertisement being a public notice in the matter of the
342-0929 SUCRN State of Florida Department of Environmental Protection Notice of Application Display Advertisement A/R #071-223506

Court, was published in said newspaper in the issues of
September 29th, 2002.

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

Karen McDaniel

The forgoing instrument was acknowledged before me

This 29th day of September, 2002

By: Karen McDaniel

who is personally known to me and who did take an oath.

Jeanette A. Schmidt
Notary Public

NOTARY PUBLIC STATE OF FLORIDA
JEANETTE A. SCHMIDT
MY COMMISSION # DD 049734
EXPIRES: August 16, 2005
1-800-3-NOTARY FL Notary Service & Bonding, Inc.

da
ntal Protection
ation

application from Citrus County
Metcalfe, for construction of a
eferred to as Phase 2 as an
ll, located south of State Road
ty, Florida.
able for public inspection during
Monday through Friday, except
mental Protection, Southwest
a, Fl 33619-1352.

UNIVERSAL ENGINEERING SCIENCES
GEOTECHNICAL INVESTIGATION

UNIVERSAL ENGINEERING LETTER DATED 10/14/02

UNIVERSAL
ENGINEERING SCIENCES
Consultants in: Geotechnical Engineering • Threshold Inspection
Environmental Sciences • Construction Materials Testing

OFFICES IN:
• Orlando
• Gainesville
• Fort Myers
• Rockledge
• St. Augustine
• Daytona Beach
• West Palm Beach
• Jacksonville
• Ocala
• Tampa
• Debary

October 14, 2002

SCS Engineers
3012 U.S. Highway 301 North, Suite 700
Tampa, FL 33619-2242

Attention: Mr. Bruce Clark, P.E., D.E.F.

Reference: Citrus County Central Landfill
New 9.5 Acre Waste Disposal Cell
S. R. 44, Citrus County, FL
Order No. 26081-001-01 Report No 21354

Dear Mr. Clark:

As per your request, we are providing an update on the appearance of sinkhole activities in the area at the above referenced location. Universal Engineering has previously performed geotechnical investigations at this site and presented our findings in our report No. 21607, dated November 15, 2001.

We understand that a lineament study performed in1988 by Post, Buckley, Schuh & Jernigan, Inc. had indicated that there are no active sinkholes or solutional features near the Citrus County Landfill. Based on our investigation, and available gathered information we have not found a presence of advanced sinkhole activity since 1988 at this location and within the area designated by our report.

We appreciate this opportunity to perform service to you on this project. If you should have any questions, or if we can be of further assistance, please contact us.

Sincerely,
UNIVERSAL ENGINEERING SCIENCES, INC.

Eduardo Suarez
Project Engineer

Andrew T. Schmid, P.E.
Project Engineer
Florida P.E. No. 56022

ANDREW T. SCHMID, P.E.
CERTIFICATE NO. 56022
STATE OF FLORIDA
PROFESSIONAL ENGINEER
10/14/02

Jack W. Ray
Regional Manager

ES/ATS/JWR:es (5)

4475 S.W. 35th Terrace • Gainesville, FL 32608 • (352) 372-3392 • Fax (352) 336-7914

POST, BUCKLEY, SCHUH & JERNIGAN, INC.
GROUNDWATER MONITORING PLAN
AUGUST 1988

Prepared for

Board of County Commissioners
Citrus County

CITRUS COUNTY CENTRAL SANITARY LANDFILL

EXPANSION SITE
GROUNDWATER MONITORING PLAN

August 1988

Prepared by

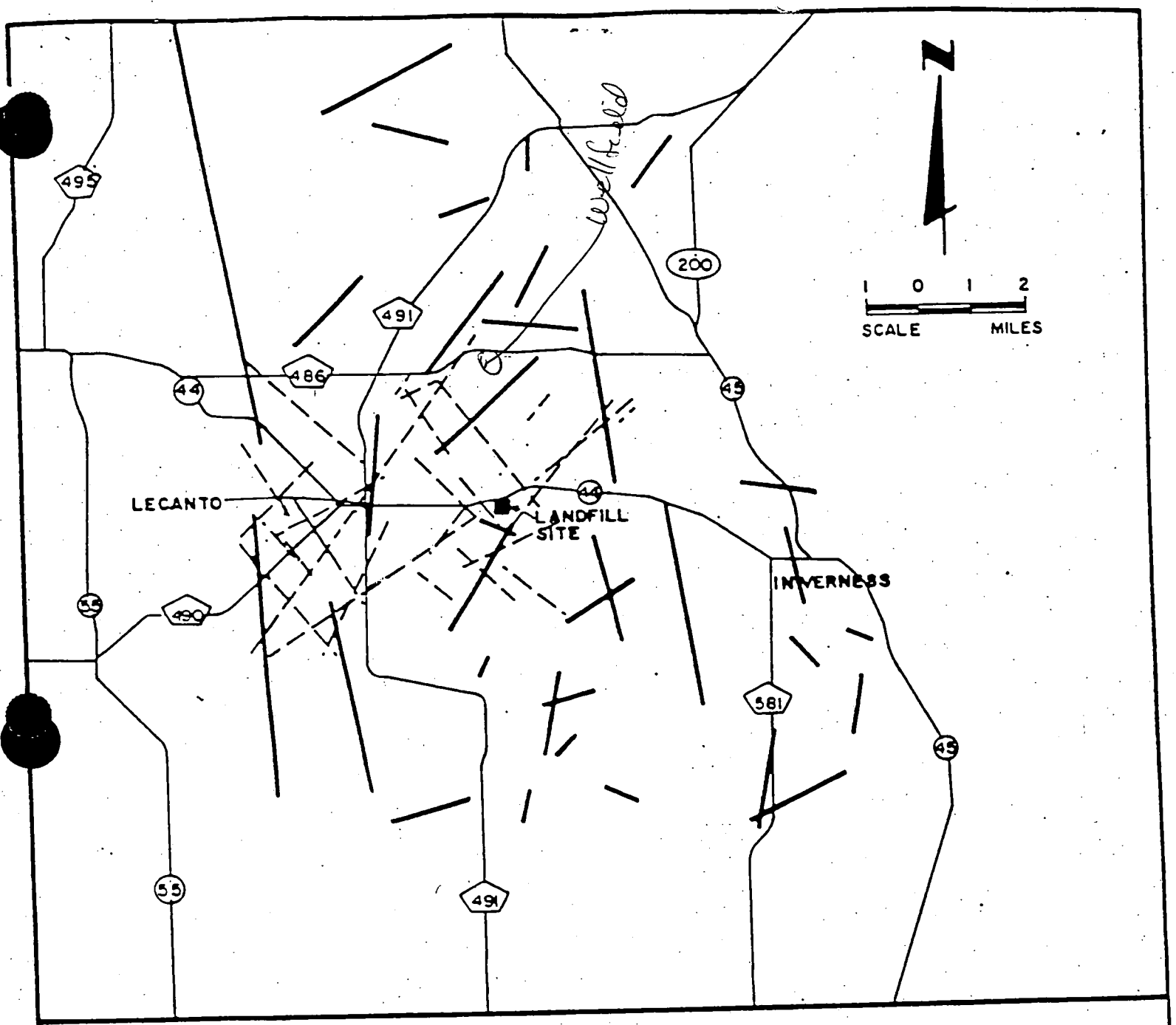
Post, Buckley, Schuh & Jernigan, Inc.
Hydrogeology Department
800 N. Magnolia Avenue, Suite 600
Orlando, Florida 32803

22-081.40

3.4 LINEAMENT ANALYSIS

A lineament study was performed in 1985 by Seaburn and Robertson, Inc. to determine possible geologic conditions that relate to occurrence of sinkholes and solution openings in the vicinity of the existing landfill. That study indicated that there were no discernable structural trends that would indicate active solution features near the landfill (Figure 4). The study was based on an interpretation of the U.S. Department of Agriculture Commodity Stabilization Service black and white air photo mosaics flown in March 1957.

To supplement the 1985 lineament study, PBS&J examined 7.5 minute U.S. Geological Survey Quadrangles for physiographic features such as depressions, hills, lakes, and drainages that might be of geologic significance. The resulting alignment of features is shown on Figure 4 for comparison with the Seaburn and Robertson lineament study. From both studies there appears to be a predominant northeast-southwest trend to the lineaments with a secondary northwest-southeast trend. In a karst terrain such as central Citrus County, most of the physiographic features as interpreted from aerial photographs or topographic maps are related to ancient solution and erosion of underlying limestones. These features cannot be directly related to the potential for sinkhole development based only on lineament studies. As far as is known there are no active sinkholes or solutional features near the Citrus County Landfill.



EXPLANATION:

TOPOGRAPHIC TREND

PHOTOLINEAR TREND (TAKEN FROM SEABURN AND ROBERTSON, 1985)

PBSJ POST, BUCKLEY, SCHUH & JERNIGAN, INC.

TOPOGRAPHIC AND PHOTO LINEAR TREND MAP

FIGURE 4

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

Ms. Susan J. Metcalfe, P.G., Director
Citrus County Solid Waste Division
PO Box 340
Lecanto, Fl. 34460-0340

October 3, 2002

RE: Citrus County Landfill Financial Assurance Cost Estimates
Permit No.: 21375-003-SO, Class I, Phases 1 & 1A

Dear Ms. Metcalfe:

This letter is to acknowledge receipt of the inflation-adjusted cost estimates dated August 29, 2002 (received September 3, 2002) for closing and long-term care of the Citrus County Landfill (Phases 1, 1A and old closed 60 acres). The cost estimates received September 3, 2002 (closing $2,411,276 and long-term care $232,219/year x 30 years=$6,966,570), are **APPROVED for 2002**. The next annual update (revised or inflation-adjusted estimates) is due no later than **September 1, 2003**.

The estimates submitted are approved. However, please note that it has been the Department's experience that leachate generation may not decrease linearly to 28,000 gallons per year for this size site in only three years as indicated in the cost estimates prepared by Jones, Edmunds & Associates, Inc., dated October 30, 2001 (received October 31, 2001). Department files indicate that a similarly lined and closed Class I landfill (approximately 14 acres) in the Southwest District generated approximately 140,000 gallons of leachate in 2000, five years after final closure. Please review this item and submit cost estimates which address this item. These revised cost estimates may be submitted with the estimates required for the proposed expansion area.

A copy of these estimates will be forwarded to Mr. Fred Wick, Solid Waste Section, FDEP, 2600 Blair Stone Road, Tallahassee, Florida 32399-2407. Please work with him directly to assess the facility's compliance with the funding mechanism requirements of Rule 62-701.630, F.A.C. If you have any questions, you may contact me at (813) 744-6100 ext. 386.

