

Jeb Bush
Governor

Department of Environmental Protection

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Colleen M. Castille
Secretary

Ms. Susan J. Metcalfe, Director
Citrus County Solid Waste Management Division
PO Box 340
Lecanto, FL 34460

September 23, 2005

RE: Citrus Central Class I Landfill
Permit No.: 21375-007-SC, Citrus County
Certification of Construction Completion, Phase 2 (approximately 6 acres)

Dear Ms. Metcalfe:

On July 1, 2005, an inspection of the above-referenced facility relative to construction completion and adherence to the permit issued by the Florida Department of Environmental Protection (FDEP) was made by Susan Pelz, P.E., Steve Morgan, and Danielle Nichols (FDEP), John Banks, P.E., (SCS Engineers), Susan Metcalfe, Tom Dick, Ken Frink (Citrus County). Certification of Construction Completion dated and received May 18, 2005, and additional information submitted in support of the Certification documents dated July 5, 2005 (received July 6, 2005), July 21, 2005, and July 25, 2005 has been received by the Department.

Based on the information submitted and the site inspection, the Department approves the construction certification for Phase 2. Operation in Phase 2 shall be in accordance with Operation Permit No. 21375-008-SO/01. If you have any questions, you may contact me at (813) 744-6100 ext. 386.

Sincerely,

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

Phase 2
cert approval
9/23/05

sjp
cc:

John Banks, P.E., SCS Engineers, 3012 US Highway 301 North, Ste. 700, Tampa, FL 33619
William Kutash, Waste Program Administrator, FDEP Tampa
Richard Tedder, P.E., FDEP Tallahassee (email)
Fred Wick, FDEP, Tallahassee
Douglas Hyman, P.E., FDEP Tampa, ERP

"More Protection, Less Process"

Printed on recycled paper.

Sent copy of docs to
TAL 9/27/05

Pelz, Susan

From: Susan Metcalfe [Susan.Metcalfe@bocc.citrus.fl.us]
Sent: Friday, September 16, 2005 2:32 PM
To: Pelz, Susan
Cc: Thomas Dick; jlocklear@jea.net; jbanks@scsengineers.com
Subject: status inquiry

Susan,

When we last talked, on the 8th, you indicated that you expected to have the Phase 2 construction certification approval ready this week. How close is that document to being issued?

The County delivered the Consent Agreement to Ms. Getzoff on the 14th, which should remove the last impediment on your side to issuing the operating permit. We are ready to look at the draft permit language. When will that be available?

We have scheduled a meeting including Mr. Wesch, Mr. Dick and myself with Ms. Getzoff (and I assume you and/or other solid waste department staff) for October 4. We will be wanting to discuss the delays in getting access, whether the Department can encourage Forestry to move more quickly and procedures for formalizing our likely requests for time extensions based on our observation that the timetable is likely to be delayed. Other issues may be the details of the alternate investigation scenarios. Obviously if we don't have the Phase 2 approval and permit by that time, we will want to discuss those as well.

Susie

Pelz, Susan

From: Pelz, Susan
Sent: Tuesday, August 30, 2005 7:11 AM
To: 'Susan Metcalfe'
Cc: Morgan, Steve
Subject: RE: Phase 2 construction approval

Susie,

I'll get to it as soon as I get back on Tuesday 9/6.

Susan J. Pelz, P.E.
Solid Waste Program Manager
Southwest District
813-744-6100 x 386
susan.pelz@dep.state.fl.us

-----Original Message-----

From: Susan Metcalfe [mailto:Susan.Metcalfe@bocc.citrus.fl.us]
Sent: Monday, August 29, 2005 1:02 PM
To: Morgan, Steve
Cc: Thomas Dick; Pelz, Susan; jbanks@scsengineers.com
Subject: Phase 2 construction approval

Steve,

Susan and I discussed the status of your Phase 2 construction certification review last week (via e-mail). She said she would be out this week, so that's the reason to direct this to you.

Susan indicated that there are a couple projects in the queue ahead of the certification. Do you have an update on the timetable for completing the review and approval of the construction? Is this under the normal 30-day time clock for review?

We understand that approval of construction is not a permit to use the space, however, the County is eager to have the construction approved.

Susie

Susan Metcalfe, Director
Citrus County Solid Waste Management Division
P.O. Box 340
Lecanto, FL 34460

352-527-7670 phone
352-527-7672 fax

Tracking:

Recipient

'Susan Metcalfe'
Morgan, Steve

Read

Read: 8/30/2005 7:53 AM

Pelz, Susan

From: Susan Metcalfe [Susan.Metcalfe@bocc.citrus.fl.us]
Sent: Monday, August 29, 2005 1:02 PM
To: Morgan, Steve
Cc: Thomas Dick; Pelz, Susan; jbanks@scsengineers.com
Subject: Phase 2 construction approval

Steve,

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Susie

Susan Metcalfe, Director
Citrus County Solid Waste Management Division
P.O. Box 340
Lecanto, FL 34460

352-527-7670 phone
352-527-7672 fax

Pelz, Susan

From: Pelz, Susan
Sent: Wednesday, August 24, 2005 7:41 AM
To: 'Susan Metcalfe'
Cc: Morris, John R.; Morgan, Steve
Subject: RE: Status update

Susie,

Thanks for the update. I have a couple of timeclock submittals in front of the Phase 2 Certification. I hope to get to it shortly. The Operation permit is 90% drafted & in my box for my review. As soon as I get done reviewing it, I'll (or Steve will) email the draft to you.

I received the information about the carbon cleanup, but haven't had time to look at it in detail (so far I've only flipped through it).

The complainant has requested to be anonymous. I am discussing what this means in terms of releasing information to the County with our attorneys and senior staff. I'll let you know as soon as we reach a decision. Most everyone is at a workshop for the rest of the week, and I will be out of the office next week (I'll be checking email), so it may be a few weeks to get back to you on this point.

As far as closure cost estimates, since we have not arrived at a statewide decision on the leachate management cost issue, we will allow the estimates we approved last month to be valid until September 1, 2006 **OR** when we reach consensus (we'll notify you of this) on how the Department is going to approach the leachate cost issue **whichever is earlier**. At that time, revised estimates (not inflation-adjusted) will be required.

Susan J. Pelz, P.E.
Solid Waste Program Manager
Southwest District
813-744-6100 x 386
susan.pelz@dep.state.fl.us

-----Original Message-----

From: Susan Metcalfe [mailto:Susan.Metcalfe@bocc.citrus.fl.us]
Sent: Monday, August 22, 2005 1:48 PM
To: Pelz, Susan
Subject: Status update

Susan,

Time for another update on several items.

Consent Agreement

Keith Mousel (Brooksville Forestry) now indicates that a signed sublease amendment will be required prior to the County being able to access the Forestry property for the investigation activities required in the Consent Agreement. Steve Bohl (Tallahassee Forestry) reported that it would take a couple weeks for Tallahassee staff to review the proposed terms provided by the Brooksville office. (One week left to go on that timeline if a couple is really two). They would then submit a draft agreement to us for our review. If OK with the County, it would take up to 3 weeks on a fast track to get our Board to execute an agreement. If we need to negotiate terms, the process would obviously take longer. Progress is being made as fast as I believe we can make it happen.

Inspection comment

Cleanup of the spilled carbon has been completed and a response letter

has been sent to your office. You may inspect at any time.

When your investigation is complete, I will be asking for information related to the complaint, such as form of the contact (in person, phone, fax, e-mail, courier or US mail), date and time of the complaint and any followup correspondence, content of the complaint. If the complainant identified him/herself we will request that name as well.

Phase 2 construction certification

You indicated that you would be able to approve the construction soon; any update on your schedule?

Operating permit

You indicated that you would have a draft permit ready for review soon; any update on your schedule?

Closure cost estimate

Can we consider the closure and LTC cost estimate submitted this summer with the permit application our official "before September 1" document?

Susie

Tracking:

Recipient

Read

'Susan Metcalfe'

Morris, John R.

Morgan, Steve

Read: 8/24/2005 7:52 AM

Read: 8/24/2005 8:08 AM

Pelz, Susan

From: Susan Metcalfe [Susan.Metcalfe@bocc.citrus.fl.us]
Sent: Monday, August 22, 2005 1:48 PM
To: Pelz, Susan
Subject: Status update

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Phase 2 construction certification

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Closure cost estimate

Can we consider the closure and LTC cost estimate submitted this summer with the permit application our official "before September 1" document?

Susie

SCS ENGINEERS

July 25, 2005
File No. 09199056.02

Mr. Steve Morgan
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, FL 33619

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



Dear Mr. Morgan


As discussed at our meeting on Wednesday July 13, 2005 regarding the Citrus County Landfill permitting and construction certification, the need for revised panel as-built drawing for the secondary liner was discussed. Based on review of the drawing, there appeared to be three duplicate repairs numbers used to indicate repair locations.

Enclosed please find four prints of the revised drawing along with a memorandum from the liner installer, Comanco Environmental Corporation, which describes the reason for the needed corrections. In summary, two of the repairs shown on the drawings were typographical errors by the CAD operator and no repairs should have been shown in those locations and one repair, R-7, was shown twice because the original location was cut out and replaced with a cap or long narrow panel that was designated as R-7.

We hope this clarifies the issues regarding the panel drawings. Please contact us if you have any questions or comments regarding this submittal.

Very truly yours,


John A. Banks, P.E.
Project Director


C. Ed Hilton, P.E.
Solid Waste Director
SCS ENGINEERS

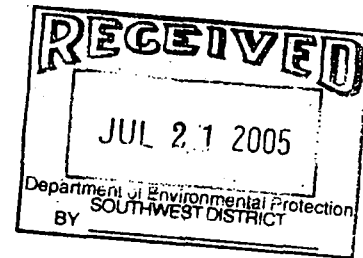
cc: Susan J. Metcalfe, P.G., Citrus County
Susan Pelz, P.E., FDEP

(See Board cert report)
FILE

SCS ENGINEERS

July 21, 2005
File No. 09199056.13

Ms. Susan Pelz, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, FL 33619



Subject: Citrus County Central Landfill – Operations Permit Renewal
Revisions to Application Documents

Dear Susan:

As a result of the meeting held on Wednesday July 13, 2005 related to the operations permit application and construction certification for Phase 2 of Citrus County Landfill, SCS Engineers (SCS) is providing the enclosed documents in response to your requests as listed below. We have listed a summary of your comment or request in **bold**, followed by our response.

The Gas Monitoring Action Plan is acceptable. The Consent Order will state that the vent system design will not need to be reviewed by the Department prior to its installation.

Response: Comment acknowledged.

Revise Section 9.1.4 of the Operations Plan to state that the landfill gas issues are being addressed via the consent agreement and by the Landfill Gas Monitoring Action Plan submitted to the Department on July 8, 2005. Please revise Attachment 9-1 to show the existing LFG monitoring probes.

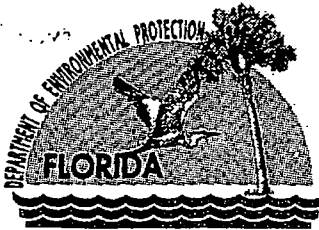
Response: Please see the enclosed revised pages for Section 9.1.4 of the Operations Plan and the revised Attachment 9-1 as Attachment 1 to this letter.

Revise Section M of the permit application to remove the month and day reference to the date of the groundwater monitoring plan evaluation report by JEA.

Response: Please see the enclosed revised pages of Section M to the permit application as Attachment 2 to this letter.

The slope stability calculations provided for the Phase 2 north slope refer to the slope as the south slope. Also for this and the slope stability calculation for the vertical height

(see Board Cert Report)
FILE



Jeb Bush
Governor

Department of Environmental Protection

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Colleen M. Castille
Secretary

SITE INSPECTION REPORT

July 25, 2005

OWNER/OPERATOR: Ms. Susan J. Metcalfe (Citrus County LF)
MAILING ADDRESS: PO Box 340
Lecanto, Fl. 34460

NAME OF SITE: Citrus County Central Landfill
SITE ADDRESS: 230 West Gulf Lake Highway
CITY: Lecanto, Fl. 34461

INSPECTION

DATE: July 1, 2005

PERMIT NO: 21375-004-SC

REASON FOR VISIT:

- PERMITTING INSPECTION X
- COMPLAINT INVESTIGATION X

PERSONS PRESENT: Susan Pelz, Danielle Nichols, Steve Morgan (FDEP); Susie Metcalfe, Ken Frink, Tom Dick (Citrus Co.); John Banks (SCS Engineers)

SUMMARY REPORT:

The purpose of this inspection was to inspect the newly constructed Phase 2 disposal area and also to follow-up on a recent complaint concerning the onsite leachate pre-treatment facility.

First we went to the Phase 2 landfill expansion area. We observed an overview of the construction and discussed the leachate riser pipes and pipes observed in stormwater ditch. We observed the valve that will be removed after Phase 2 is in service. Then we drove down to the bottom of the Phase 2 area and observed the contractor/liner installer performing vacuum box tests on a liner patch. John Banks explained that an insufficient number of destructive tests were taken in the secondary liner system and that SCS Engineers had instructed the contractor to take an additional sample in this location. The contractor was just finishing the vacuum box testing when we arrived. It began to rain while we were watching the testing. It appeared that the testing was not being completed in strict accordance with the specifications/CQAP. When we returned to the landfill office to discuss the certification request for information (RAI), we confirmed that the vacuum box tests that we observed did not meet the 10 second observation period required by the specifications. We then drove to the stormwater discharge structure (lift station) and observed drainage on the sideslopes (it was raining) and to the north stormwater pond. We then went back to the office to discuss the certification RAI. Based on the RAI dated June 20, 2005, additional information was received on July 6 and July 21, 2005, and is currently under review by the Department.

After discussing the certification RAI, we went to the onsite leachate plant to investigate the complaint. I pulled up the plastic material that was around the stairs and tanks. Black material was observed under the plastic in the south part of the plant. The operator explained that the material was unused carbon that sometimes spills from the box that is located directly above the impacted area during placement of the carbon in the treatment tank. We walked around the plant and looked under the plastic in several areas. Only the south portion in the vicinity of the unused carbon storage appeared to be impacted.

Staining was observed along the top of the tanks on the east side of the tanks. The County has notified the Department of several malfunctions of the leachate treatment plant that have resulted in untreated leachate discharges. The most recent event was April 7, 2005 (the Department was notified April 8, 2005). During the site inspection, we observed the treatment plant area, the access road, grassed areas on either side of the road and the drainage ditch east of the access road. Staining at the top of the tanks indicated that the tanks had overflowed and a thin layer of black material (estimated to be $<1/4$ inch based on scuffing the area with my boot) was observed in some locations in the grassed area adjacent to (east of) the tanks.

Water was observed in the ditch east of the access road. The water was cloudy similar to the complainant's photographs. Based on observations during the site visit, it appears that the turbidity in the ditch is likely due to the onsite soils and runoff from the access road. Several valves that could potentially discharge outside the treatment plant tanks were observed, but no evidence of inappropriate discharges (e.g., erosion on the ground in the areas, discoloration) was observed. Subsequent review of the routine groundwater monitoring data provided by the County revealed no correlation between the leachate discharges and impacts to the groundwater in the vicinity of the leachate treatment plant (i.e., MW-6).

DEFICIENCIES NOTED:

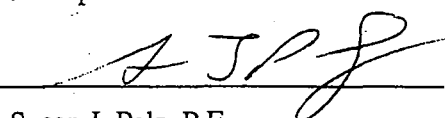
1. Carbon from the leachate treatment plant was observed spilled and covered by black plastic on the south side of the plant. A thin layer of black material (assumed to be carbon) was observed in the grassed area adjacent to (east of) the tanks.

RECOMMENDATIONS:

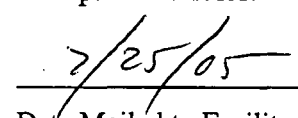
The owner/operator should perform the following activities to bring the facility into compliance:

1. Remove the carbon and impacted soils from the south part and grassed area east of the treatment plant. Dispose of the carbon and impacted soils in the Class I landfill. Implement best management procedures to prevent the spillage of carbon during the treatment plant operation.

The above activities should be completed within 30 days of the date listed below. If completion of these activities is expected to require longer than 30 days, a schedule for completion should be provided to the Department. Upon completion of these items, the owner/operator should contact the Department and arrange for a follow-up site inspection, to verify the facility's compliance with the conditions of the permit and Department rules.

FDEP REPRESENTATIVE:
Susan J. Pelz, P.E.

Solid Waste Program Manager


Date Mailed to Facility

Pelz, Susan

From: Susan Metcalfe [Susan.Metcalfe@bocc.citrus.fl.us]
Sent: Wednesday, July 20, 2005 5:07 PM
To: Pelz, Susan; jbanks@scsengineers.com
Subject: Phase 2 construction certification

Susan and John,

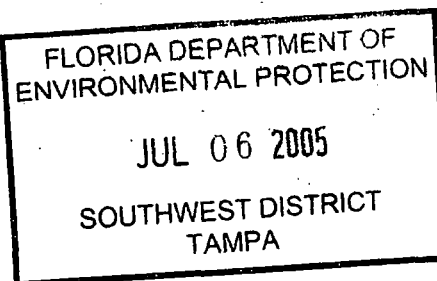
I was reviewing some of my notes from the inspection/meeting and found a question that we had not yet answered.

The secondary leachate pump had been in the off position following testing. That pump was set to the automatic position a week ago. The pump has not run yet. I believe this demonstrates that the primary liner is in good condition since we have had over three inches of rain during that period.

July 7, 2004

Mr. Ken Pitts
Advance Construction
400 Neal Road
Cantonment, Florida 35233

RE: Borrow Source Qualification Letter
Citrus County Land Fill Phase II Expansion
Citrus County, Florida
PSI Report No. 390-30102



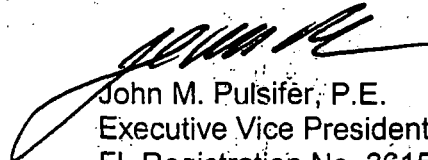
Dear Mr. Pitts:

This letter forwards the results of the laboratory soils testing performed on representative samples of the proposed low permeability soil to be used for the Citrus County Landfill Phase II Expansion in Citrus County, Florida. The laboratory testing was performed to verify that the soil specimens collected meet/exceed the project specifications for low permeability soil as specified in Table 02212-1 of the contract documents. The tests performed included flexible wall permeability tests (ASTM D-5084), Atterberg limits tests (ASTM D-4318), wash #200 sieve tests (ASTM-D1140), Maximum Dry Density and Optimum Moisture Content by Standard Proctor Method (ASTM D-698) and Natural Moisture Content determinations (ASTM D-2216). As required by the project specifications (Section 02212, Part 1, 1.03-C-4) three samples were collected for the above mentioned series of tests. The samples were collected from material stockpiled onsite that came from the proposed borrow source owned by DM and Sons, Inc. located at 5490 W. Homosassa Trails in Lecanto, Florida. In addition, one (1) sample of the stockpiled proposed low permeability soil and leachate collected from the landfill were tested for Leachate Compatibility using the U.S. EPA Test Method 9100. The table on the following page shows the results of the laboratory soils tests as well as the corresponding project specifications.

Should you have any questions or require additional information, please do not hesitate to call our office.

Respectfully Submitted,
Professional Service Industries, Inc.


Kevin H. Scott, E.I.
Branch Manager


John M. Pulsifer, P.E.
Executive Vice President
FL Registration No. 36154
7-7-04

Attachment: Table 1 – Laboratory Tests for Low Permeability Soil Borrow Source Acceptance

KHS/JMP_39030102_Borrow Source Qualification Letter

Table 1
Laboratory Test Results For Low Permeability Soil Borrow Source Acceptance
Citrus County Land Fill Phase II Expansion
Citrus County, Florida
PSI Report No. 390-30102

Sample Location and Description	Constant Head Permeability (ASTM D-5084) (cm/sec)	Percent Compaction & Moisture Content	Natural Moisture Content (ASTM D-2216)	Standard Proctor (ASTM D-698)	Atterberg Limit (ASTM D-4318)	Wash #200 (ASTM D-1140)	Leachate Compatibility (EPA T.M. 9100) (cm/sec)
Stockpile Pale Brown Sandy Clay	1.99×10^{-6}	98.8% @ 14.2%	26.5 %	87.0 pcf @ 29.0%	LL=70, PI=49	59%	4.6×10^{-6}
Stockpile Reddish Brown Clayey Sand	2.62×10^{-6}	98.3% @ 24.0%	21.8 %	91.5.0 pcf @ 27.0%	LL=58, PI=40	49%	---
Stockpile Pale Brown Sandy Clay	4.11×10^{-7}	96.7% @ 21.7%	25.0 %	91.0 % @ 28.5%	LL=68, PI=49	62%	---
Project Specifications	$\leq 1.0 \times 10^{-5}$	Min. 92%	---	---	20<LL<80 10<PI<40	> 20%	$\leq 1.0 \times 10^{-5}$

* Natural Moisture Content as determined from samples obtained from stockpile.

Citrus Central - Certification of Phase 2
inspection

7/1/05

Piping - orig design was SDR 17, they spec'd 15.5
couldn't get it so used SDR 11
they revised calcs & will provide

Archon trench -
will give us revised detail

Daily Reports -

"SCS not onsite"

- only deployed geocomposite = SCS

Cap strip - Air tested - not really a cap strip
cut geom & welded strip in between & air channel
tested

Financial cost ests -

leachate disposal in LTC

if average leachate generation then don't
have enough lining

take actual generation ~~est~~ for 1 yr put in
closing, then can use HELP
to est 30 yrs

Vertical Expansion -

- ~~it~~ ~~we~~ probably can give us technical calcs that show it's ok

If there were no permitting issues, Phase 2 would be better choice to operate instead of vertical over Phase I/II.

CO -

we can say "neither admits or denies", can say Consent Agreement

CAS -

- property line needs to be Plan "B"
- we want other actions to be Plan "A"
(passive venting)

Groundwater -

- property line more doesn't help
- ~~the~~ lateral/vertical extent → then risk-based corrective action
- what parameters?
-

62-780

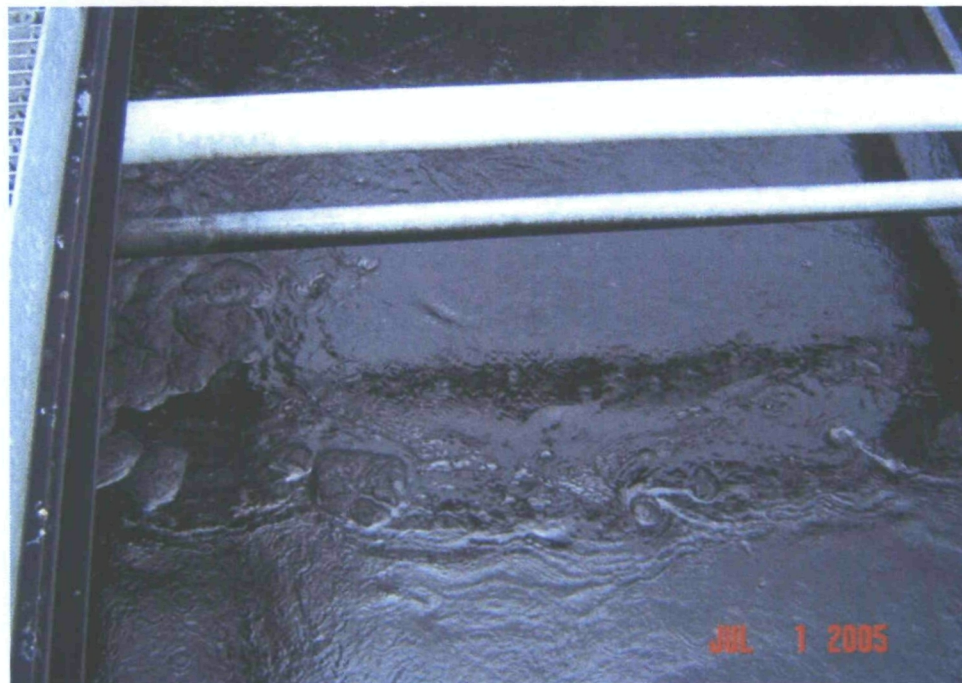
★











Pelz, Susan

Subject: Citrus Phase 2 inspection
Location: field

Start: Fri 7/1/2005 7:00 AM
End: Fri 7/1/2005 1:00 PM
Show Time As: Out of Office