Sincerely,

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

sjp
cc: Fred Wick, FDEP, Tallahassee, w/attachment
Kim Ford, P.E., FDEP Tampa

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

September 13, 2002

Ms. Susan Metcalfe, P.G.
Citrus County
P.O. Box 340
Lecanto, FL 34460

Re: Citrus County Central Landfill - Phase 2 Expansion
Permit No.: #21375-004-SC, Citrus County

Dear Mr. Metcalfe:

This is to acknowledge receipt of your permit application received August 14, 2002 to construct a new disposal area (Phase 2) as an expansion of the existing Class I landfill.

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

Your permit application is incomplete. This is the Department's 1st request for additional information. 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 62-701, Florida Administrative Code (F.A.C.)]. Please provide:

1. **62-701.320(7)(f)5. and (g).** A boundary survey and proof of ownership are requested.

2. **62-701.320(8)(a).** Proof of publication of notice of application (see attached notice) is requested.

3. **62-701.330(3)(c).** A site plan with the location of soil borings is requested. The referenced plot plan in Appendix E-1 was not found. Appendix E-1 was not provided.

4. **62-701.340(4)(c).** Approval of the requested alternate procedure for the reduced setback of less than 100 feet is requested.

5. **62-701.320(10).** List and reaffirm those referenced parts of the previously provided reports and documentation that provide information appropriate for this pending permit application and that are still valid. Those parts that are no longer valid should be deleted or replaced.

6. **62-701.320(7)(f)6.** Site plan revisions are requested to show the additional information listed below:

   a) Sheet 6 revisions to show the bottom slopes without abrupt changes in grade, and to show flatter sump side slopes.

b) Sheet 8 revisions to relocate the geotextile from between the leachate collection system and the sump to above the leachate collection system and the sump, and to show flatter sump side slopes;
c) Sheet 10 revision to show the sub-base (not the "subgrade") with a permeability of less than $1X10^{-5}$ cm/sec on Detail 3;
d) Sheet 15 revision to show the sub-base on Detail A.

7. **62-701.400(3)(a)1.** a) A copy of each of the "technical reference reports on the subject of liner analysis on side slopes" mentioned in Section H.2.a.1 are requested. b) Revisions to Appendix C and Appendix O are requested to demonstrate that each component of the liner system is able to withstand the stresses imposed by the component's own weight with the weight of the 24-inch sand layer, and any potential down-drag forces from the ongoing compression of the waste, and including worst case site conditions (using worst case interface friction angles and worst case moisture content expected during construction and during operation), on 2H:1V side slopes with the condition of operating heavy equipment for spreading and compaction. These additional calculations should be based on friction angles from published data and the actual results from shear box tests for the proposed design for a 2H:1V slope. Appendix C and Appendix O (with revisions) should be signed and sealed by a Florida professional engineer. c) A description of the method to be used to hold down the liner system onto the internal terrace on the east side slope, and related calculations, are requested.

8. **62-701.400(3)(c)1.** a) A description of construction procedures for the slopes in the sump, and related testing on these slopes, are requested. 3H:1V slopes in the sump should be considered and the sump sub-base design supplemented with a GCL. b) A site plan showing the locations of all areas of the liner system where the $1x10^{-5}$ cm/sec sub-base has been excluded is requested. c) Approval of the requested alternate procedure for the sub-base design allowing the proposed hydraulic conductivity greater than $1x10^{-5}$ cm/sec is requested.

9. **62-701.400(3)(c)2.** An Action Leakage Rate (ALR) is requested to establish a standard by which one can compare the actual leakage through the primary liner for determining when corrective action is needed.

10. **62-701.400(3)(d) and (e).** 1) The locations of each project specification that demonstrates compliance for each of the standards described in 62-701.400(3)(d) are requested. 2) Table 02776-1 references "smooth" liner and should be revised. 3) The rationale for allowing "averaged test results" as stated is Section 3.02D. is requested. 4) The transmissivity value referenced in Note 1 of Table 02930-2 is requested. 5) Clarification is requested regarding source of the coefficient of interface friction angle of 25 degrees as provided in Table 02930-2. Since this 25 degree angle is less then the 26.6 degree angle for the proposed side slope, the composite geonet appears to be an unstable component of the liner system. 6) Revisions to Section 15060 are requested to include all specifications for each type of leachate piping. These specifications should include the type of materials and pipe strength, size of perforations, and the use of rub sheets under pipe bends and couplings.

11. **62-701.400(4)(a).** 1) The location of the perforated corrugated 8-inch diameter pipe is requested. 2) The rationale for choosing corrugated pipe with small perforations rather than smooth-walled pipe with larger perforations is requested. 3) Documentation to demonstrate that all leachate pipes can be completely cleaned and video inspected is requested. The documentation should confirm that the video camera and all related equipment for cleaning and inspections will pass through all pipe bends.

12. **62-701.400(4)(b).** 1) Specifications for the course sand (drainage layer and protective material) to demonstrate chemical compatibility and adequate hydraulic conductivity are requested. The ".5X10^{-3} cm/sec" mentioned in Section H.3.b. is less than the hydraulic conductivity value required by rule. 2) The design detail for the geonet overlap at the toe of the east and west side slopes, and related calculations and specifications, are requested. Since the maximum flow carrying capacity of the geonet is based on its orientation, and its orientation changes at the toe of the east and west side slopes, a description of the method of providing adequate flow carrying capacity at the change in orientation is requested.

13. **62-701.400(7).** Revisions to the CQA Plan are requested to provide construction quality assurance procedures for each component of the liner system including the composite geonet, leachate piping, gravel, and sand layer.

14. **62-701.400(9)(b).** A site plan with the location of the proposed temporary lined soil dike to be used to prevent stormwater from Phase 1 and 1A from entering Phase 2, including design details with elevations, is requested.

15. **62-701.410(2).** A comprehensive geotechnical report is requested. Some information required as part of the geotechnical site investigation was not found in the Universal Geotechnical Report (Appendix F) and additional information is requested as listed below.

    a) A table of all top of ground elevations for each boring is requested.

    b) A current lineament survey (as a site-specific drawing) including adjacent off-site areas in the vicinity is requested. Conclusions regarding sinkholes based on a literature search and the lineament survey is requested.

    c) Calculations for subgrade settlements, both total and differential, are requested.

    d) Calculations for subgrade slope stability based on the actual design configuration and worst case site conditions are requested, using the worst case soil internal friction angle and moisture content expected during construction of the 2H:1V side slopes with the condition of operating heavy equipment for excavation and compaction. Recommendations for excavating, compacting, maintaining and repairing the side slopes during construction are requested.

    e) Please provide the comprehensive geotechnical report and supporting information, including detailed description of the methods, calculations, and interpretations used, signed and sealed by a professional engineer.

16. **62-701.500.** A permit modification of the existing operations permit is required upon project completion to include all revisions of the Operations Plan (Appendix B) that may be necessary for Phase 2 operations.

17. **62-701.630.** Cost estimates for Phase 2 closure and long-term care (signed and sealed by a professional engineer), and related proof of financial assurance, is not required until construction is completed and prior to operation of Phase 2.

18. **62-709.320.** A site plan with the layout and design for the yard trash processing facility to demonstrate compliance with this rule is requested.

19. List of any other permits required for the site.

Please provide all responses that relate to engineering required for construction signed and sealed by a professional engineer. Responses that relate to the facility operation should be included as part of the Operations Plan. All replacement pages should be numbered, and with revision date. To expedite the review process, on one set of the revisions to the narrative reports, deletions may be struckthrough (~~struckthrough~~) and additions may be shaded (shaded) or a similar notation method used.

"NOTICE! Pursuant to the provisions of Section 120.60, F.S., if the Department does not receive a response to this request for information within 90 days of the date of this letter, the Department may issue a final order denying your application. You need to respond within 30 days after you receive this letter, responding to as many of the information requests as possible and indicating when a response to any unanswered questions will be submitted. If the response will require longer than 30 days to develop, you should develop a specific time table for the submission of the requested information for Department review and consideration. Failure to comply with a time table accepted by the Department will be grounds for the Department to issue a Final Order of Denial for lack of timely response. A denial for lack of information or response will be unbiased as to the merits of the application. The applicant can reapply as soon as the requested information is available."

You are requested to arrange a meeting with FDEP staff to discuss the items in this letter prior to responding. Please submit your response to this letter as one complete package with an original and two copies of all correspondence (with one copy sent to Ms. Susan Pelz). If you have any questions you may call me at (813) 744-6100, extension 382.

Sincerely,

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

KBF/ab
Attachments
cc: John Banks, P.E., SCS Engineers
John Morris, P.G., FDEP Tampa
Susan Pelz, P.E., FDEP Tampa

62-110.106(5). Notices: General Requirements.
Each person who files an application for a Department permit or other notice as may publish or be required to publish a notice of application or other notice as set forth below in this section. Except as specifically provided otherwise in this paragraph, each person publishing such a notice under this section shall do so at his own expense in the legal advertisements section a newspaper of general circulation (i.e., one that meets the requirements of sections 50.011 and 50.031 of the Florida Statutes) in the county or counties in which the activity will take place or the effects of the Department's proposed action will occur, and shall provide proof of the publication to the Department within seven days of the publication.

62-110.106(6). Notice of Application. Publication of a notice of application shall be required for those projects that, because of their size, potential effect on the environment or natural resources, controversial nature, or location, or reasonably expected by the Department to result in a heightened public concern or likelihood of request for administrative proceedings. If required, the notice shall be published by the applicant one time only within fourteen days after a complete application is filed and shall contain the name of the applicant, a brief description of the project and its location, the location of the application file, and the times when it is available for public inspection. The notice shall be prepared by the Department and shall comply with the following format:

State of Florida
Department of Environmental Protection
Notice of Application

The Department announces receipt of a permit application from Citrus County Board of County Commissioners, c/o Ms. Susan Metcalfe, for construction of a new disposal area (approximately 6 acres) referred to as Phase 2 as an expansion to the existing Citrus County Central Landfill, located south of State Road 44 between Lecanto and Inverness, Citrus County, Florida.

This application is being processed and is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department of Environmental Protection, Southwest District Office, 3804 Coconut Palm Drive, Tampa, Florida 33619-1352.

WASTE MANAGEMENT TECHNICAL SUPPORT
ROUTING FORM

PERMITTED FACILITIES

To: Susan

From: fm

Date: Sept 9, 2002

Subject: Citrus Phase 2 Expansion

Document Name: _____

Revision Number 0 County: Citrus

Facility Name: _____

Type of Facility: C I. LF

Permit Number: _____ Issue Date: _____

Copy of Permit attached: _____

Document submitted in compliance with permit condition. _____

Document subject to permit timeclock. _____

Day 1: 8/14

Day 30: 9/12

PATS sheet attached: _____

Enforcement Case/CO/NOV/ associated with this site: _____

Files and related documents can be found Attached Draft Costs

Please review and comment on the technical aspects of the attached document as you deem appropriate. In order to maintain progress with the permit review, please provide comments within 30 days or by 9/12.