Recurrence: (none)

Meeting Status: Meeting organizer

Required Attendees: Morgan, Steve

Optional Attendees: Nichols, Danielle; Morris, John R.; Ross, Lora; Petro, Stephanie

to conduct Phase 2 certification inspection

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 7/13/05

Subject Citrus Cent

Time 1230-225pm

Permit No. _____

County _____

M Susie Metcalfe

Telephone No. 352-527-7671

Representing _____

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

Other Individuals Involved in Conversation/Meeting John Banks (SCS)

Steve Mangum (FDEP)

Summary of Conversation/Meeting _____

- discussed gas remediation plan → submittal 7/8/05 is OK

- discussed info needed for Op Renewal re: gas

- new figure revise text

- discussed vertical exp over Phase 1/1A

- long slope on west, no terraces, only interim

will submit mod' to revise sequence draw

& drainage by end of October

- we will put condition in permit

- discussed Cent of Phase 2

- some items will just be comments in letter

- need pipe calcs for 8" SDR11 LCS pipe

- need daily reports 6/30-11/15/04

- need interface friction test results for gm/soil

- need revised gm report logs

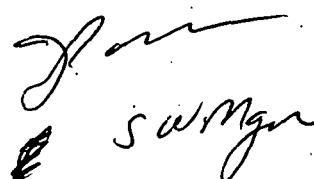
- need calcs to show LCS pipes will drain based

on 156 ft elevations & expected settlement

(continue on another
sheet, if necessary)

Signature

Title

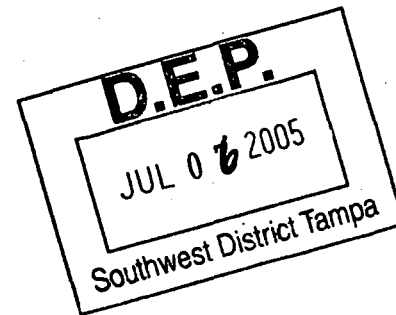

Steve Mangum

SCS ENGINEERS

July 5, 2005

File No. 09199056.02 Task 6

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



Subject: Citrus County Central Landfill, Phase 2 Permit No. 21375-004—01/SC,
Citrus County - Certification of Construction Completion

Dear Ms. Pelz:

On behalf of Citrus County, SCS Engineers (SCS) submits the following responses to your request for additional information in a letter dated June 20, 2005. For ease of review, each Florida Department of Environmental Protection (FDEP) comment is reiterated in bold type, followed by our response.

Four copies of the following items are provided attached with this letter:

Attachments

- 1 Certification Form
- 2 Revised Report Pages (Pages 1-2, 1-3, 2-6, 2-7, and 2-10)
- 3 Table 1(a) From GRI GM19 "Seam Strength and Related Properties of Thermally Bonded Polyolefin Geomembranes"
- 4 Results from New Destructive Seam Test SDS 16 AA
- 5 Calculations for Riser Pipe SDR 17
- 6 Additional Signed and Sealed Geotechnical Engineering Services Report (PSI)
- 7 Project Photographs
- 8 Project Weekly Progress Reports
- 9 Daily Field Reports for Clay Liner Installation
- 10 Photograph of Anchor Trench Adjustment at the Riser Pipes
- 11 Photographs of Geocomposite Damage and Repair From Incident of December 20, 2004
- 12 Record Drawing (See Separate Set of Rolled Plans)
- 13 Replacement Final Record Topographic Survey
- 14 Collection Pipe Slope Calculations
- 15 Revised Subgrade Acceptance Forms
- 16 Addendum to Secondary and Primary Seaming Logs
- 17 Addendum to the Secondary and Primary Non-Destructive Test Logs

- 18 Revised As-Built Panel Drawings
- 19 Amended Secondary Destructive Test Log
- 20 EPA 9100 Test Results
- 21 Friction Angle Test Results

1. **FDEP Form 62-701.900(2) indicates that there were no deviations from the permitted plans. However, Section 1.3 indicates that there were "changes made during construction." It has been the Department's experience that construction projects of this magnitude often have changes during construction (e.g., see §2.5.1., §3.1 in Certification documents) As required by Specific Condition #7.c. of the above-referenced permit, please provide a narrative indicating all changes in plans and the cause of the deviations and certification by the design engineer to the Department. Please provide a revised certification form that references this narrative.**

Response: Please see the revised certification form listing the changes in the project.

2. **§1.4, Preparation of Phase 2 Cell. The information indicates that the prepared subgrade was free of rocks, sticks, etc., larger than 1-inch in any direction. This does not appear to comply with Specifications 02212-3.01.E (for bottom of landfill) or 02220-2.02.B (for sideslopes)**

Response: Please see the revised pages which indicate consistency with the specification requirements.

3. **§1.5, Installation of clay liner subbase. The information indicates that the installed subbase was free of rocks, sticks, etc., larger than 1-inch in any direction. This does not appear to comply with Specifications 02212-1.01.C or 02776-3.03.A.**

Response: Please see the revised pages which indicate consistency with the specification requirements.

4. **§2.5.1, §2.5.2. Geomembrane testing. The values listed in Tables 2-5 and 2-6 for the geomembrane do not appear to correlate with the specified values of 0.940 g/cm³ for geomembrane density (see Specification Table 02776-1).**

Response: Please see the revised pages which indicate consistency with the specification requirements.

5. **§2.7.2, Geomembrane seaming. Please clarify the specification that allows 78 ppi for peel strength for extrusion welds.**

Response: The project specifications did not include a specified value for extrusion weld peel strength. Therefore we deferred to the industry standard as represented by GRI GM19 "Seam Strength And Related Properties of Thermally Bonded Polyolefin Geomembranes" Table 1(a) dealing with smooth and textured HDPE. A copy of this table is provided, which indicates 78 ppi for extrusion weld peel strength.

6. **§2.7.5, Destructive tests. This section indicates that only two geomembrane seam destructive tests failed. However, this does not appear to correlate with Attachment C, Daily Field reports dated 12/07/04, 12/09/04, and 12/17/04. Please revise this section as appropriate.**

Response: The reference in paragraph 2.7.5 was incorrect and has been revised per the attachment replacement page 2-10.

For clarification, there were a total of three destructive test failures (SDS 4, SDS 5, SDS 16) during installation of the secondary geomembrane liner, as referenced in the daily reports and field logs.

SDS 4 was marked and sampled from seam S1 and the existing liner tie in seam TI. The seam was extrusion welded from the east anchor trench to a point approximately 140' west down the east side slope as referenced in the as-built drawing. SDS 4 was field tested with the use of a field tensiometer where it failed due to a non-Film Tear Bond peel incursion. Several other samples of the extrusion welded seam were tested and failed. At this time it was determined by the Quality Assurance Inspector to have the seam capped stripped over the entire length of extrusion welded seam. The south side of the 2-foot wide cap that attaches to the tie in seam was extrusion welded and vacuum tested. The north side of the cap was fusion welded and air tested. After capping the seam SDS 4-1 was sampled from the extruded side of the cap, field tested, and sent to TRI for third party testing. The field test and lab test results were both passing for this sample.

SDS 5 was a fusion welded sample from seam S7 and S8 as noted in the field logs and as-built drawings. SDS 5 passed field tensiometer testing, but failed third party lab testing due to two out of ten 1-inch samples having peel incursions. The seam was traced to an area of passing seam before and after the failure as per contract specifications. The area of failed seam was cap stripped between the two passing areas and two additional destructive samples were taken (SDS 5A and SDS 5B) as noted in the field logs and as-built drawing. The field test and lab test results were both passing for these samples.

SDS 16 was a fusion welded sample from seam S41 and S42 as noted in the field logs and as-built drawing. SDS 16 failed field tensiometer testing due to a peel incursion. The seam was traced to an area of passing seam before and after the failure as per

contract specifications. The area of failed seam at S41 and S42 was cap stripped and two additional destructive samples were taken (SDS 16A and SDS 16B) as noted in the field logs and as-built drawing. The field test and lab test results were both passing for these samples. An additional destructive sample was taken at the northern end of seam S45 and S47 (SDS 16AA) to close the gap between 16B and the cap strip. The results of this sample are included with the supplemental logs and it is recorded on the revised panel as-built drawing.

7. **§3.1, Leachate collection piping. Since the SDR of the leachate collection piping was changed from the permitted design, please provide revised pipe structural calculations (buckling, crushing, deflection) that demonstrate that the SDR 11 pipe is appropriate for the design. These calculations should include a comparison of the safety factor for the original design and the as-built condition.**

Response: The reference to SDR11 pipe in this section was to indicate that a stronger pipe was used than what was specified. SDR11 has a thicker wall and is stronger than SDR15.5. As noted SDR 17 pipe was used for the risers and we have included the calculations for this pipe. It should be noted that the approved permit submittal indicated that SDR 17 would be acceptable, but SDR 15.5 was included in the specification. The buckling calculation shows that SDR 15.5 would have a factor of safety of 2.3 while SDR 17 has a factor of safety of 1.7.

8. **§4.1, Protective sand cover testing. Please specify the number of acres included in the Phase 2 construction project. The information indicates that only two sand samples were tested for hydraulic conductivity. This does not appear to meet the requirements of Specification 02220-2.04.A (1 sample/acre). Please clarify if sand was placed on the slopes. If sand was not placed on the sideslopes, please explain how the permeability of the sand that will be placed on the slopes will be verified and certified.**

Response: There are 2.1 acres in the bottom of the cell. As stated in the project specifications, the construction only called for sand in the "floor" of the cell. This was done because the sand needs to be placed against the side slopes immediately before waste placement. This has historically been done by the County. The sand the County will use for this operation will be the white sand that was used in the bottom of the cell as a substantial stockpile of this material remains. It should be noted however, that a high permeable sand is not necessary on the 2:1 slopes.

Attachment A. Geotechnical Engineering Services Report

9. **Please provide a signed and sealed copy of the geotechnical engineering services report.**

Response: Please see the enclosed signed and sealed copy of the report. Please note that the original submittal contained one original signed and sealed copy of this report.

10. **Table 1. Please explain why samples permeability tests were not performed on samples #9 and #10.**

Response: The project specifications required two tests per acre. At two acres this equates to four tests required. Eight tests were performed.

Attachment B. Liner as-built drawings.

11. See comments in Attachments K, L and M, below.

Response: Please see the responses to Items 34, 35, 36 and 37.

Attachment C. Daily construction QA field reports

Please provide copies of photographs of the construction required by the CQA Plan, *Photodocumentation and Reporting Data Sheets* (page 40). These photographs may be printed or may be submitted on a compact disk (CD), and should show representative activities for each portion of the construction project. Photographs of problems encountered (e.g. waste encountered within tie-in area, report dated 12/09/04) and corrective actions should also be included.

Response:

Please see the enclosed project photographs. For clarification regarding the field reports of 12/09/04, a mixture of daily cover and solid waste was noted in the transition area where the new liner would be attached to the Phase 1A liner. The contract drawings called for removal of this material in the existing cell for a minimum of 12 feet, so as to properly anchor the geogrid layer. The gross removal of this material was accomplished with an excavator and off road trucks along the entire tie-in. After gross removal, the liner layer were hand cleaned by technicians prior to welding.

13. **Please provide copies of the weekly progress reports as required by Specific Condition #4 of the construction permit, and the CQA Plan, *Progress Reports* (page 40)**

Response: Please see the enclosed weekly progress reports covering the time period of the liner system installation.

14. **Please provide Daily Field Reports for the construction of the low permeability soil liner (installed subbase)**

Response: Please see the enclosed Daily Field Reports for the time period of the liner subbase installation.