Comments: _____

Module _____

Attachments

CONSTRUCTION PERMIT APPLICATION
CITRUS COUNTY CENTRAL LANDFILL
PHASE 2 EXPANSION

Volume 1 of 2

SCS ENGINEERS

Prepared for:

Citrus County
Board of County Commissioners
P.O. Box 340
Lecanto, Florida 34460

Prepared by:

SCS Engineers
3012 U.S. Highway 301 N., Suite 700
Tampa, Florida 33619
(813) 621-0080

File No. 09199056.02
August 14, 2002

CONSTRUCTION PERMIT APPLICATION
CITRUS COUNTY CENTRAL LANDFILL
PHASE 2 EXPANSION

Prepared for:

Citrus County
Board of County Commissioners
P.O. Box 340
Lecanto, Florida 34460

Prepared by:

SCS Engineers
3012 U.S. Highway 301 North, Suite 700
Tampa, Florida 33619
(813) 621-0080

File No. 09199056.02
August 14, 2002

Environmental Consultants

3012 U.S. Highway 301
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

August 14, 2002
File No. 09199056.02

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

D.E.P.
AUG 14 2002
Southwest District Tampa

Subject: Construction Permit Application
Citrus County Central Landfill
Phase 2 Expansion

Dear Mr. Ford:

On behalf of Citrus County, SCS Engineers (SCS) is pleased to submit four copies of the construction permit application for the Citrus County Central Landfill, Phase 2 Expansion.

The permit fee of $10,000 to the Florida Department of Environmental Protection (FDEP) is attached.

Please do not hesitate to call should you have any questions or require additional information regarding this application.

Sincerely,

8-14-02

John A. Banks, P.E.
Project Manager

Raymond J. Dever, P.E., D.E.E.
Vice President
SCS ENGINEERS

JAB/RBG:jlh

cc: Susan J. Metcalfe, P.G.

Enclosures

SECTION S

FINANCIAL RESPONSIBILITY REQUIREMENTS

S.1 COST ESTIMATES

Citrus County is required by Rule 62-701.630, FAC, to provide FDEP a description of the financial mechanism that demonstrates proof of financial assurance for closure and long-term care of the facility.

Each year, closure and long-term care cost estimates will be prepared for the facility in accordance with Rule 62-701.630(3) and (4), FAC. In preparing the closure cost estimates, the following assumptions are to be made:

- The closure cost estimates include the permitted areas of the landfill.
- Construction of the closure will be performed under contract by a private contractor.
- The cost estimates are prepared for the time period during the landfill operation when the extent and manner of the landfill's operation make closing the most expensive.
- The closure cost estimate assumes a geomembrane cover system over all of Phase 2.
- Long-term care costs include land surface care, landfill gas control, leachate control, groundwater and surface water monitoring, and administration.

The closure and long-term care cost estimate prepared by SCS Engineers is included in Appendix P. Closure of Phases 1, 1A, and 2 is estimated to cost approximately $3,143,000. Long-term care is estimated to cost $200,000 per year or $6,010,000 for the 30-year care period required by Rule 62-701.630(3)(a), FAC.

S.2 ANNUAL COST ESTIMATES

There are no changes to this subpart.

S.3 FUNDING MECHANISMS

There are no changes to this subpart.

DRAFT

DEP Form #	62-701.900(28)
Form Title	Financial Assurance Cost Estimate Form
Effective Date	05-27-01
DEP Application No.	(Filled by DEP)

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

FINANCIAL ASSURANCE COST ESTIMATE FORM

Date: July 24, 2002 Date of FDEP Approval: _____

I. GENERAL INFORMATION:

Facility Name: Citrus County Central Landfill WACS or GMSID #.: SWD/09/39859
Permit / Application No.: 21375-003-SO Expiration Date: January 11, 2005
Facility Address State Road 44, 3 miles east of Lecanto, Citrus County Florida
Permittee: Citrus County Board of County Commissioners
Mailing Address P.O. Box 340 Lecanto, FL 34460

Latitude: 28'51'08 Longitude: 82'26'38 or UTM: _____

Solid Waste Disposal Units Included in Estimate:

Phase / Cell	Acres	Date Unit Began Accepting Waste	Design Life of Unit From Date of Initial Receipt of Waste
Phase 2	5.75	In permitting stage	6 years
Phase 1/1A	18.8	1991	2003
Closed	60	1975	Closed

Total Landfill Acreage included in this estimate. 24.55 Closure 84.55 Long-Term Care

Type of Landfill: X Class I _____ Class III _____ C&D Debris

II. TYPE OF FINANCIAL ASSURANCE DOCUMENT (Check Type)

_____ Letter of Credit *
_____ Performance Bond *
_____ Guaranty Bond *
_____ Insurance Certificate
X Escrow Account
_____ Trust Fund Agreement

*Indicates mechanisms that require use of a Standby Trust Fund Agreement

III. ESTIMATE ADJUSTMENT

40 CFR Part 264 Subpart H as adopted by reference in Rule 62-701.630, Florida Administrative Code sets forth the method of annual cost estimate adjustment. Cost estimates may be adjusted by using an inflation factor or by recalculating the maximum costs of closure in current dollars. Select on of the methods of cost estimate adjustment below.

☐ **(a) Inflation Factor Adjustment**

Inflation adjustment using an inflation factor may only be made when a Department approved closure cost estimate exists and no changes have occurred in the facility operation which would necessitate modification to the closure plan. The inflation factor is derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its survey of Current Business. The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year. The inflation factor may also be obtained from the Solid Waste Financial Coordinator at (850)-488-0300.

This adjustment is based on the Department approved closure cost estimate dated: _____

Latest Department Approved Closure Cost Estimate:		Current Year Inflation Factor		Inflation Adjusted Closure Cost Estimate:
_____	x	_____	=	$0.00

This adjustment is based on the Department approved long-term care cost estimate dated: _____

Latest Department Approved Annual Long-Term Care Cost Estimate:		Current Year Inflation Factor		Inflation Adjusted Annual Long-Term Care Cost Estimate
_____	x	_____	=	$0.00

Number of Years of Long Term Care Remaining: x _____

Inflation Adjusted Long-Term Care Cost Estimate: = $0.00

☒ **(b) Recalculate Estimates** (see section V)

IV. CERTIFICATION BY ENGINEER

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

Signature of Engineer

John A. Banks, P.E., Solid Waste Division Director
Name & Title (please type)

39397
Florida Registration Number (affix seal)

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

813-621-0080
Telephone Number

Signature of Owner/Operator

Susan J. Metcalfe, P.G., Director Division of Solid Waste Management
Name & Title (please type)

(352)746-5000
Telephone Number

V. RECALCULATE ESTIMATED CLOSING COST

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

**** Third Party Estimate / Quote must be provided for each item**
**** Costs must be for a third party providing all material and labor**

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL
1. Proposed Monitoring Wells		(Do not include wells already in existence.)		
	EA	0	0.00	$0
2. Slope and Fill (bedding layer between waste and barrier layer):				
Excavation	CY	0	0.00	$0
Placement and Spreading	CY	0	0.00	$0
Compaction	CY	0	0.00	$0
Off Site Material *Includes Delivery, Placement, and Spreading*	CY	39,608	5.20	$205,962
Delivery	CY	0	0.00	$0
			Subtotal Slope and Fill	$205,962
3. Cover Material (Barrier Layer):				
Off-Site Clay	CY	0	0	$0
Synthetics - 40 mil	SF	1,069,400	0.42	$444,870
Synthetics - GCL	SY	0	0	$0
Synthetics - Geonet	SF	1,069,400	0.49	$522,723
Synthetics - Other	SY	0	0	$0
			Subtotal Barrier Layer Cover:	$967,593
4. Top Soil Cover:				
Off-Site Material *Includes Delivery, Placement, and Spreading*	CY	79,213	7.28	$576,671
Delivery/Spreading	CY	0	0	$0
			Subtotal Top Soil Cover	$576,671

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL
5. Vegetative Layer				
Sodding	SY	96,074	1.61	$154,871
Hydroseeding *Includes Mulch*	AC	40	4,680	$186,030
Fertilizer	AC	0	0	$0
Mulch	AC	0	0	$0
Other	SY	0	0	$0
			Subtotal Vegetative Layer:	$340,901
6. Stormwater Control System:				
Earthwork	CY	0	0	$0
Grading	SY	0	0	$0
Piping	LF	0	0	$0
Ditches	LF	0	0	$0
Berms	LF	0	0	$0
Control Structures	EA	0	0	$0
Other	LS	0	0	$0
			Subtotal Stormwater Controls:	$0
7. Gas Controls: Passive				
Vents	EA	25	4,680	$117,000
Fittings	EA			$0
Monitoring Probes	EA	120	26	$3,120
NSPS/Title V requiremer	LS	0	0	$0
			Subtotal Passive Gas Control:	$120,120

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL
8. Gas Control: Active Extraction				
Traps	EA	0	0	$0
Sump	EA	0	0	$0
Flare Assembly	EA	0	0	$0
Flame Arrestor	EA	0	0	$0
Mist Eliminator	EA	0	0	$0
Flow Meter	EA	0	0	$0
Blowers	EA	0	0	$0
Collection System	LF	0	0	$0
Other (describe)		0	0	$0
			Subtotal Active Gas Extraction:	$0
9. Security System				
Fencing	LF	0	0	$0
Gate(s)	EA	0	0	$0
Sign(s)	EA	0	0	$0
			Subtotal Security System:	$0
10. Engineering:				
Closure Plan report	LS	1	26,000	$26,000
Certified Engineer Drawing	LS	1	78,000	$78,000
NSPS/Title V Air Permit	LS	0	0	$0
Final Survey	LS	1	10,920	$10,920
Certification of Closure	LS	1	15,600	$15,600
Other (detail) Closure Permit	LS	1	36,400	$36,400
			Subtotal Engineering:	$166,920

11. Professional Services

	Contract Management		Quality Assurance		
	Hours	LS	Hours	LS	TOTAL
P.E. Supervisor	130	13,926	78	8,346	$22,272
On-Site Engineer	0	0	0	0	$0
Office Engineer	455	38,329	156	13,141	$51,471
On-Site Technician		0	1170	70,574	$70,574
Other (explain) Administration	156	7,625	0	0.00	$7,625

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL
Quality Assurance Testing	LS	1	18,200	$18,200

Subtotal Professional Services: $170,142

Subtotal of 1-11 Above: $2,548,309

12. Contingency % of Total 15%

Closing Cost Subtotal: $2,930,555

13. Site Specific Costs (explain)

Mobilization	$101,920
Waste Tire Facility	$8,320
Materials Recovery Facility	$0
Special Wastes	$0
Leachate Management System Modification	$0
Other	$101,920
Bonds and Insurance	$0

Subtotal Site Specific Costs: $212,000

TOTAL CLOSING COSTS: $3,142,555

VI. ANNUAL COST FOR LONG-TERM CARE (Check Term Length)

_____ 5 years _____ 20 years __X__ 30 years _____ Other

See 62-701.600(1)a.1., 62-701.620(1), 62-701.630(3)a. and 62-701.730(11)b. F.A.C. for required term length. For landfills certified closed and Department accepted, enter the remaining long-term care length as "Other" and provide years remaining.