15. **12/06/04. The report indicates that liner deployment began although "all perm tests [had] not been received by engineer." This does not appear to meet the requirements of the CQA Plan Subbase Preparation and Acceptance (page 10)**

Response: The decision to allow the contractor to proceed in this manner was made due to the lengthy delays due to the adverse weather conditions. The Contractor was placed on notice that he was proceeding at his own risk meaning that if any test reports came back with unacceptable results he would be required to remove the liner and reinstall the clay. Because the test results to date were far exceeding the requirement, this risk was determined to be minimal.

16. **12/10/04. The report indicates that destructive seam tests SDS 11 through 15 were "cut but not sampled." This does not appear to comply with the CQA Plan *Sampling Procedures* (page 16)**

Response: For clarification, the seam test samples for SDS 11 thru 15 were marked by the Quality Assurance Inspector on 12/10/04, and cut out of the seam on 12/10/04. Due to time constraints, the samples were not tested in the field until 12/13/05. After field testing they were shipped to the third party testing lab for quality assurance testing. See reference to this activity on the 12/13/05 daily report.

17. **12/14/04. Please provide photographs and as-built detail of the correction of the "slight problem with transition to anchor trench ."**

Response: For clarification, a minor field adjustment was made by moving the anchor trench approximately 2 feet to west beneath the riser pipe to insure proper seating of the riser pipe as it existed the cell. Please see the enclosed Record Drawings and photograph that show how this issue was resolved.

18. **12/16/04. Please clarify the statement, "Blacked out secondary."**

Response: "Blacked out" is the term used to indicate when all of the liner material has been deployed but not all seam necessarily completed.

19. **12/18/04 and 01/08/05. These reports state, "No SCS personnel onsite." This does not appear to comply with Specific Conditions #5 and #6 of the construction permit.**

Response: Because the Contractor was working 7 days per week due to extensive weather delays, County personnel were assigned to observe deployment only of the geocomposite materials. The County staff were familiar with the operations and acted as the CQA consultant's designated representative in this regard as allowed by the specific conditions.

20. **12/20/04. Please provide a photograph of the damage to the geocomposite and the associated repair.**

Response: Please see the enclosed photographs for this specific item.

21. **01/12/05. Please provide a photograph of the damage to the Phase 1/Phase 2 liner tie-in and the associated repair.**

Response: While uncovering and cleaning the Phase 1A liner in preparation for the tie-in to the Phase 2 liner, a damaged area of the Phase 1A liner was discovered. Because it was not apparent that this damage was related to the Phase 2 construction, the County contracted directly with Comanco to make this repair and the repair was not documented as part of the Phase 2 construction project. The County will provide information on this repair under separate cover.

22. **01/15/05. This report states, "Work not observed by SCS." This does not appear to comply with Specific Conditions #5 and #6 of the construction permit.**

Response: Please see the response to Item 19 above.

23. **02/21/05. This report indicates that additional work was anticipated to be completed the next day. Please provide daily field reports for all dates through substantial completion.**

Response: The daily reports are not required for the entire project but are for the liner and associated features (i.e., liner CQA requirements). The referenced additional work was not related to the liner system.

Attachment D, Record Drawings.

24. **As required by Specific Condition #7.b., please provide a complete set of Record Drawings that show all changes (i.e. additions, deletions, revisions to the plans previously approved by the Department including site grades and elevations). The Record Drawings should include all sheets referenced in the permitted drawings with as-built information appropriately noted (i.e., "clouded" or otherwise noted).**

Response: Please see the enclosed record drawings.

25. **Please provide surveys that include the grid points and elevations for comparison of the subgrade, clay liner and final as-builts. Please specify which layer each of the surveys represent.**

Response: The contractor's surveyor provided the "as-built" final survey which did not include the 2 ft. protective sand layer. SCS is providing the enclosed replacement final survey drawing based on the surveyor's drawing with the addition of the sand layer based on SCS field checks of sand thickness.

26. **Please provide a survey that includes the leachate collection piping and sump as-built elevations.**

Response: Careful evaluation of the sub-base topographic survey dated January 3, 2005, shows that the overall slope of the collection pipe location is 0.99 percent, with the shallowest segment at 0.83 percent. The attached calculations indicate that the minimum slope requirement for the collection pipe is 0.43 percent, including allowances for the maximum predicted differential settlement of 3-inches. Thus the as-built condition provides a factor of safety of 2 compared to the requirement.

27. **Subgrades as-built. Please clarify the northern extent of the subgrade topography. It appears that the as-built does not include the northern slope. Please clarify which of the permitted plans includes the required subgrade elevations.**

Response: The subgrade as-built survey of the side slopes shows up on the 1/3/05 survey as the clay was placed only in the bottom of the cell. Sheet 5 of the permit plans showed the top of liner elevations which includes the clay in the bottom of the cell. The Subgrade elevations in the bottom of the cell were not shown on the Permit Drawings.

28. **Final as-built. The contours on this sheet do not appear to correlate with the contours on Sheet 5 of 17 in the permit drawings (January 2003). The "final as-built" survey does not appear to show a minimum 1% slope from east to west for leachate drainage, and does not appear to show the location of the leachate collection trench as required by the permitted design.**

Response: The Final as-built survey should have shown the top of the sand layer. We noticed this was not the case even though the submitted as-built survey is dated well after the sand was placed. SCS is providing the enclosed cell as-built drawing based on the subbase drawing and our depth checks for the sand. The drawings for the subgrade and the top of clay (which is what is shown on Sheet 5 of the permit drawings) all show that a

1% slope is provided east to west. The location of the leachate collection line shows up on the subgrade survey but would not be visible on the final survey.

Attachment E. Manufacturer Geosynthetic Quality Control Test Reports

29. **Geocomposite Quality Control. Section Four, Geocomposite MQC. Please provide test results for Composite roll #0400039 (sample #2) Composite roll #0400115 (test #4) and Composite roll #0400191 (test #6) that include the transmissivity results. Please specify the loading condition for the transmissivity results for Composite roll numbers 0400229-0400261.**

Response: The Specifications require Manufacturers Quality control testing for transmissivity at a rate of one test per 200,000 square feet (sq. ft.) of material. Approximately 600,000 sq. ft. of material were provided for this project, thus three test results are required. Three test results were provided in the submittal.

Attachment F. Geosynthetic Conformance Test Reports

30. **Geocomposite Conformance. The following geocomposite conformance test results do not appear to meet the transmissivity required by the specifications (Table 02930-3, $1.8 \times 10^{-3} \text{ m}^2/\text{sec}$ minimum) Sample 0400007, specimen 2; Sample 0400191, specimen 1; Sample 0400229, specimen 1. The following geocomposite conformance test results do not appear to meet the AOS required by the specifications for the geotextile component (Table 02930-2, #70 sieve (0.210 mm) maximum) Sample 0400007, top; Sample 0400007, bottom; Sample 0400191, bottom.**

Response: The testing protocol for the geocomposite includes averaging the results of three specimens as specified in ASTM D4716. The result of the average of the three specimens shall be a minimum of $1.8 \times 10^{-3} \text{ m}^2/\text{sec}$. The reported results meet the project specifications.

The AOS test specified value is a maximum sieve size of #70. The reference to maximum is in reference to the opening size which is also given as 0.210 mm. All results show that the opening size is less than the specified maximum value, the smaller the opening, the larger the sieve number (i.e., 100 is a smaller opening than 70).

31. **Geogrid conformance. Please clarify if the required ultimate strength in Table 02950-1 (11,900 lb/ft) is a minimum or average value.**

Response: The requirement is a minimum as calculated in accordance with the specified test method (i.e., an average of the results from 10 specimens from each sample).

Attachment G. Sub-Base Acceptance Forms.

32. Please explain how the "certification received by SCS" on 12/06/04 was not certified by the Comanco superintendent until 12/07/04. Please provide Certificate of Subbase Acceptance for 12/13/04 through 12/16/04 that include the date the SCS resident engineer received the certifications.

Response: The sub-base acceptance form in question was submitted on 12/7/04 by Comanco. The SCS representative mis-dated his signature. Please note there are correctly dated forms for the 6th and 12th thru 16th. Please see the attached revised dated sheets.

Attachment I. Geomembrane Seaming Logs.

33. Please clarify which sheet includes the seams S23/T1, S61/T1 and P19/T1. Please clarify if the seam listed as P53/T1 is actually P51/T1 (sheet 7 of 12)

Response: Please see the attached addendum to the Secondary and Primary Seaming Logs.

Attachment IC. Geomembrane Non-Destructive Test Logs.

34. Please provide vacuum box testing logs for all extrusion welded seams. Since cap stripped seams generally are extrusion welded, please explain how "capped" seams were air channel tested (see page 8 of 8 for secondary liner)

Response: Please see the addendum to the Secondary and Primary Non-Destructive Test Logs. Often when an installer has to make an extensive repair of seam, they will choose to cut out the bad seam and fusion weld a 2-foot piece in place of the cut out seam. This expedites completing the repair and provides for a superior repair as extrusion welded seams are only a single seam and vacuum box tested, where as a fusion welded seam is a double seam that is air tested.

Attachment L. Geomembrane Repair Logs.

35. Secondary liner. The following repairs do not appear to be shown and/or noted on the panel layout drawing: RS-59, RS-88, RS-103, RS110, RS-115, RS-128, RS-131, RS-132, RS-134, RS-61, RS-200, RS-202, RS-203, and RS-220. Please verify the locations of: RS-34 (it appears that a duplicate RS-19 is shown at this location) ; RS-43 (log appears to be incorrect) ; and RS-219 (log appears to be incorrect). Please clarify if SDS-10 was taken at RS-59. Please clarify if SDS-22 was taken at RS-99. Please include SDS-5A (shown on layout) in the logs. DS-31 appears to be noted as DS-90 on layout drawing. Please note DS-30 and RS-200 on the panel layout drawing. It appears that DS-27 (at location RS-197) is noted as DS-25. Please explain why DS-16A and DS-163 are so far apart and how these seams were repaired.

Response: Please see the revised panel as-built drawings showing these items. Seam S41/S42 and S42/40 where DS16 failed was cap striped. Destructive sample DS16A was taken from this cap strip and passed, no other seams were welded with this machine after S41/42 that day. The seam welded prior to S41/42 with this machine was seam S45/47 a destructive sample was take at DS16B and at DS16AA which both passed thereby tracing the bad seam.

For clarification the following repairs have been noted on the revised as-built drawings:

RS59 – Located on edge of SDS 10 small repair found while vacuum boxing R45

RS88 – Located at intersection of S49,50,51

RS103 – Located at intersection of S23,24,TI

RS110 – Located at S30,TI

RS 115 – Located at intersection 3s33,34,TI

RS 128 – Located at seam S58,59

RS 131 – Located at intersection of S63,64,65

RS 132 – Located at intersection of S64,65,67

RS 134 – Located at seam S64,67

RS 61 – Located at panels S26,27,28

RS 200 – Located at S87,72 SDS 30

RS 202 – Located at seam S61,63

RS 203 – Located at panel 38

RS 220 – Located at intersection of S15,11,10

RS 34 – Located at the intersection of S12,13,19

RS 19 – Located at the intersection of S20,21,2

RS43 – Located at S16,17 and is SDS 8 see revised repair log sheet #8

RS 219 – Located at S7,8 and is SDS 5A the log reflects seam 8 and cap #2

RS 59 - Located on edge of SDS 10 small repair found while vacuum boxing R45 which is SDS 10

SDS 22 – Located at seam S55,56 and is repair 125

Susan J. Pelz, P.E.

July 5, 2005

Page 12

RS 99 – Located at the intersection of S55,56,57

SDS 5A – Located at R 219 and is SDS 5A the log reflects seam 8 and cap 2 see revised log page 14 reflecting this change.

SDS 31 – Located at seam S82/83 and is repair 201

SDS 30 – Located at seam S82/87 and is repair 200

SDS 27 – Located at seam S66/68 and is repair 197

SDS 16A, SDS 16 B, SDS 16AA – see attached repair information for SDS 16AA

36. **Primary liner. The following repairs do not appear to be shown and/or noted on the panel layout drawing: RP-78, RP-95, RP-166, RP-167, RP-168, and RP-169. Please show the locations of DS-8 and DS-15A on the panel layout drawing.**

Response: Please see the revised panel as-built drawings addressing these items.