**** Third Party Estimate / Quote must be provided for each item**
**** Costs must be for a third party providing all material and labor**

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

DESCRIPTION	Sampling Frequency (events/yr.)	Number of Wells	$/Well/Event	$ / Year
1. Groundwater Monitoring (62-701.510(6), and (8)(a))				
Monthly	12		0	$0
Quarterly	4		0	$0
Semi-Annual	2	12	443	$10,633
Estimate based on semi-annual monitoring.				
Annual	1		0	$0
		Subtotal Groundwater Monitoring:		$10,633
2. Surface Water Monitoring (62-701.510(4), and (8)(b))				
Monthly	12		0	$0
Quarterly	4		0	$0
Semi-Annual	2		0	$0
Annual	1		0	$0
		Subtotal Surface Water Monitoring:		$0
3. Gas Monitoring				
Monthly	12		0	$0
Quarterly	4	94	36	$13,686
Estimate based on quarterly monitoring.				
Semi-Annual	2		0	$0
Annual	1		0	$0
		Subtotal Gas Monitoring:		$13,686

DESCRIPTION	Sampling Frequency (events/yr.)	Number of Wells	$/Well/Event	$ / Year
4. Leachate Monitoring (62-701.510(5), (6)(b) and 62-701.510(8)(c))				
Monthly	12	1	0	$0
Quarterly	4	1	251	$1,003
Semi-Annual *Influent and Effluent*	2	1	2,415	$4,830
Annual	1	1	693	$693
Weekly	52	1	184	$9,572
		Subtotal Groundwater Monitoring:		$16,097

DESCRIPTION	UNIT	QUANTITY	UNIT COST	ANNUAL COST
5. Leachate Collection/Treatment Systems Maintenance				
Maintenance				
Collection Pipes	LS	1	10,400	$10,400
Sumps, Traps	EA	1	1,500	$1,500
Lift Stations	EA	14	1,040	$14,872
Cleaning	LS	0	0	$0
Tanks	EA	2	3,120	$6,240
Impoundments				
Liner Repair	SY	0	0	$0
Sludge Removal	CY	0	0	$0
Aeration Systems	CY	0	0	$0
Floating Aerators	EA	4	1,560	$6,240
Spray Aerators	EA	0	0	$0
Disposal				
Off-site (Include Transportation and Disposal)	1000 gallon	780	43	$33,259

6. Leachate Collection/Treatment Systems Operation
Included in Item 14

Operation		Hours	$/Hour	Total
P.E. Supervisor	HR	0	0	$0
On-Site Engineer	HR	0	0	$0
Office Engineer	HR	0	0	$0
On-site Technician	HR	0	0	$0
Materials	LS	0	0	$0
Subtotal Leachate Collection/Treatment System Maintenance & Operation:				$72,511

7. Maintenance of Groundwater Monitoring Wells

Monitoring Wells	LF	2	2,080	$4,160
Replacement	EA	0	0	$0
Abandonment	EA	0	0	$0
Subtotal Groundwater Monitoring Well Maintenance:				$4,160

DESCRIPTION	UNIT	QUANTITY	UNIT COST	ANNUAL COST
8. Gas System Maintenance				
Piping, Vents (Collection Wells)	LF	32	88	$2,829
Blowers	EA	0	0	$0
Flaring Units	EA	1	3,500	$3,500
Meters, Valves	EA	0	0	$0
Compressors	EA	0	0	$0
Flame Arrestors	EA	0	0	$0
Operation	LS	0	0	$0
Subtotal Gas System:				$6,329
9. Landscape				
Mowing *3x/yr*	LS	1	4,368	$4,368
Fertilizer	AC	0	0	$0
Subtotal Landscape Maintenance:				$4,368

DESCRIPTION	UNIT	QUANTITY	UNIT COST	ANNUAL COST
10. Erosion Control & Cover Maintenance				
Sodding	SY	2,600	1.61	$4,000.00
Regrading	AC	2,600	1.77	$5,000.00
Liner Repair	SY	3,900	0.52	$2,000.00
Clay	CY	0	0.00	$0.00
			Subtotal Erosion Control and Cover Maintenance:	$11,000.00
11. Storm Water Management System Maintenance				
Conveyance Maintenance	LS	1	18460	$18,000.00
			Subtotal Storm Water System Maintenance:	$18,000.00
12. Security System Maintenance				
Fences *Includes gates and signs*	LS	1	1560	$1,560.00
Gate(s)	EA	0	0	$0.00
Sign(s)	EA	0	0	$0.00
			Subtotal Security System:	$1,560.00
13. Utilities	LS	1	10400	$10,400.00
14. Administrative				
P.E. Supervisor	HR	16	105	$2,000.00
On-Site Engineer	HR	208	60	$13,000.00
Office Engineer	HR	52	84	$4,000.00
On-site Technician	HR			$0.00
Adminstrative Assistant	HR	104	49	$5,000.00
			Subtotal Administrative:	$24,000.00
15. Contingency	% of Total	182,344	10%	$18,000.00
			Subtotal Contingency:	$18,000.00

16. Site Specific Costs (explain)

	UNIT COST	
	LS	$0
	LS	$0
	LS	$0

ANNUAL LONG-TERM CARE COST ($/Year):	**$200,344**
NUMBER OF YEARS OF LONG-TERM CARE	30
TOTAL LONG-TERM CARE COST ($):	**$6,010,334**

SOLID WASTE ROUTING
Lindsay McCoy
Kim Ford
Steve Morgan
John Morris
Lora Ross
Vacant E4

DATE: 9/18/02

DEPOSITION AFTER REVIEW
FILE [] SUSAN PELZ []

Citrus Co Inspection file 21375

)UNTY CO MISSIONERS
NT OF PUBLIC WORKS
MANAGEMENT DIVISION
O, Lecanto, Florida 34460
670 FAX (352) 527-7672
llon area Toll Free # (352) 489-2120

D.E.P.
SEP 05 2002
Southwest District Tampa

September 5, 2002

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

COMET = LTR
DATE DONE = 9/5/02
PACP = contaminated stormwater
new file

Re: Citrus County Central Landfill
Permit No. 21375-003-SO

Dear Mr. Ford:

On Friday August 30, 2002 our facility received approximately four inches of rainfall during the afternoon and evening; about half of that fell in one hour. A pump was placed in the contaminated stormwater sump at the low point of the area with no intermediate cover. Due to the rapid rainfall rate, sediment filled part of the sump and the pump head was buried late in the evening. The top of the berm separating the contaminated stormwater from the clean stormwater area was breached and approximately 1,500 gallons of contaminated stormwater escaped. A second pump was placed and pumping continued on Saturday. About 40,000 gallons of contaminated stormwater was pumped to the leachate storage tank from that event over the two days. The berm was repaired by Saturday afternoon. The approximate location of the area contributing to the contaminated stormwater is shown on the attached map.

Over the next few days, we intend to complete intermediate cover over approximately half the area that now has daily cover only, in order to divert part of the stormwater from that sump. We will remove that intermediate cover after the rainy season and continue the intended fill pattern. If you have any questions, please contact me.

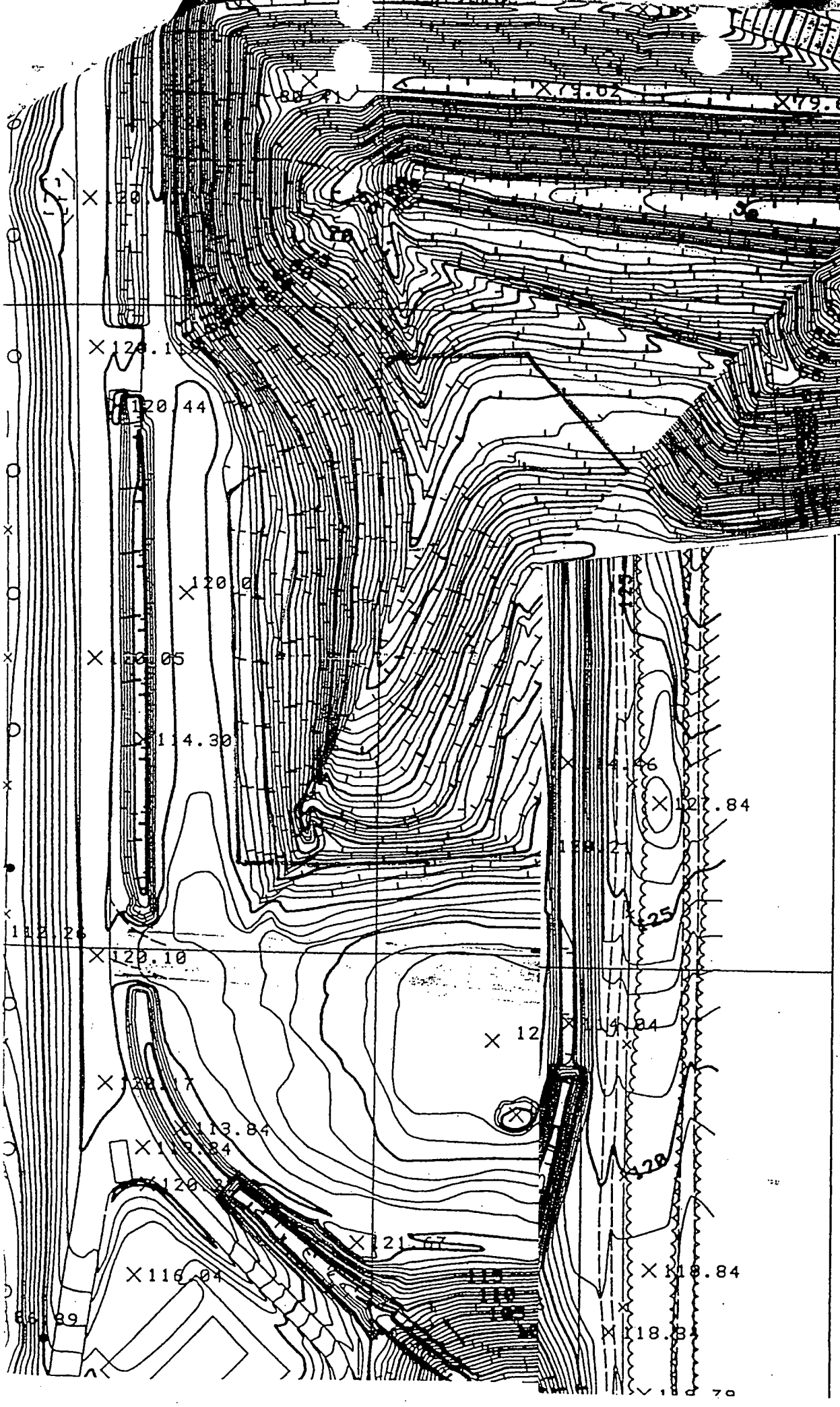
Sincerely,

Susan J. Metcalfe

Susan Metcalfe, Director
Solid Waste Management

Attachment: Map

CC: Tom Dick, Assistant Director, Public Works Department
John Banks, SCS Engineers, Tampa
David Keough, JEA, Gainesville
Susan Pelz, Solid Waste Section, FDEP, Tampa