For clarification the following repairs have been noted on the revised as-built drawings:

RP 78 – Located at the intersection of P40,39,41

RP 95 – Located at the intersection of P55,56,57

RP 166, 167, 168, 169 are located on panel P40

PDS 8 – Located at seam P22,21 and is repair RP 43

PDS 15A – Located at panel R31 and is repair RP 123

Attachment N, Geomembrane Destructive Test Logs.

37. **Secondary liner. Please show the location of test SDS-5B on the panel layout drawing and include this test in the repair logs (Attachment L). Please provide test results from the installer that indicate that SDS-4 failed. Please explain why the SCS result is not indicated on page 1 of 2 for this test. Please explain why the SCS result for SDS-16 is not included on page 1 of 2. Please provide test results for SDS-16.**

Response: The panel as-built layout drawing has been amended to include the location of SDS-5. Ten sample coupons were cut from SDS-4 and tested by field tensiometer. The first two test showed a peel at 60 psi and 50 psi respectively. The test was then considered a failure. Ten sample coupons were cut at SDS 16 and tested less than the 98 psi contract requirement. Typically when a sample cut from a destructive sample fails in the field, the process of locating new sample points on either side of the failed destructive sample begins without sending the failed sample for laboratory testing. Please see the amended secondary destructive test log.

Susan J. Pelz, P.E.
July 5, 2005
Page 13

Other:

38. **Rule 62-701.400(3)(f)2., F.A.C. Please provide the results of the EPA 9100 testing for soil compatibility with Citrus County landfill leachate.**

Response: Please see the enclosed results of the EPA 9100 test. This should be inserted with Attachment A.

39. **Rule 62-701.400(3)(d)10, F.A.C. Please provide results of the interface friction angle testing required by Specification Table for the actual liner system components.**

Response: Please see the enclosed results for friction angle testing. This should be included in Attachment F, Geosynthetic Conformance Test Reports.

Please contact us if you need further information or have further questions in order to expedite the approval process.

Sincerely,



7/5/05

John A. Banks, P.E.
Project Director



Raymond J. Dever, P.E., DEE
Vice President
SCS ENGINEERS

JAB/RJD

cc: Susan J. Metcalfe, P.G., Citrus County, w/enclosure
Deborah Getzoff, District Director, FDEP Tampa
Richard Tedder, P.S., FDEP Tallahassee
Fred Wick, FDEP Tallahassee
~~Steve Morgan, FDEP Tampa~~



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: 21375-004-SC County: Citrus

Name of Project: Phase 2 Expansion

Name of Owner: Citrus County Board of County Commissioners

Name of Engineer: SCS Engineers

Type of Project: _____

Class I Landfill Lateral Expansion

Cost: Estimate \$ 5,000,000 Actual \$ 4,000,000

Site Design: Quantity: 350 ton/day Site Acreage: 80 Acres

Deviations from Plans and Application Approved by DEP: _____

1) Carbon Black Dispersion requirement for geomembrane was revised to match current industry standards.

2) 8-inch collection pipe changed from SDR 15.5 to 11 due to availability.

3) 24-inch riser pipe changed from SDR 15.5 to 17 due to availability.

Address and Telephone No. of Site: 230 West Gulf Lake Highway, Lecanto, FL 34461

Name(s) of Site Supervisor: Ms. Susan Metcalfe, P.G.

Date Site inspection is requested: June 22, 2004

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. 21375-004-SC :Dated: March 19, 2003

Date: 7/5/05

Signature of Professional Engineer

NO. 39397

Page 1 of 10

STATE OF
FLORIDA
PROFESSIONAL ENGINEER

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

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

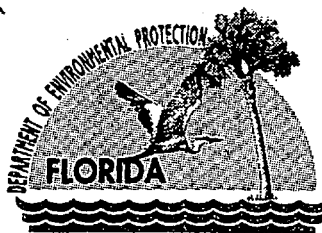
Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

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

(See also bond report)



Jeb Bush
Governor

Department of Environmental Protection

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Colleen M. Castille
Secretary

Ms. Susan J. Metcalfe, P.G., Director
Citrus County Solid Waste Management Division
P.O. Box 340
Lecanto, FL 34460

June 20, 2005

RE: Citrus County Central landfill, Phase 2
Permit No.: 21375-004-01/SC, Citrus County
Certification of Construction Completion

Dear Ms. Metcalfe:

The Department has reviewed the Certification of Construction Completion Report, Citrus County Landfill Phase 2 Expansion, dated May 18, 2005 (received May 18, 2005), prepared by SCS Engineers, Inc. Based on the information submitted, the Department does not approve the operation in the Phase 2 landfill at this time.

The following information is needed to fully evaluate the construction activities with respect to compliance with the construction permit 21375-004-01/SC, and Department rules. Please respond to the following comments and/or provide the following information:

1. FDEP Form 62-701.900(2) indicates that there were no deviations from the permitted plans. However, Section 1.3 indicates that there were "changes made during construction." It has been the Department's experience that construction projects of this magnitude often have changes during construction (e.g., see §2.5.1., §3.1 in Certification documents). As required by Specific Condition #7.c. of the above-referenced permit, please provide a narrative indicating all changes in plans and the cause of the deviations and certification by the design engineer to the Department. Please provide a revised certification form that references this narrative.
2. **§1.4, Preparation of Phase 2 cell.** The information indicates that the prepared subgrade was free of rocks, sticks, etc., larger than 1-inch in any direction. This does not appear to comply with Specifications 02212-3.01.B (for bottom of landfill) or 02220-2.02.B (for sideslopes).
3. **§1.5, Installation of clay liner subbase.** The information indicates that the installed subbase was free of rocks, sticks, etc., larger than 1-inch in any direction. This does not appear to comply with Specifications 02212-1.01.C or 02776-3.03.A.

4. **\$2.5.1, \$2.5.2. Geomembrane testing.** The values listed in Tables 2-5 and 2-6 for the geomembrane do not appear to correlate with the specified values of 0.940 g/cm³ for geomembrane density (see Specification Table 02776-1).
5. **\$2.7.2, Geomembrane seaming.** Please clarify the specification that allows 78 ppi for peel strength for extrusion welds.
6. **\$2.7.5, Destructive tests.** This section indicates that only two geomembrane seam destructive tests failed. However, this does not appear to correlate with Attachment C, Daily Field reports dated 12/07/04, 12/09/04, and 12/17/04. Please revise this section as appropriate.
7. **\$3.1, Leachate collection piping.** Since the SDR of the leachate collection piping was changed from the permitted design, please provide revised pipe structural calculations (buckling, crushing, deflection) that demonstrate that the SDR 11 pipe is appropriate for the design. These calculations should include a comparison of the safety factor for the original design and the as-built condition.
8. **\$4.1, Protective sand cover testing.** Please specify the number of acres included in the Phase 2 construction project. The information indicates that only two sand samples were tested for hydraulic conductivity. This does not appear to meet the requirements of Specification 02220-2.04.A (1 sample/acre). Please clarify if sand was placed on the slopes. If sand was not placed on the sideslopes, please explain how the permeability of the sand that will be placed on the slopes will be verified and certified.

Attachment A, Geotechnical Engineering Services Report.

9. Please provide a signed and sealed copy of the geotechnical engineering services report.
10. **Table 1.** Please explain why samples permeability tests were not performed on samples #9 and #10.

Attachment B, Liner as-built drawings.

11. See comments in Attachments K, L and M, below.

Attachment C, Daily construction QA field reports

12. Please provide copies of photographs of the construction required by the CQA Plan, *Photodocumentation and Reporting Data Sheets* (page 40). These photographs may be printed or may be submitted on a compact disk (CD), and should show representative activities for each portion of the construction project. Photographs of problems encountered (e.g. waste encountered within tie-in area, report dated 12/09/04) and corrective actions should also be included.
13. Please provide copies of the weekly progress reports as required by Specific Condition #4 of the construction permit, and the CQA Plan, *Progress Reports* (page 40).
14. Please provide Daily Field Reports for the construction of the low permeability soil liner (installed subbase).

15. **12/06/04.** The report indicates that liner deployment began although "all perm tests [had] not been received by engineer." This does not appear to meet the requirements of the CQA Plan *Subbase Preparation and Acceptance* (page 10).
16. **12/10/04.** The report indicates that destructive seam tests SDS 11 through 15 were "cut but not sampled." This does not appear to comply with the CQA Plan *Sampling Procedures* (page 16).
17. **12/14/04.** Please provide photographs and as-built detail of the correction of the "slight problem with transition to anchor trench..."
18. **12/16/04.** Please clarify the statement, "Blacked out secondary."
19. **12/18/04 and 01/08/05.** These reports state, "No SCS personnel onsite." This does not appear to comply with Specific Conditions #5 and #6 of the construction permit.
20. **12/20/04.** Please provide a photograph of the damage to the geocomposite and the associated repair.
21. **01/12/05.** Please provide a photograph of the damage to the Phase 1/Phase 2 liner tie-in and the associated repair.
22. **01/15/05.** This report states, "Work not observed by SCS." This does not appear to comply with Specific Conditions #5 and #6 of the construction permit.
23. **02/21/05.** This report indicates that additional work was anticipated to be completed the next day. Please provide daily field reports for all dates through substantial completion.

Attachment D, Record Drawings.

24. As required by Specific Condition #7.b., please provide a complete set of Record Drawings that show all changes (i.e. additions, deletions, revisions to the plans previously approved by the Department including site grades and elevations). The Record Drawings should include all sheets referenced in the permitted drawings with as-built information appropriately noted (i.e., "clouded" or otherwise noted).
25. Please provide surveys that include the grid points and elevations for comparison of the subgrade, clay liner and final as-builts. Please specify which layer each of the surveys represent.
26. Please provide a survey that includes the leachate collection piping and sump as-built elevations.
27. **Subgrades as-built.** Please clarify the northern extent of the subgrade topography. It appears that the as-built does not include the northern slope. Please clarify which of the permitted plans includes the required subgrade elevations.

28. **Final as-built.** The contours on this sheet do not appear to correlate with the contours on Sheet 5 of 17 in the permit drawings (January 2003). The "final as-built" survey does not appear to show a minimum 1% slope from east to west for leachate drainage, and does not appear to show the location of the leachate collection trench as required by the permitted design.

Attachment E, Manufacturer Geosynthetic Quality Control Test Reports

29. **Geocomposite Quality Control.** Section Four, Geocomposite MQC. Please provide test results for Composite roll #0400039 (sample #2), Composite roll #0400115 (test #4), and Composite roll #0400191 (test #6) that include the transmissivity results. Please specify the loading condition for the transmissivity results for Composite roll numbers 0400229-0400261.

Attachment F, Geosynthetic Conformance Test Reports

30. **Geocomposite Conformance.** The following geocomposite conformance test results do not appear to meet the transmissivity required by the specifications (Table 02930-3, 1.8×10^{-3} m²/sec minimum): Sample 0400007, specimen 2; Sample 0400191, specimen 1; Sample 0400229, specimen 1. The following geocomposite conformance test results do not appear to meet the AOS required by the specifications for the geotextile component (Table 02930-2, #70 sieve (0.210 mm) maximum): Sample 0400007, top; Sample 0400007, bottom; Sample 0400191, bottom.

31. **Geogrid conformance.** Please clarify if the required ultimate strength in Table 02950-1 (11,900 lb/ft) is a minimum or average value.

Attachment G, Sub-Base Acceptance Forms.

32. Please explain how the "certification received by SCS" on 12/06/04 was not certified by the Comanco superintendent until 12/07/04. Please provide Certificate of Subbase Acceptance for 12/13/04 through 12/16/04 that include the date the SCS resident engineer received the certifications.

Attachment I, Geomembrane Seaming Logs.

33. Please clarify which sheet includes the seams S23/T1, S61/T1 and P19/T1. Please clarify if the seam listed as P53/T1 is actually P51/T1 (sheet 7 of 12).