PROGRESS REPORT:
8-10-02
THROUGH
8-23-02
TRASH FENCE
BERM
ROAD
STORMDITCH
LINER EDGE
N 1,642,000
N
SCALE 1:100
Topo = 4/6/02

RECORDS TRANSFER FORM

AU/R10/S7

(1) BOX NUMBER	(2) TRANSFER DATE	ORG. CODE 37-15-08-45-000
SW-08-98	July 07, 1998	EXPANSION OPTION
(3) STORAGE CODE NO: (ASSIGNED BY REC. MGT.) 98-R0238		MODULE 4007

(4) DIVISION/DISTRICT/OFFICE
WASTE MANAGEMENT / SOUTHWEST DISTRICT /

(5) ADDRESS	CITY	STATE	ZIP CODE	MAIL STATION
3804 COCONUT PALM DRIVE,	TAMPA,	FLORIDA	33619 -8318	

(6) RECORD SERIES TITLE NAME	(7) RETENTION
Solid Waste (Groundwater)	Permanent

(8) INCLUSIVE DATES	(9) RECORDS COORDINATOR	(10) TELEPHONE NO.
Up to 1998	Anna Black	744-6100 EXT. ,377 SC 542-6100

RECORD NAME	DATE	DESCRIPTION
CITRUS COUNTY		
Citrus County Central Landfill (Permit #SC09-282375)		Addendum No. 1 to CQA Report and Certification prepared by CH2M Hill/July 1997
Citrus County Central Landfill (Permit #SC09-282375)		Addendum No. 2 to CQA Report and Certification prepared by CH2M Hill/Oct. 1997
Citrus County Central Landfill		Phase 2 Expansion by CH2M Hill (Mar. 13, 1995)
Citrus County Central Landfill	July 21, 1997	Vol. 1-CQA Report Plus Attachments 1-5, Phase 1A Expansion Lining Construction QAR prepared by CH2M Hill/July 1997
Citrus County Central Landfill	July 21, 1997	Vol. 2-CQA Report Plus Attachments 6-21, Phase 1A Expansion Lining Construction QAR prepared by CH2M Hill/July 1997
Citrus County Central Landfill	May 20, 1996	Phase 1A Expansion - Technical Specifications prepared by CH2M Hill/May 20, 1996
Citrus County Central Landfill	May 20, 1996	Phase 1A Expansion - Lining Construction QAR prepared by CH2M Hill/May 20, 1996
Citrus County Central Landfill	Sept. 6, 1996	Citrus County BCC Bidding Requirements and Contract Documents Bid No. 96-89 / Copy No. 35 prepared by CH2M Hill/Sept 1996
Citrus County Central Landfill (Permit #SC09-282375)		Construction Plans for Phase 2 Expansion prepared by CH2M Hill/May 1996
Citrus Central Landfill (Permit #SC09-282375)	Jan - Oct 97	Phase 1A Construction Permit File
Citrus Central Landfill (Permit #SC09-282375)	1994- 04/96	Phase 1A Construction Permit File
Citrus Central Landfill (Permit #SC09-282375)	May-Dec 96	Phase 1A Construction Permit File

Anna I would like to get this whole box + + KW 8/26/02

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

REGULATORY DISTRICT ROUTING SLIP

TO: SUSAN PELZ / KIM FORD DATE: 8/16/02

CC:

	PENSACOLA	NORTHWEST DISTRICT	
	Panama City	Northwest District Branch Office	
	Tallahassee	Northwest District Branch Office	
✓	**TAMPA**	SOUTHWEST DISTRICT OFFICE	
	Punta Gorda	Southwest District Branch Office	
	Bartow	Southwest District Branch Office	
	ORLANDO	CENTRAL DISTRICT OFFICE	
	JACKSONVILLE	NORTHEAST DISTRICT OFFICE	
	Gainesville	Northeast District Branch Office	
	FORT MYERS	SOUTH DISTRICT OFFICE	
	Marathon	South District Branch Office	
	WEST PALM BEACH	SOUTHEAST DISTRICT OFFICE	
	Port St. Lucie	Southeast District Branch Office	

Reply Optional by _____ **Reply Required by** _____ **Info Only** _____

COMMENTS:

FYI - Alternate Procedure Request for Citrus Co.

FROM: LEE MARTIN **PHONE** S/C 291-8115

05-01-01

Request for Approval of Alternate Procedure Landfill Sideslope Subbase Design and Horizontal Separation to Property Line Citrus County Central Landfill Phase 2 Expansion

SCS ENGINEERS

Prepared for:

Citrus County
Board of County Commissioners
P.O. Box 340
Lecanto, Florida 34460

Prepared by:

SCS Engineers
3012 U.S. Highway 301 N., Suite 700
Tampa, Florida 33619
(813) 621-0080

File No. 09199056.02
August 14, 2002

Southwest District
Permitting Application

New Site

Site Name:		
Site ID:		
County:		
Type/Subcode:		
Fee submitted:	( ) correct	( ) incorrect
Total Fee Required $_____	Need $_____	Refund $_____

Existing Site

Site ID:	21375 — 004	
Project Name:	CITRUS CENTRAL PHASE 2 EXPANSION	
Type/Subcode:	SC / 01	
Fee submitted: 10000	(✓) correct	( ) incorrect
Total Fee Required $ 10000	Need $ /	Refund $ /

Applicant Information

Name:	SUSAN METCALFE		
Role:	APPLICANT		
Company:	CITRUS COUNTY		
Address:	PO BOX 341		
City:	LECANTO	Zip Code:	34460
Phone:	(352) 527-7671		

Fee verified by: KIM FORD

Application Assigned To: KIM FORD Date: 8/15/02

S C S ENGINEERS
Environmental Consultants

3711 Long Beach Blvd., Ninth Floor
Long Beach, CA 90807-3315
562 426-9544
FIN 54-0913440

Union Bank of California
445 Figueroa Street
Los Angeles, CA 90071

№ 16340

16-49
1220

8/12 20 02

PAY THE SUM OF 10,000dols 00cts DOLLARS $ 10,000.00

TO THE ORDER OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

TWO SIGNATURES REQUIRED OVER FIVE THOUSAND DOLLARS
VOID IF NOT CASHED IN 90 DAYS

William L. Schubert

[redacted]

S C S ENGINEERS
FIN 54-0913440

DETACH AND RETAIN THIS STATEMENT
THE ATTACHED CHECK IS IN PAYMENT OF ITEMS DESCRIBED BELOW.
IF NOT CORRECT PLEASE NOTIFY US PROMPTLY. NO RECEIPT DESIRED.

№ 16340

CONST PERMIT APPLICATION FEE $10,000.00 09199056.02 00003 561.00

SW fee check 8/14/02

D.E.P.
AUG 14 2002
Southwest District Tampa

CH

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
APPLICATION FOR A PERMIT TO CONSTRUCT, OPERATE, MODIFY OR CLOSE
A SOLID WASTE MANAGEMENT FACILITY

Please Type or Print

A. GENERAL INFORMATION

1. Type of facility (check all that apply):

[✓] Disposal
- [✓] Class I Landfill
- [ ] Class II Landfill
- [ ] Class III Landfill
- [✓] Other Describe: Yard Waste mulching and consumer goods recycling.
- [ ] Ash Monofill
- [ ] Asbestos Monofill
- [ ] Industrial Solid Waste

[ ] Non-Disposal
- [ ] Incinerator For Non-biomedical Waste
- [ ] Waste to Energy Without Power Plant Certification
- [ ] Other Describe: _____

NOTE: Waste Processing Facilities should apply on Form 62-701.900(4), FAC; Land Clearing Disposal Facilities should notify on Form 62-701.900(3), FAC; Compost Facilities should apply on Form 62-701.900(10), FAC; and C&D Disposal Facilities should apply on Form 62-701.900(6), FAC

2. Type of application:
- [✓] Construction
- [ ] Operation
- [ ] Construction/Operation
- [ ] Closure

3. Classification of application:
- [✓] New
- [ ] Renewal
- [ ] Substantial Modification
- [ ] Intermediate Modification
- [ ] Minor Modification

4. Facility name: Citrus County Central Landfill

5. DEP ID number: 4009C00086 County: Citrus

6. Facility location (main entrance): State Road 44 between Lecanto and Inverness, Florida

7. Location coordinates:

Section: 1 Township: 19S Range: 18E

Latitude: 28 ° 51 ' 08 " Longitude: 82 ° 26 ' 38 "

8. Applicant name (operating authority): Citrus County Board of County Commissioners

Mailing address: P.O. Box 340 | Lecanto | FL | 34460
Street or P.O. Box | City | State | Zip

Contact person: Ms. Susan Metcalfe, P.G. Telephone: (352) 527-7671

Title: Solid Waste Management Division Director

susan.metcalfe@bocc.citrus.fl.us
E-Mail address (if available)

9. Authorized agent/Consultant: SCS Engineers

Mailing address: 3012 U.S. Highway 301 North, Suite 700 | Tampa | FL | 33619
Street or P.O. Box | City | State | Zip

Contact person: John Banks, P.E. Telephone: (813) 621-0080

Title: Solid Waste Division Director

jbanks@scsengineers.com
E-Mail address (if available)

10. Landowner(if different than applicant): Citrus County BOCC

Mailing address: 111 W. Main Street, 3rd Floor | Inverness | FL | 34450
Street or P.O. Box | City | State | Zip

Contact person: Jim Fowler Telephone: (352) 341-6560

E-Mail address (if available)

11. Cities, towns and areas to be served: Citrus County, including, but not limited to towns of Inverness, Lecanto & Crystal River.