Attachment K, Geomembrane Non-Destructive Test Logs.

34. Please provide vacuum box testing logs for all extrusion welded seams. Since cap stripped seams generally are extrusion welded, please explain how "capped" seams were air channel tested (see page 8 of 8 for secondary liner).

Attachment L, Geomembrane Repair Logs.

35. **Secondary liner.** The following repairs do not appear to be shown and/or noted on the panel layout drawing: RS-59, RS-88, RS-103, RS-110, RS-115, RS-128, RS-131, RS-132, RS-134, RS-161, RS-200, RS-202, RS-203, and RS-220. Please verify the locations of: RS-34 (it appears that a duplicate RS-19 is shown at this location); RS-43 (log appears to be incorrect); and RS-219 (log appears to be incorrect). Please clarify if SDS-10 was taken at RS-59. Please clarify if SDS-22 was taken at RS-99. Please include SDS-5A (shown on layout) in the logs. DS-31 appears to be noted as DS-90 on layout drawing. Please note DS-30 and RS-200 on the panel layout drawing. It appears that DS-27 (at location RS-197) is noted as DS-25. Please explain why DS-16A and DS-16B are so far apart and how these seams were repaired.

36. **Primary liner.** The following repairs do not appear to be shown and/or noted on the panel layout drawing: RP-78, RP-95, RP-166, RP-167, RP-168, and RP-169. Please show the locations of DS-8 and DS-15A on the panel layout drawing.

Attachment M, Geomembrane Destructive Test Logs.

37. **Secondary liner.** Please show the location of test SDS-5B on the panel layout drawing and include this test in the repair logs (Attachment L). Please provide test results from the installer that indicate that SDS-4 failed. Please explain why the SCS result is not indicated on page 1 of 2 for this test. Please explain why the SCS result for SDS-16 is not included on page 1 of 2. Please provide test results for SDS-16.


Other.

38. **Rule 62-701.400(3)(f)2., F.A.C.** Please provide the results of the EPA 9100 testing for soil compatibility with Citrus County landfill leachate.

39. **Rule 62-701.400(3)(d)10, F.A.C.** Please provide results of the interface friction angle testing required by Specification Table 02930-3 for the actual liner system components.

Please provide the requested information within 45 days of the date of this letter. Please be advised, that based on the information submitted to date for the Phase 2 construction, operation in Phase 2 is not approved at this time. However, the Department is aware of the County's capacity limitations and is committed to expediting the review of the requested information. If you have any questions, you may contact me at (813) 744-6100 x 386 or susan.pelz@dep.state.fl.us.

Sincerely,


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

sjp

cc: John Banks, P.E., SCS Engineers, 3012 US Hwy 301 North, Ste. 700, Tampa, FL 33619-2242
Deborah Getzoff, District Director, FDEP Tampa
Richard Tedder, P.E., FDEP Tallahassee (w/copy of certification documents)
Fred Wick, FDEP Tallahassee
Steve Morgan, FDEP Tampa

Pelz, Susan

From: Susan Metcalfe [Susan.Metcalfe@bocc.citrus.fl.us]
Sent: Friday, June 24, 2005 9:03 AM
To: Pelz, Susan
Cc: Ken Frink; Thomas Dick; jbanks@scsengineers.com
Subject: construction certification

We expect to have responses completed for your RAI on Phase 2 construction certification by the time we meet for the site inspection on July 1.

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

MAY 18 2005

SOUTHWEST DISTRICT
TAMPA

Certification of Construction Completion Report Citrus County Landfill Phase 2 Expansion

Prepared for:

Citrus County Solid Waste Management Division
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
Fax (813) 623-6757



May 18, 2005
File No. 09199056.02

SCS ENGINEERS

See Band Report



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: 21375-004-SC County: Citrus

Name of Project: Phase 2 Expansion

Name of Owner: Citrus County Board of County Commissioners

Name of Engineer: SCS Engineers

Type of Project: _____

Class I Landfill Lateral Expansion

Cost: Estimate \$ 5,000,000 Actual \$ 4,000,000

Site Design: Quantity: 350 ton/day Site Acreage: 80 Acres

Deviations from Plans and Application Approved by DEP: _____

None

Address and Telephone No. of Site: 230 West Gulf Lake Highway, Lecanto, FL 34461

Name(s) of Site Supervisor: Ms. Susan Metcalfe, P.G.

Date Site inspection is requested: June 22, 2004

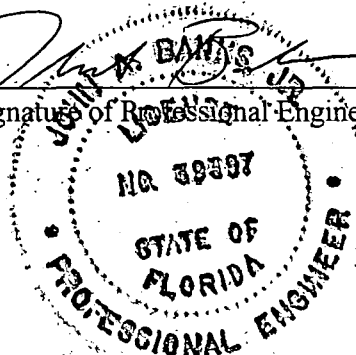
This is to certify that, with the exception of any deviation noted above, the construction of the project has been completed in substantial accordance with the plans authorized by Construction

Permit No. 21375-004-SC :Dated: March 19, 2003

Date: 5/18/05

Signature of Professional Engineer

Page 1 of 1



*Revised
7/6/05*

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

Northeast District
7825 Baymeadows Way, Ste. 8200
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

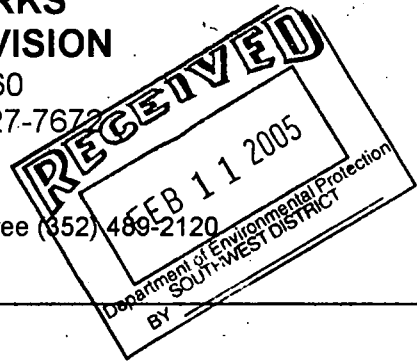
Southeast District
400 North Congress Ave.
West Palm Beach, FL 33401
561-681-6600

See Board Report



Board of County Commissioners
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION

P.O. Box 340, Lecanto, Florida 34460
Telephone: (352) 527-7670 FAX: (352) 527-7672
email: landfillinfo@bocc.citrus.fl.us
TDDTelephone: (352) 527-5214
Citrus Springs/Dunnellon/Inglis/Yankeetown area Toll Free (852) 489-2120



February 8, 2005

Susan J. Pelz, P.E. *2/14/05*
Solid Waste Section
Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

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

Dear Ms. Pelz:

During the past week there have been two construction damage incidents related to Phase 2 cell construction.

On Thursday, February 3, while constructing the ramp over the liner, which will be used for access to spread the protective sand layer, the weight of the loaded dump truck caused the ramp to fail. The ramp is an extension of the access road on the north edge of the cell. There were no injuries or damage to the truck, however the slide caused damage to the geogrid and the primary geocomposite. The sand was removed and the liner system was inspected. Comanco repaired the two damaged layers by Saturday February 5. The ramp has now been completed and the protective sand layer is being installed.

On Monday February 7, while excavating for the geogrid anchor trench on the west slope near the south end of Phase 2, the power supply and control wires for the Phase 1/1A primary and secondary leachate pumps were severed. Advance has arranged for an electrician to repair the damage. It is expected to be complete by February 9.

Please let me know if you have any questions.

Sincerely,

Susan Metcalfe, P.G.
Director

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

*Citrus constr
permit*

Pelz, Susan

From: Susan Metcalfe [Susan.Metcalfe@bocc.citrus.fl.us]
Sent: Wednesday, February 09, 2005 4:55 PM
To: Pelz, Susan
Cc: Thomas Dick; jbanks@scsengineers.com
Subject: RE: FW: construction contractor request

Susan,
They project 2-3 nights. SCS will be observing. I will ask them to take photos. They will start tonight. Thanks.
Susie

>>> "Pelz, Susan" <Susan.Pelz@dep.state.fl.us> 02/09/2005 4:50:22 PM
>>>
Susie,

Is it possible for them to document the (at least "typical") night activities with videotape? If not, then we will certainly need still photos. The photos should document that there was adequate lighting. With the understanding that we will receive this photographic/video documentation, I have no objection to your request.

How long (end date?) will they be conducting night activities?

Thanks,
Susan J. Pelz, P.E.
Solid Waste Program Manager
Southwest District
813-744-6100 x 386
susan.pelz@dep.state.fl.us

-----Original Message-----

From: Susan Metcalfe [mailto:Susan.Metcalfe@bocc.citrus.fl.us]
Sent: Wednesday, February 09, 2005 1:46 PM
To: Pelz, Susan
Cc: Thomas Dick; jbanks@scsengineers.com
Subject: Fwd: FW: construction contractor request

The attached is the review from SCS for the proposed night work for the next few days. I believe that this addresses all of your concerns. We intend to approve Advance's request to work at night beginning today (2/9)

Pelz, Susan

From: Susan Metcalfe [Susan.Metcalfe@bocc.citrus.fl.us]
Sent: Wednesday, February 09, 2005 4:00 PM
To: Pelz, Susan
Subject: Fwd: Advances Letter for Night Operations



Advances
er for Night Op
FYI

Pelz, Susan

From: John A. Banks [jbanks@scsengineers.com]
Sent: Wednesday, February 09, 2005 1:48 PM
To: Susan.Metcalf@bocc.citrus.fl.us
Cc: RDever@scsengineers.com
Subject: Advances Letter for Night Operations

Attached please find the referenced document.

John A. Banks, P.E.
Project Director
SCS Engineers
Tampa, Florida
(813) 621-0080
jbanks@scsengineers.com

2/10/2005

Advance Construction Services, Inc.

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

February 9, 2005

Mr. John A. Banks, P.E.
SCS Engineers, Inc.
3012 US Highway 301
Suite 700
Tampa, FL 33619

Re: Citrus County Landfill Phase II Expansion
Proposed Night Operations

Dear Mr. Banks:

Advance proposes to operate a night shift for the purposes of hauling cover sand to the cell floor. The work activities will include loading sand from the existing stockpile, hauling, dumping in the new cell, and rough spreading. Grading and depth control will be performed during daylight hours for quality control and inspection.

The sand operation will utilize three Moxy MT 31 off road trucks, CAT 325B excavator and CAT D5 dozer, all equipped with operating lights. Additional lighting will be provided by means of portable light plants at the loading point and dumping point. Lighting will be adjusted in the field to ensure a safe operating environment. Sand placement is expected to be completed within two to three nights, with night shift operations commencing at 6:00 pm and concluding at 6:00 am. The adjacent property is forested, with no residences, businesses or occupied dwellings that would be affected by the night operations.

Advance superintendent Don Kervin will supervise the night operation. Mr. Kervin has earned a BA degree from Troy State University and has over 20 years management experience with a background in major earthmoving projects, and is certified as a quality control manager by the US Army Corps of Engineers. He currently holds the position of Quality Control Manager and assistant superintendent for two adjoining USACOE levee projects in Tallulah, LA. These projects include excavation, hauling and placement of approximately 5 million CY of earth utilizing over 30 active pieces of equipment, with hauling operations also conducted with a night shift.

Sincerely,
Advance Construction Services, Inc.

Kenneth W. Pitts, P.E.
Project Manager



Board of County Commissioners
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION

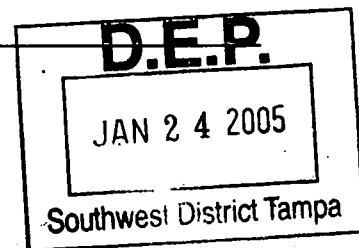
P.O. Box 340, Lecanto, Florida 34460
Telephone: (352) 527-7670 FAX: (352) 527-7672
email: landfillinfo@bcc.citrus.fl.us
TDDTelephone: (352) 527-5214

Citrus Springs/Dunnellon/Inglis/Yankeetown area Toll Free (352) 489-2120

SC *ore*
SM *1/31/05*

January 20, 2005

Susan J. Pelz, P.E. *1/24*
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 Construction

Dear Ms. Pelz:

During installation of the liner for Phase 2, Comanco Environmental Corporation, the liner subcontractor to Advance Construction, discovered damage to the liner in Phase 1A. The location of that damage is shown on the attached sketch. This position is about 100 feet east of the toe of the east side slope and less than 10 feet south of the Phase 1A liner anchor trench. Primary and secondary layers of both liner and geotextile were penetrated for a length of about three to four feet. Comanco repaired these holes on the same day of the discovery, January 12, 2005.

Review of aerial photographs reveals that this location has been under a lined stormwater ditch for several years. The nature of the damage suggests that the blade of a piece of heavy equipment was the cause. We suspect that installation of the berm for the ditch may have been the time when damage occurred. There was no waste above the tear, at the time it was discovered. Advance Construction had removed intermediate cover and a small amount of waste along the anchor trench for the geogrid (12 feet back from the liner tie-in) prior to discovery of this tear.

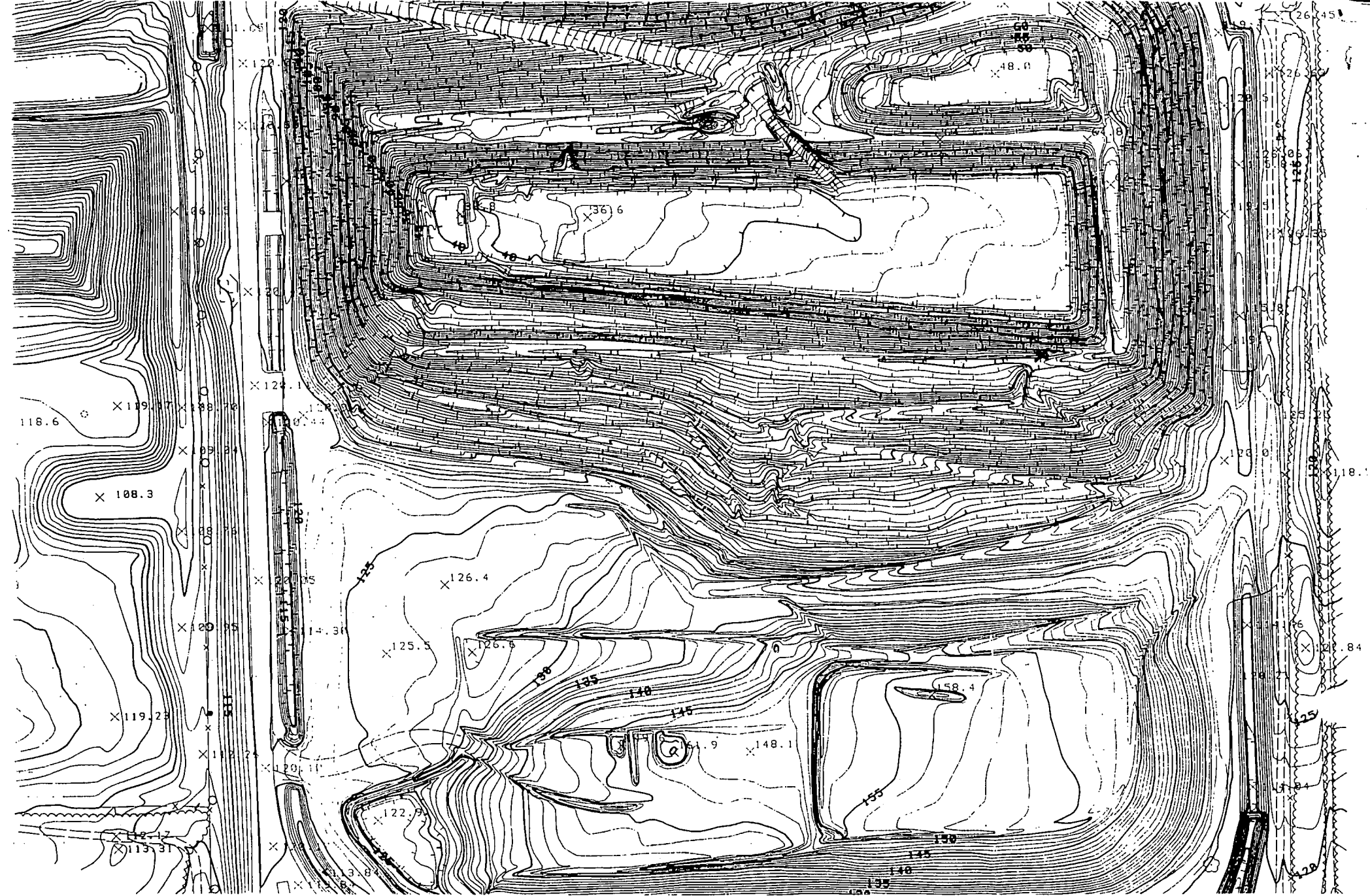
Please let me know if you have any questions.

Sincerely,

Susan Metcalfe

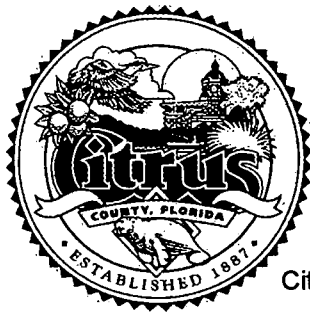
Susan Metcalfe, P.G.
Director

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



Aerial photography/topography Oct 2004
 Citrus County Central Landfill
 ↑N 1 inch = approx. 155 ft.

X = location of liner tear 7/2005



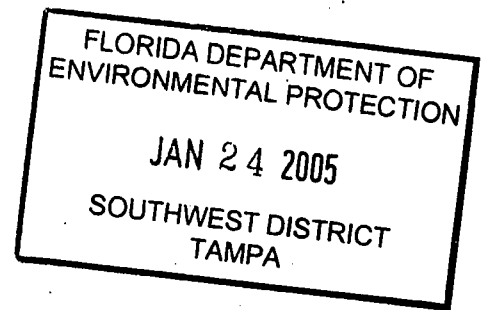
SC Sm

Board of County Commissioners
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION

P.O. Box 340, Lecanto, Florida 34460
Telephone: (352) 527-7670 FAX: (352) 527-7672
email: landfillinfo@bocc.citrus.fl.us
TDDTelephone: (352) 527-5214
Citrus Springs/Dunnellon/Inglis/Yankeetown area Toll Free (352) 489-2120

January 19, 2005

Susan J. Pelz, 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 Construction Progress Report #10

Dear Ms. Pelz:

The attached project schedule provided by our contractor, Advance Construction Services, updates the timetable for completion of this project. This schedule is provided in accordance with Specific Condition 4 of the referenced permit.

Liner installation should be completed by the end of this month, with substantial completion next month. We anticipate submittal of the construction certification documents prepared by SCS Engineers in March.

Please let me know if you have any questions.

Sincerely,

Susan Metcalfe, P.G.
Director

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

ACTIVITY ID	EARLY START	EARLY FINISH	REM DUR	TOTL FLT	2004							2005			
					MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	
3	21SEP04A	14FEB05	32	0											
810	29JAN05	2FEB05	5	7											
820	3FEB05	3FEB05	1	7											
840	4FEB05	6FEB05	3	7											
1200	6DEC04A	28JAN05	15	0											
1250	26JAN05	30JAN05	5	0											
1300	1FEB05	5FEB05	5	0											
1400	6FEB05	13FEB05	8	0											
1605	29JAN05	2FEB05	5	6											
1700	6FEB05	10FEB05	5	3											
1800	14FEB05	14FEB05	1	0											
4999		14FEB05	0	0											
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ACTIVITY ID	EARLY START	EARLY FINISH	ORIG DUR	2003												2004												2005	
				JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB					
1	6JUN03A	4JUN04A	365	Time Base Bid																									
2	5JUN04A	20SEP04A	108													Time By CO 1													
3	21SEP04A	14FEB05	145																									Time Extension No. 2	
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 PR 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 17JAN05
Data Date 14JAN05
Project Start 6JUN03
Project Finish 14FEB05

Activity Bar/Ready Bar
Critical Activity
Overhead Bar
IC/Log/Plan/Flag Activity

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

UPDATED 1/16/05

Date	Revision	Checked	APPROVED

(c) Primavera Systems, Inc.

ACTIVITY ID	EARLY START	EARLY FINISH	ORIG DUR	2003						2004												2005																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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Complete Storm Recovery

Geomembranes

Place Cover Sand

Leachate Piping

Pump Stations / PM

PS modifications, Elec

Activate Storm PS

Fabric Form Rip Rap PH I

Fabric Form Rip Rap PH II

Complete Grassing

Sod Retention Pond

Demobilization

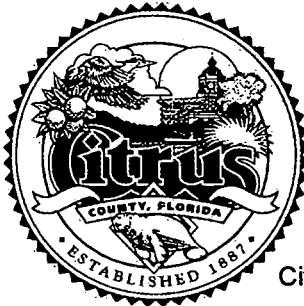
Finish Base Bid

[illegible]

Pelz, Susan

From: Susan Metcalfe [Susan.Metcalfe@bocc.citrus.fl.us]
Sent: Wednesday, November 24, 2004 2:58 PM
To: Core, Simone; Pelz, Susan
Subject: Phase 2 Construction schedule update

According to the contractor at our project update today, lining activities will not begin until the week of December 6.

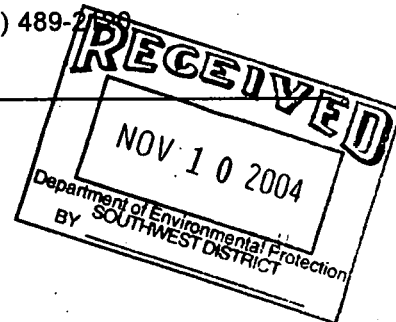


Board of County Commissioners
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION

P.O. Box 340, Lecanto, Florida 34460
Telephone: (352) 527-7670 FAX: (352) 527-7672
email: landfillinfo@bocc.citrus.fl.us
TDDTelephone: (352) 527-5214

Citrus Springs/Dunnellon/Inglis/Yankeetown area Toll Free (352) 489-2150

SMC
12/14/24



November 8, 2004

Susan J. Pelz, 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 #10

Dear Ms. Pelz:

Due to heavy-normal rains this summer and the rainfall impact of hurricanes in September, the timetable for our landfill construction project has been delayed. The attached project schedule, while not accepted by SCS and the County as yet, is the first update we have received since July. We have received the permit modification for use of GCL as an alternate. That material may or may not be used. The intent is to complete as much of the project as possible with the natural clay.

The current schedule is for Comanco, the liner installation subcontractor to Advance Construction Services, to be onsite starting November 22. We expect to have the liner preconstruction meeting including the County, SCS, Advance and Comanco on Friday November 19th.