12. Population to be served:

Current: 118,085 (2000 Census) Five-Year Projection: 130,000 (FY 2005)

13. Date site will be ready to be inspected for completion: February 2004

14. Expected life of the facility: 5 years

15. Estimated costs:

Total Construction: $ ~5.0 million Closing Costs: $ Approximately 3.1 million*

16. Anticipated construction starting and completion dates:

From: April 2003 To: March 2004

17. Expected volume or weight of waste to be received:

_____ yds^3/day ~350** tons/day _____ gallons/day

* Includes closure of Phase I/IA.
**Total waste volume. Approximately 85% is landfilled (295 tons/day), the balance is not landfilled and managed as yard waste and recyclables.

T. **CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER**

1. Applicant:

The undersigned applicant or authorized representative of Citrus County Board of County Commissioners is aware that statements made in this form and attached information are an application for a Construction Permit from the Florida Department of Environmental Protection and certifies that the information in this application is true, correct and complete to the best of his/her knowledge and belief. Further, the undersigned agrees to comply with the provisions of Chapter 403, Florida Statutes, and all rules and regulations of the Department. It is understood that the Permit is not transferable, and the Department will be notified prior to the sale or legal transfer of the permitted facility.

Susan J Metcalfe
Signature of Applicant or Agent

Susan J. Metcalfe, Director, Division of S.W. Mgmt.
Name and Title (please type)

susan.metcalfe@bocc.citrus.fl.us
E-Mail address (if available)

P.O. Box 340
Mailing Address

Lecanto, Florida 34460
City, State, Zip Code

(352) 527-7671
Telephone Number

Date: 8/14/2002

Attach letter of authorization if agent is not a governmental official, owner, or corporate officer.

2. Professional Engineer registered in Florida (or Public Officer if authorized under Sections 403.707 and 403.7075, Florida Statutes):

This is to certify that the engineering features of this solid waste management facility have been designed/examined by me and found to conform to engineering principles applicable to such facilities. In my professional judgment, this facility, when properly maintained and operated, will comply with all applicable statutes of the State of Florida and rules of the Department. It is agreed that the undersigned will provide the applicant with a set of instructions of proper maintenance and operation of the facility.

Signature 8-14-02

John Banks, P.E., Solid Waste Divison Director
Name and Title (please type)

39397
Florida Registration Number
(please affix seal)

SCS Engineers
3012 U.S. Highway 301 North, Suite 700
Mailing Address

Tampa, FL 33619
City, State, Zip Code

jbanks@scsengineers.com
E-Mail address (if available)

(813) 621-0080
Telephone Number

Date: 8/14/2002

[redacted]E OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHWEST DISTRICT

CONVERSATION RECORD

8/15/02

Date 8/14/02 Subject CITRUS L F

Time 10:30 Permit No.

County CITRUS

M SUSI METZALEL Telephone No. 352 527 7671

Representing CITRUS

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

Other Individuals Involved in Conversation/Meeting

Summary of Conversation/Meeting

DISCUSSED UNUSUAL CONSTRUCTION FEATURES
S W SAYS SETBACK
& LINER ALONG BOTTOM SLOPE
WE DISCUSSED PREVIOUS APPROVALS
AND REMEMBERING TALLAHASSEE
WAS FAVORED AND MAY HAVE APPROVED
AN ALT PROCEDURE.
I REQUESTED A SEPARATE LETTER
IDENTIFYING THE SETBACK &
SIDESLOPE ISSUES AND ATTACHING
PREVIOUS APPROVALS AND DEP
WILL REVIEW AND RESPOND ON
WHAT IS REQUIRED BY TALLAHASSEE OR NOT.

(continue on another sheet, if necessary)

Signature

Title

PA-01
1/96
pap

Environmental Consultants

3012 U.S. Highway 301 N
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

November 30, 2001
File No. 09199056.02

MEMORANDUM

TO: Susan J. Metcalfe, P.G., Director
Citrus County, Division of Solid Waste Management

FROM: John A. Banks, P.E., Project Manager
Raymond J. Dever, P.E., D.E.E., Vice President SCS Engineers

SUBJECT: FDEP Pre-Application Meeting / Proposed Phase 2 Expansion of Central Landfill

This memorandum summarizes the significant points discussed in the pre-application meeting with the Florida Department of Environmental Protection (FDEP) on November 20, 2001. Those in attendance included; Susan Metcalfe (Citrus County), John Banks and Bruce Clark (SCS Engineers), and Kim Ford and Bob Butera (FDEP).

JUSTIFICATION FOR LANDFILL EXPANSION

The FDEP questioned why the County was proposing to expand the size of the current waste fill area. The FDEP seemed to believe that the County, with a daily volume of 300 tpd, the County should take advantage of air space, from elevation 125 to 168 in Phase 1 and 1A to provide space for several more years of filling, before expanding the lined footprint.

The County indicated that waiting until that time to obtain a permit for expansion would result in a slower, less efficient and more difficult job in depositing the waste as opposed to having a broader base of waste at lower elevations to work on. Waiting also would compress the time frame and leave less schedule flexibility for bringing the new cell on-line.

LANDFILL GEOTECHNICAL INVESTIGATION

The FDEP positively acknowledged that a comprehensive geotechnical investigation was being conducted within the area planned for the proposed cell. They had no specific comments with regards to supplemental provisions proposed in the contract documents that would address the potential to hit rock (limestone) during the base excavation. These provisions would call for removal of the rock and replacement with suitable soil backfill prior to installation of the liner system.

It was suggested that if rock was encountered, a limited geophysical survey could be conducted, if necessary, to better define the extent of the rock for removal.

STEEPNESS OF INTERNAL LANDFILL SIDE SLOPES

The County indicated that internal side slopes were planned to be 2:1 to maximize waste volume within the limited area available for expansion. The FDEP had concerns about several issues related to the liner system on the proposed side slope. Theses included;

- Constructability of the liner system and ability to satisfactorily compact subgrade on a 2:1 slope in sandy soil.
- Estimation and limiting of stresses induced in the geomembrane by the normal settlement of the refuse.
- Assessment of potential for refuse slide and recommendations for constructing a refuse buttress, placing protective cover, and refuse.
- Assessment of potential for water that has seeped into the soil outside the lined area (i.e., within the main east or west ditches) to accumulate behind the liner and increase the potential for the liner/subgrade plane to fail.
- Suitability of the liner (i.e., potential for weakening) in areas that will remain uncovered by waste and exposed to the weather for several years.

It was noted that internal side slopes are not addressed in the Rule.

SCS proposed to use the results of the geotechnical investigation to perform stability analyses and assess various failure surface combinations occurring during construction and operations. Recommendations would include a side slope at which the liner system could be installed and perform within safe tolerances throughout the various stages of the cell construction and operational life and other design features, as necessary, including liner shade cover and an intermediate bench/liner anchor trench.

SCS also would assess appropriate quality control tests that would be specified in the contract documents to minimize potential for liner failure due to long term UV exposure. SCS will also evaluate the potential advantages of using white liner.

LANDFILL SIDE SLOPE SUBBASE ALTERNATE PROCEDURE

The County proposed an alternate to the Rule requiring a prepared liner base on the sideslope with a hydraulic conductivity of not more than $1x10^{-5}$ cm/sec. This would be similar to the alternate that was approved by the FDEP on Phase 1A. The alternate would be a liner base with a hydraulic conductivity of not more than $1x10^{-4}$ cm/sec. Although the FDEP questioned

how consistent the proposed permeability could be, they indicated that if the alternate design was approved previously, then it should likely be approved again.

To expedite approval of this specific issue, the FDEP suggested the County send the alternate procedure request, the proposed project schedule, a copy of the previous submittal, and FDEP approval, as soon as possible to the Tallahassee, FDEP offices. SCS should contact Richard Tedder and confirm who to send it to. Lee Martin has taken over Richard's previous position and will likely be the lead reviewer.

LEACHATE RECIRCULATION

The County proposed to consider recirculating leachate back into the landfill. The County would like to achieve 100% recirculation because re-balancing the leachate plant flow to maintain consistent effluent quality is troublesome.

The FDEP suggested the County should consider leachate recirculation, more for treating the leachate to reduce its strength, rather than a volume reduction technique. The FDEP recalled numerous failures at other landfills where leachate recirculation was attempted without proper design or operational controls.

The FDEP also suggested that leachate recirculation over the Phase 1 cell, where only a single geomembrane liner exists, would be much less likely to receive approval than over Phase1A and Phase 2 cells where there is a double liner with a leachate leak detection zone.

The FDEP requires that the HELP modeling and subsequent leachate collection system design take into consideration the additional liquid loading from leachate recirculation. Also, the Operations Plan must address specific operation and management considerations for leachate recirculation.

Several methods for leachate recirculation were discussed including;

- Spray irrigation.
- Surface application by a dust control water truck.
- Sub-surface distribution through horizontal or vertical pipe networks.

SCS noted that the County would not likely consider spray methods due to the higher potential for objectionable odors to result from this method and the proximity of residential developments.

The FDEP suggested that the County start with distributing leachate from a dust control water truck; however, a dedicated water truck would be needed for leachate so as not to accidentally spray leachate outside of the lined area. The cost effectiveness of truck distribution versus dedicated, sub-surface piping should be reviewed.

OPERATING SEQUENCE & CLOSURE PLANS

Closure plans for portions of the existing landfill (i.e., the south side of Phases 1/1A) should include details of terraces (benches) to provide for capturing and dissipating energy of runoff from long, 3:1 side slopes. The FDEP also was concerned that the final waste slope profile and cover/cap installation provide proper clearances for ensuring the critical seal between the top and bottom geomembrane liners occurs on the inside slope of the perimeter berm.

A final closure plan is not required for the landfill with Phase 2 plans, however, the FDEP requested key cross-sections for Phase 2 including *intermediate* (i.e., approx. elevation 195) and *final* (i.e., approx. elevation 220) build-out stages. A detailed operating sequence plan is not required with Phase 2.

PERMITTING

The FDEP is processing the County's Operating Permit which will be issued for three years. The landfill Operating Permit will be extended by the FDEP, as a minor modification, for an additional two years upon receipt of the final certification of construction completion and fill sequencing plans for Phase 2.

There also was some discussion on the administrative process and possibility of combining the County's long term closure permit for the old landfill with the current Operating Permit, however, no definitive actions were agreed to.

SCHEDULE

A preliminary schedule for the Phase 2 design and construction was discussed as follows:

- Permit Application Submittal - March 2002
- Bid Solicitation - June/July 2002
- Open Bids - August 2002
- Start Construction - October 2002

FDEP requested that the schedule be included with the Permit Application.

cc: Kim Ford, P.E., FDEP

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

DATE: 11/20/01

TIME: 1:30 —

SUBJECT: Citrus Co LF Expansion - Phase 2

ATTENDEES

Name	Affiliation	Telephone
Kim Ford	DEP	(813) 744-6100 x 382
BRUCE CLARK	SCS ENGINEERS	813 621-0080
Susie Metcalfe	Citrus County	352 746-5000
John Banks	SCS Engineers	(813) 621-0080

Meeting Notes

look at LTC permit
Confirm still valid
Include References in Ops mod

LTC

10-5 ALT proc.

3 yr

modify to extend expir upon receipt of cert minor

put into const planning

SEQ: OFF FILL

put Comm in Ops mod to extend upon const completion / expansion

Environmental Consultants

3012 U.S. Highway 301 N
Suite 700
Tampa, FL 33619-2242

813 621-0080
FAX 813 623-6757

SCS ENGINEERS

November 19, 2001
File No. 09199056.02

Bob comments? tw

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

Subject: Citrus County Central Landfill - Phase 2 Expansion

Dear Kim:

On behalf of Citrus County, SCS Engineers (SCS) is pleased to provide this letter to summarize the key design issues for the proposed Phase 2 waste disposal cell. This is provided in advance of our meeting with the Department on November 20, 2001, in order to facilitate discussion on relevant issues to the design and operational elements of the Phase 2 cell.

The key issues include the following:

LANDFILL GEOTECHNICAL INVESTIGATION

SCS has proposed a geotechnical investigation of the proposed Phase 2 cell area that meets the intent of the regulations. However, SCS is aware of the limitations of conventional drilling programs and the difficulties that were experienced when a limestone boulder was unexpectedly encountered in the construction of the liner in the Phase 1 cell.

As a result, SCS and the County have discussed options for effectively managing a similar occurrence in Phase 2. SCS proposes to address this potential problem through the assessment of the results of the geotechnical investigation and use of specific provisions in the construction specifications that address this type of situation, including supplemental pricing for dealing with unsuitable site conditions including discovery of rock. The remedy shall, in general, include over-excavation of the rock and backfilling and compacting with appropriate soil type.

STEEPNESS OF LANDFILL SIDE SLOPES

Dozer grading? Removal of Rocks?

SCS is aware of the previous failure of the primary HDPE cell liner in Phase 1 and the probable cause, which points to a significant manufacturing defect in the liner. This incident notwithstanding, SCS anticipates that a side slope of 2:1 will likely result in satisfactory performance of the proposed HDPE liner system in Phase 2.

3:1, 2.5 /6

A comprehensive geotechnical investigation was conducted in the area of the proposed Phase 2 cell and will be used to characterize soils and key strength properties, confirm appropriate

cell side slopes, slope breaks if necessary, and related design features of the liner system. A slope stability analysis will be conducted using the site specific information as well as the proposed geosynthetic materials profile. Our preliminary analysis indicate that a satisfactory factor of safety can be achieved with the 2:1 side slopes.

SCS will work with the County on a plan for placement of protective cover soil, construction of refuse buttress, and placement and compaction of refuse on the side slopes so that the risk of a slope failure is minimized.

CAPACITY AND LIFE EXPECTANCY OF PHASE 2 CELL

The proposed approximate capacity of the Phase 2 cell is 1,000,000 tons at an intermediate elevation of 195.0. Based on an annual waste volume of approximately 82,000 tons in 2001 and a growth rate of 4 percent, the cell should provide more than five years of capacity.

LANDFILL LINER SYSTEM AND LEACHATE COLLECTION SYSTEM

The proposed preliminary bottom liner system will consist of a primary liner constructed of 60-mil HDPE, overlain by a drainage net. The drainage net will have a geotextile cover on the top side to prevent the overlying sand layer from clogging the net. The net will be overlain with 2 feet of coarse sand to protect it from the first lift of refuse.

Beneath the primary liner will be a leachate detection zone consisting of a drainage net. The net will lie on top of the secondary liner. The secondary liner will consist of a 60-mil HDPE liner laid directly on a 6-inch thick, prepared soil sub-base, which has been compacted to achieve a permeability of equal to or less than 1×10^{-5} cm/sec.

The proposed lining system design is contingent on the results of the geotechnical investigation and may be modified based on those findings and recommendations. Landfill sideslope lining will be as described below in the next section.

A sump, separate from Cells and 1A, will be provided in the Phase 2 cell for collection of leachate from the primary leachate collection system and the leachate detection system. The sump will be equipped with submersible pumps that will discharge leachate into the existing leachate force main connected to the existing leachate storage tanks.

LANDFILL SIDE SLOPE SUBBASE DESIGN EXEMPTION

The County wishes to propose an exemption to Rule 62-701.400(3)c (i.e. provisions for at least a 6-inch thick lining sub-base with a maximum hydraulic conductivity of 1×10^{-5} cm/sec.) for the landfill side slopes. The exemption request would be similar to that reviewed and accepted by the FDEP for the Phase 1 A cell and would include a demonstration with

appropriate back-up that an alternate design consisting of a primary and secondary HDPE liner system laid directly on prepared, naturally-occurring soil will provide equivalent performance to that required by Rule.

PRIMARY LINER EXPOSURE

Significant sections of HDPE bottom liner will be exposed to the elements and will not receive waste for several years. SCS is assessing the need to protect the primary liner from the effects of weathering, primarily UV exposure, until it is covered with waste.

REFUSE VEHICLE ACCESS TO CELL

Initial filling of the Phase 2 cell is expected to be from the south with solid waste vehicles crossing over the existing Phase 1 and 1A cells to reach the tipping area. Filling of the cell will be from top to bottom. Later, as filling progresses, an additional access road will be constructed from the north to provide access to the fill from the bottom to top of the cell.

LEACHATE RECIRCULATION

Citrus County is considering the feasibility of recirculating collected leachate through the refuse in the proposed Phase 2 cell, as well as existing Phase 1 and Phase 1A lined cells. The goal would be to construct the necessary design features and operate the cells so that a reduction of the volume of leachate that ultimately must be treated is achieved.

LEACHATE TREATMENT PLANT FLOWS

Currently, the leachate treatment plant is operating at up to 30 percent capacity. The County has on its Landfill staff an experienced operator who oversees the plant's daily operation and maintenance needs.

A preliminary estimate of leachate flow from the Phase 2 cell, based on operating records for Phases 1 and 1A, is anticipated to bring the plant flows up to approximately 45 percent of capacity.

STORM WATER RUNOFF MANAGEMENT

Provisions will be made to collect and properly dispose of clean storm water runoff from waste-filled areas of the proposed cell that receive proper cover. The County will construct a temporary, un-lined basin adjacent to the Phase 2 cell that will be used for this purpose until the next cell comes on-line. The basin will be equipped with dual pumps that will discharge the water to the main drainage ditch on the east side of the landfill. This ditch drains to the main retention pond on the south end of the 80-acre site.

Once the surface of the waste and cover soil is higher than the perimeter ditch, some of the clean runoff from the cell will be diverted with cut-off berms and ditches directly to the main east and west ditches.

STORM WATER MANAGEMENT WITHIN CELL

During the placement of the initial lift of refuse, the proposed Phase 2 cell will be sectioned-off to maximize segregation of clean runoff from areas where refuse has not been placed, and leachate from areas that have had refuse deposited. The clean runoff will be discharged from the cell through a temporary sump pump and pipeline and into the east ditch for disposal. The leachate will be directed to the cell for transmission to the leachate treatment plant.

SCS is working with the County on various options for segregating the cell as waste is deposited including placing a temporary raintarp over a portion of the cell.

INTERMEDIATE AND FINAL CELL ELEVATIONS

The proposed intermediate height of the Phase 2 cell is approximately elevation 195.0, which is about 75 feet above natural land surface. The final elevation is predicated on the construction of the Phase 3 cell and is elevation 220.0, or about 100 feet above natural land surface. Both intermediate and final closure elevations will be achieved with maximum landfill side slopes of 3:1. DESIGN FOR CLOSURE ARCW
← NEEDS TERRACES

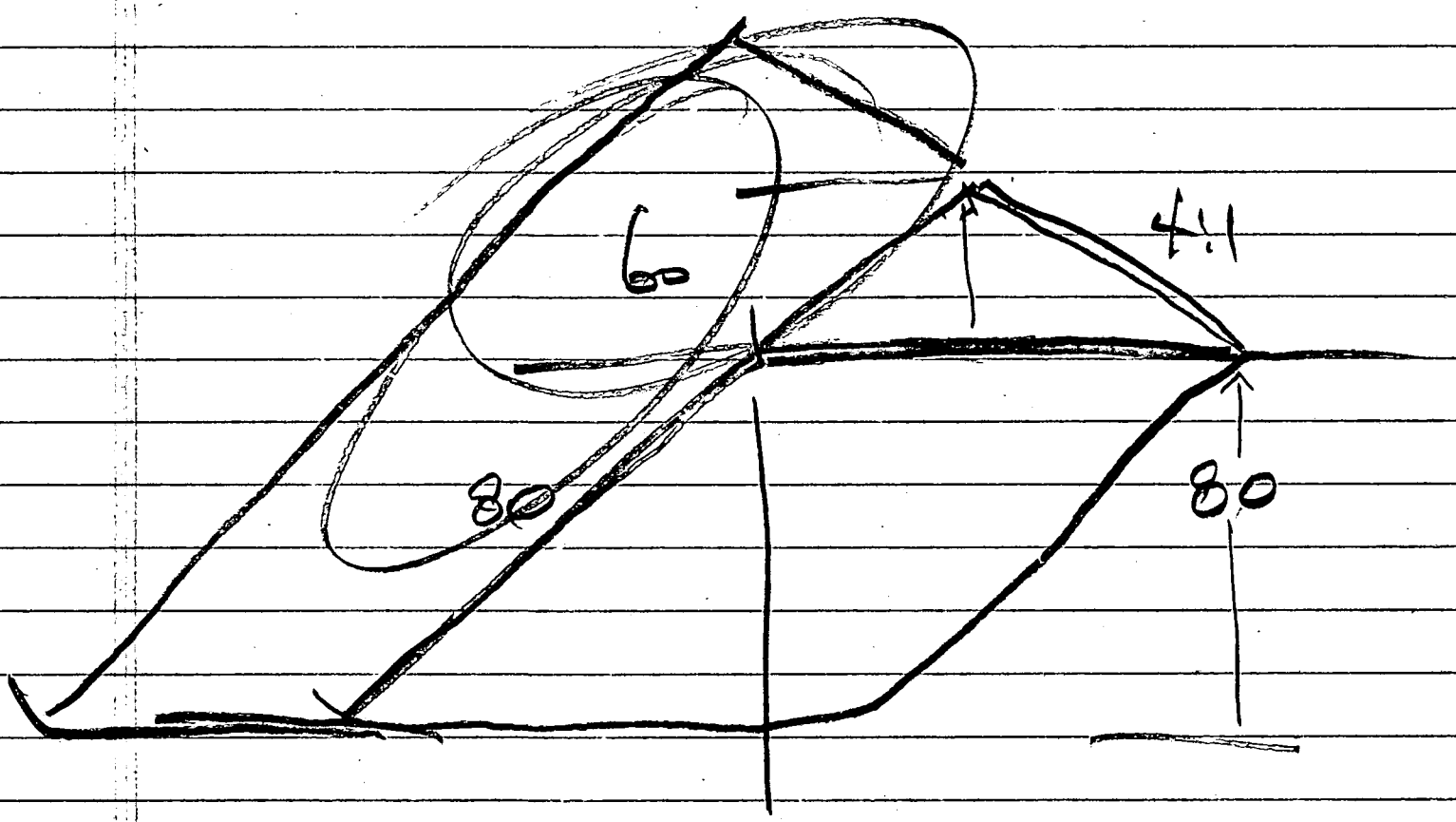
We look forward to meeting with the Department and discussing the County's proposed landfill expansion. Please call us if you have any questions.

Very truly yours,

John A. Banks, P.E.
Project Manager
SCS ENGINEERS

Raymond J. Dever, P.E., D.E.E
Vice President
SCS ENGINEERS

cc: Susan J. Metcalfe, P.G., Citrus County


60
4:1
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Permitting Application - Events

Events Scheduled

33 of 90

Site # 0021375 Site Name CITRUS CO CENTRAL SLF (LF1)

Permit # 0021375-004-SC Type/Subtype SC / 01 Received 08/14/2002

Project # 004 Project Name CITRUS CENTRAL PH. 2 EXPANSION

> ISSUE PERMIT: Issued

Event	Begin Date	Period	Due Date	Rmn	Status	End Date
Completeness Review	10/16/2002	30	11/15/2002		Incomplete	11/15/2002
RESET CLOCK	11/15/2002	1	11/16/2002		Done	11/15/2002
Awaiting Additional Information	11/15/2002	45	12/30/2002		Received	12/16/2002
Completeness Review	12/16/2002	30	01/15/2003		Complete	12/16/2002
Determine Agency Action	12/16/2002	90	03/16/2003		Issue	02/12/2003
Mail Public Notice of Intent to Applicant a	02/12/2003	10	02/22/2003		Done	02/12/2003
Date of Publication	02/12/2003	999	11/07/2005		Published	02/22/2003
Issue Final Permit	02/22/2003	14	03/08/2003		Issued	03/19/2003
STOP CLOCK	03/19/2003	1	03/20/2003		Done	03/19/2003
ISSUE PERMIT	03/19/2003	1	03/20/2003		Issued	03/19/2003
STOP CLOCK	02/12/2003	1	02/13/2003		Done	02/12/2003

Permitting Application - Permit Detail and L[illegible]ermit

SITE Permit

Site Name: CITRUS CO CENTRAL SLF (LF1) | Site #: 0021375

County: CITRUS | Comments: N | RPAs: N | # Cases: 0

Project

Permit #: 0021375 - 004 - SC | Project #: 004 | Received: 08/14/2002 | CRA #: 128035

Permit Office: SWD (DISTRICT) | Agency Action: Issued

Project Name: CITRUS CENTRAL PH. 2 EXPANSION | Desc:

Type/Sub/Des: SC / 01 SANI. LANDFILL CLASS I | COE #:

Logged: 08/15/2002 | Issued: 03/19/2003 | Expires: 03/15/2008 | OGC:

Fee: 10000.00 | Fee Recd: 10000.00 | Dele: | Override: NONE

Related Party

Role: APPLICANT | Begin: 08/15/2002 | End:

Name: METCALFE, SUSAN J. | Company: CITRUS COUNTY

Address: PO BOX 340

City: LECANTO | State: FL | Zip: 34460 - | Country: U.S.A.

Phone: 352-527-7671 | Fax:

Processors

Processor: FORD_K | Y | Active: 08/15/2002 | Inactive: | Events

Permitting Application - Events

Events Scheduled

33 of 90

Site # 0021375 Site Name CITRUS CO CENTRAL SLF (LF1)

Permit # Type/Subtype SC / 01 Received 08/14/2002

Project # 004 Project Name CITRUS CENTRAL PH. 2 EXPANSION

> Issue Final Permit: Pending

Event	Begin Date	Period	Due Date	Rmn	Status	End Date
Completeness Review	10/16/2002	30	11/15/2002		Incomplete	11/15/2002
RESET CLOCK	11/15/2002	1	11/16/2002		Done	11/15/2002
Awaiting Additional Information	11/15/2002	45	12/30/2002		Received	12/16/2002
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Date of Publication	02/12/2003	999	11/07/2005		Published	02/22/2003
STOP CLOCK	02/12/2003	1	02/13/2003		Done	02/12/2003
Issue Final Permit	02/22/2003	14	03/08/2003	1	Pending	
Publish Notice of Application	08/16/2002	14	08/30/2002		Done	09/29/2002
Return Proof of Publication of Notice of App	09/29/2002	21	10/20/2002		Received	10/16/2002

SUSAN

THE CLOCK IS STILL ON
CORRECT ME IF I AM
THE DATE OF PUBLICATION —
I SHOULD HAVE 90 DAYS
FROM DATE COMPLETE PLUS THE
TIME FROM INTENT SENT TO
RECEIPT OF PROOF OF PUBLICATION
— THE DUE DATE IS NOT 3/8/03

[illegible]
3/10

Permitting Application - Events

Events Scheduled

33 of 90

Site # 0021375 Site Name CITRUS CO CENTRAL SLF (LF1)

Permit # Type/Subtype SC / 01 Received 08/14/2002

Project # 004 Project Name CITRUS CENTRAL PH. 2 EXPANSION

> Issue Final Permit: Pending

Event	Begin Date	Period	Due Date	Rmn	Status	End Date
Completeness Review	10/16/2002	30	11/15/2002		Incomplete	11/15/2002
RESET CLOCK	11/15/2002	1	11/16/2002		Done	11/15/2002
Awaiting Additional Information	11/15/2002	45	12/30/2002		Received	12/16/2002
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Publish Notice of Application	08/16/2002	14	08/30/2002		Done	09/29/2002
Return Proof of Publication of Notice of App	09/29/2002	21	10/20/2002		Received	10/16/2002

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
APPLICATION FOR A PERMIT TO CONSTRUCT, OPERATE, MODIFY OR CLOSE
A SOLID WASTE MANAGEMENT FACILITY

Please Type or Print

A. GENERAL INFORMATION

1. Type of facility (check all that apply):

[✓] Disposal
- [✓] Class I Landfill
- [ ] Class II Landfill
- [ ] Class III Landfill
- [✓] Other Describe: Yard Waste mulching and consumer goods recycling.
- [ ] Ash Monofill
- [ ] Asbestos Monofill
- [ ] Industrial Solid Waste

[ ] Non-Disposal
- [ ] Incinerator For Non-biomedical Waste
- [ ] Waste to Energy Without Power Plant Certification
- [ ] Other Describe: _____

NOTE: Waste Processing Facilities should apply on Form 62-701.900(4), FAC; Land Clearing Disposal Facilities should notify on Form 62-701.900(3), FAC; Compost Facilities should apply on Form 62-701.900(10), FAC; and C&D Disposal Facilities should apply on Form 62-701.900(6), FAC

2. Type of application:
- [✓] Construction
- [ ] Operation
- [ ] Construction/Operation
- [ ] Closure

3. Classification of application:
- [✓] New
- [ ] Renewal
- [ ] Substantial Modification
- [ ] Intermediate Modification
- [ ] Minor Modification

4. Facility name: Citrus County Central Landfill

5. DEP ID number: 4009C00086 County: Citrus

6. Facility location (main entrance): State Road 44 between Lecanto and Inverness, Florida

7. Location coordinates:

Section: 1 Township: 19S Range: 18E

Latitude: 28 ° 51 ' 08 " Longitude: 82 ° 26 ' ~~28~~ 16 "

Confirmed Lat 28°51'08 Long 82°26'16" (on phase 2 expansion) 1/22/03 EJK

Oracle Developer Forms Runtime - Web

Query Coll Rpts Rfnd Exit CRA Window ORACLE

Cash Receiving Application - Collection Point Log Remittance

Collection Point Log Remittance

CRAF006A

AREA SWD

Tot $10,000.00

Remittance 484528 Type * CP Recved Date * 08/14/2002 Status RECEIVED

SYS$RCPT 390307 PNR Check # * 16340 Amount * 10,000.00

SSN/FEI# Name * SCS ENGINEERS

First Middle Title Suf

Address1 3711 LONG BEACH BLVD Short Comments

Address2 NINTH FLOOR S-SW 21375-004

City LONG BEACH ST CA Zip 90807 3315 Country

PAYMENT(S)

Payment#	Distr CL Area	Object Code/Description		Payment Amount	Reference#	Applic/	Fund *	status
518306	SWD	002244	SOLID WASTE-CON	$10,000.00		PA	PFTF	COMPLETE

COMMIT FREQUENTLY $10,000.00 Payment total

Oracle Developer Forms Runtime - Web

Permits Events Payment Site Facility Party Lct Help Exit Window ORACLE

Permitting Application - Permit Detail and Log Permit

SITE Permit

Site Name CITRUS CO CENTRAL SLF (LF1) Site # 0021375

County CITRUS Comments N RPAs N # Cases 0

Project

Permit # - - Project # 004 Received 08/14/2002 CRA# 128035

Permit Office SWD (DISTRICT) Agency Action Pending

Project Name CITRUS CENTRAL PH. 2 EXPANSION Desc

Type/Sub/Des SC / 01 SANI. LANDFILL CLASS I COE #

Logged 08/15/2002 Issued Expires OGC

Fee 10000.00 Fee Recd 10000.00 Dele Override NONE

Related Party

Role APPLICANT Begin 08/15/2002 End

Name METCALFE, SUSAN J. Company CITRUS COUNTY

Addr PO BOX 340

City LECANTO State FL Zip 34460 - Country U.S.A.

Phone 352-527-7671 Fax

Processors

Processor FORD_K Y Active 08/15/2002 Inactive Events

Enter date application was received. MM/DD/YYYY

Record: 2/?