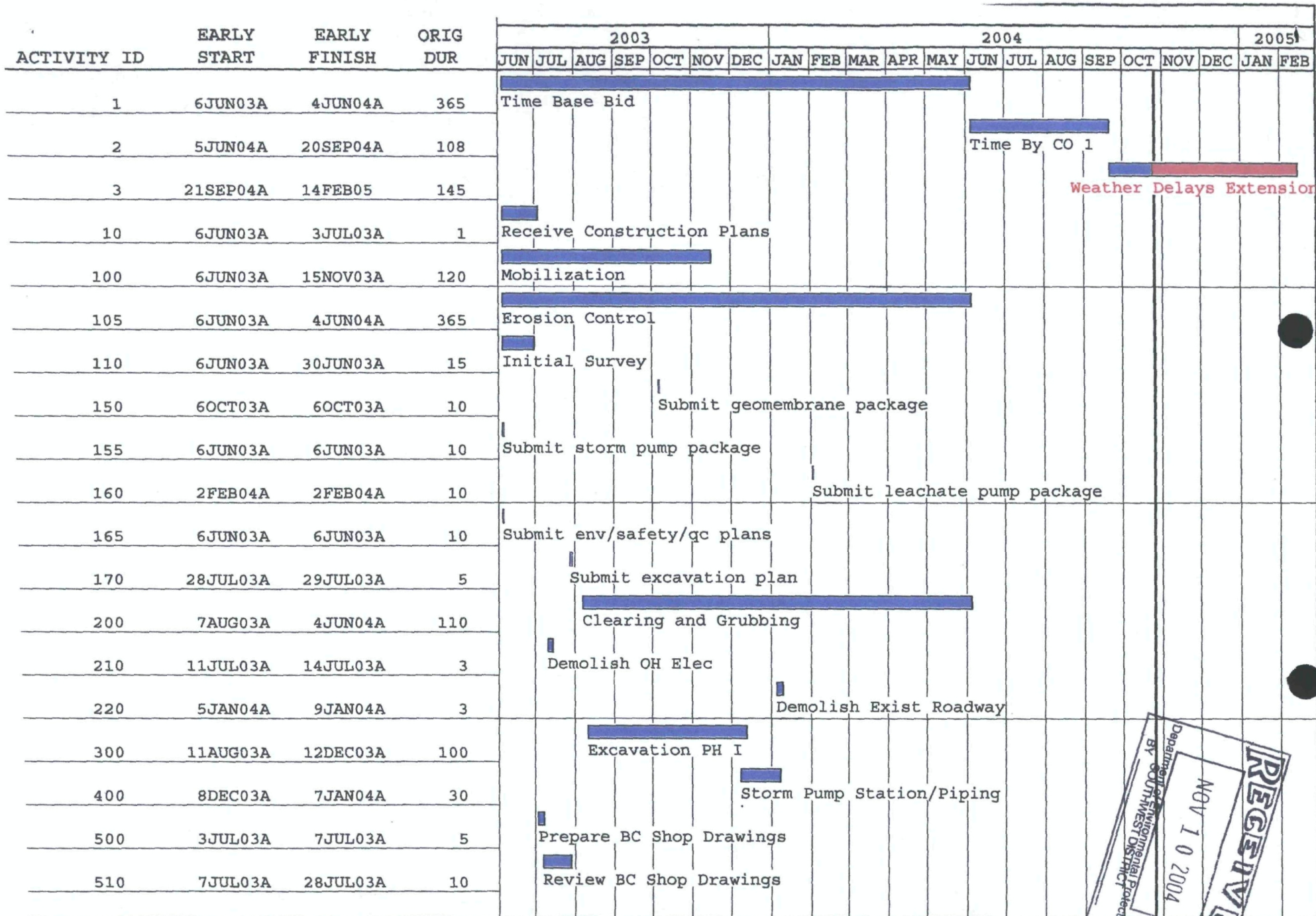
Please let me know if you have any questions.

Sincerely,

Susan Metcalfe, P.G.
Director

Enclosures

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



ot Date 26OCT04
 ita Date 26OCT04
 oject Start 6JUN03
 oject Finish 14FEB05

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

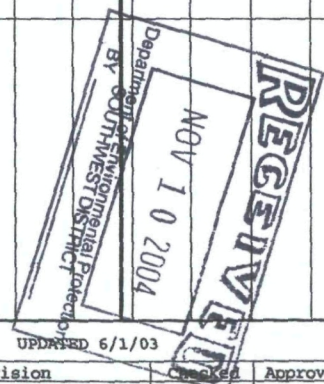
CT12

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

Sheet 1 of 3

UPDATED 6/1/03

Date	Revision	Checked	Approved



ACTIVITY ID	EARLY START	EARLY FINISH	ORIG DUR	2003								2004												2005	
				JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	
520	28JUL03A	27AUG03A	21																						
600	4MAY04A	12MAY04A	7																						
605	28JUN04A	23JUL04A	10																						
610	26OCT04	26OCT04	1																						
800	26JAN04A	28JAN04A	3																						
810	26OCT04	4NOV04	10																						
820	5NOV04	5NOV04	1																						
830	18MAR04A	19MAR04A	2																						
840	6NOV04	8NOV04	3																						
850	10MAY04A	12MAY04A	3																						
855	9AUG04A	10AUG04A	3																						
858	10MAY04A	10MAY04A	1																						
859	11MAY04A	12MAY04A	2																						
900	13MAY04A	15MAY04A	3																						
1000	29DEC03A	30APR04A	42																						
1001	17MAY04A	11JUN04A	16																						
1100	4JUN04A	5NOV04	15																						
1110	17JUL04A	5NOV04	112																						
1120	6NOV04	6NOV04	1																						

Plot Date 26OCT04
Data Date 26OCT04
Project Start 6JUN03
Project Finish 14FEB05

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

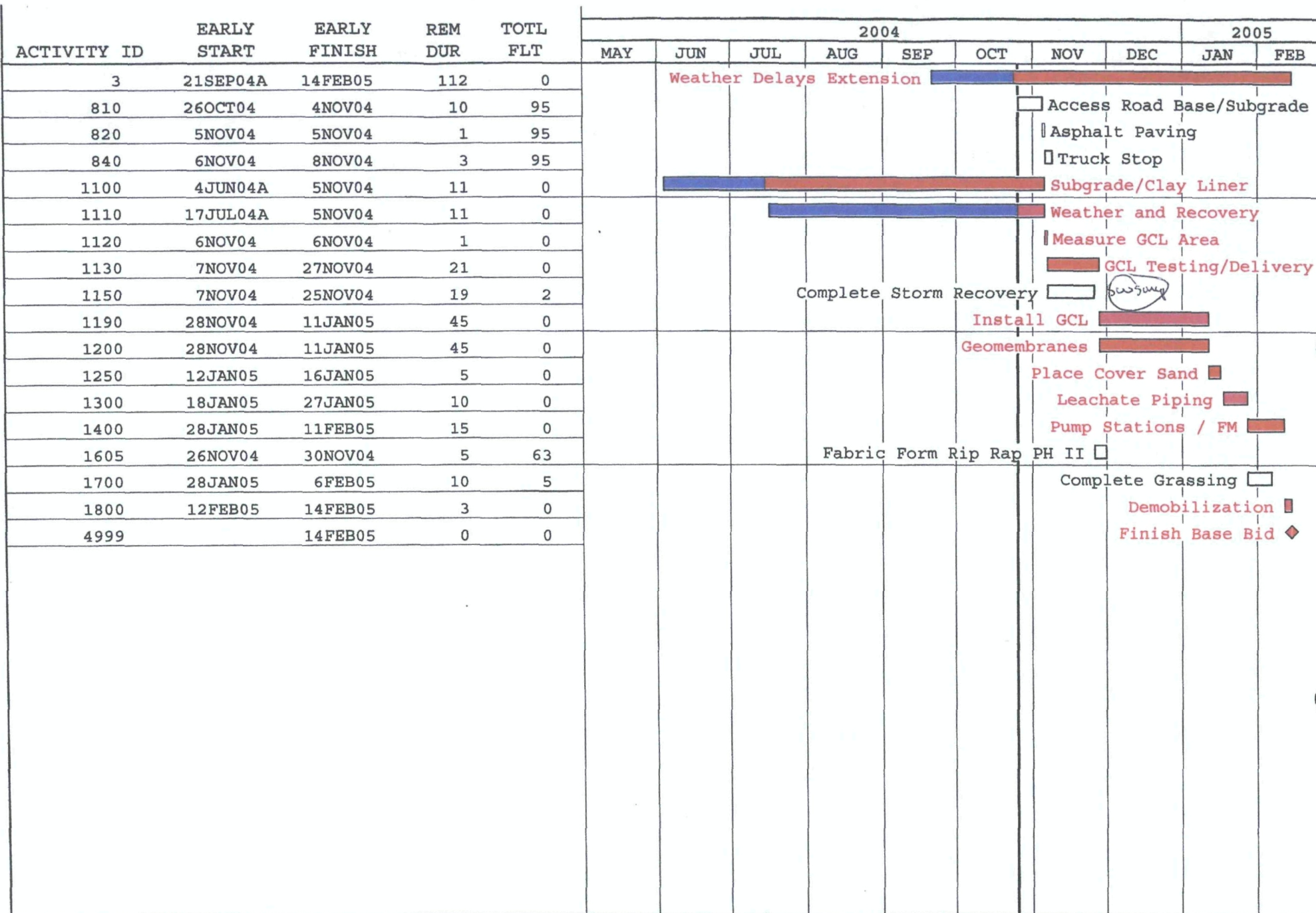
CT12

Sheet 2 of 3

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

UPDATED 6/1/03

Date	Revision	Checked	Approved



Plot Date 26OCT04
 Data Date 26OCT04
 Project Start 6JUN03
 Project Finish 14FEB05

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

Citrus LF
construction
permit

Pelz, Susan

From: Pelz, Susan
Sent: Friday, October 22, 2004 3:12 PM
To: 'Susan Metcalfe'
Cc: Pelz, Susan
Subject: RE: permit modification

Susie,

Here's the only substantive language I added to address the GCL. If you have any questions, please call or email on Monday. I will be having it proofread on Monday (to check for errors in transcription from older version).

13. Geosynthetic Clay Liner.

a. This permit authorizes the use of a geosynthetic clay liner (GCL) in the bottom liner system of the Phase 2 expansion. The GCL may be used as a substitute for the 6-inch clay layer **only** in areas of the bottom liner where the slope is 2% or less (flatter).

b. The following information shall be submitted as part of the Certification of Construction Completion documentation required by Specific Condition #7 above (Rule 62-701.400(3)(d)10., F.A.C.):

1) Results of interface friction testing of the GCL/soil and GCL/geomembrane (using materials actually used in the project)(Rule 62-701.400(3)(d)7., F.A.C.); and

2) Results of hydraulic conductivity testing required by Rule 62-701.400(3)(d)9., F.A.C.

Susan J. Pelz, P.E.
Solid Waste Program Manager
Southwest District
813-744-6100 x 386
susan.pelz@dep.state.fl.us

-----Original Message-----

From: Pelz, Susan
Sent: Friday, October 22, 2004 2:17 PM
To: 'Susan Metcalfe'
Subject: RE: permit modification

Susie,

I am drafting it today. It should be routed around on Monday. We have discovered that we have lost some of the electronic files (and we have no backups for some of Kim's permits) so I am working off an old version and retyping part of it.

I'll email it as soon as I'm done with it.

Susan J. Pelz, P.E.
Solid Waste Program Manager
Southwest District
813-744-6100 x 386
susan.pelz@dep.state.fl.us

-----Original Message-----

From: Susan Metcalfe [mailto:Susan.Metcalfe@bocc.citrus.fl.us]
Sent: Friday, October 22, 2004 10:07 AM
To: Pelz, Susan

Subject: permit modification

Has the permit been issued to use GCL as an alternate to natural clay
for subbase?

Memorandum

Florida Department of Environmental Protection

PERMIT COVER MEMO

TO: x DEBORAH GETZOFF, Director of District Management

FROM/THROUGH:

William Kutash, ENVIRONMENTAL ADMINISTRATOR
Susan Pelz, P.E., Program Manager

DATE: October 22, 2004

FILE NAME: Citrus County Class I LF
PROGRAM : Solid Waste

Mod #21375-007-SC to
PERMIT #: 21375-004-SC
COUNTY : Citrus

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

PUBLIC NOTICE PERIOD CLOSED? PETITION FILED?

PERMIT SUMMARY: This permit modification allows the substitution of a geosynthetic clay liner for the permitted 6-inch clay layer in the bottom liner system of the Phase 2 expansion. The Phase 2 expansion is a double lined Class I landfill expansion at the citrus county Landfill. Construction progress has been delayed due to hurricanes and the GCL installation will help the project to be completed in the necessary timeframes.

PROFESSIONAL RECOMMENDATION: X APPROVE DENY

EVALUATION SUMMARY: The applicant has provided adequate information for this modification.

To 10/25/04: TIH=66; TTP=62		TTP
Application received	08/20/04	
Additional information requested (email)	08/25/04	5
Additional information rec'd	08/30/04	
Application complete	08/30/04	
Final permit for routing	10/25/04	57

DAY 90/30 FOR THIS ACTION IS: ASAP.

Is your RETURN ADDRESS completed on the reverse side?

SENDER'S USE ONLY
■ 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:

Ms. Susan Metcalfe, P.G., Director
Citrus County Dept. of Public Works
Division of Solid Waste Management
P O Box 340
Lecanto, FL 34460

4a. Article Number

7002 3150 0003 8459 6382

4b. Service Type

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

7. Date of Delivery

1 Nov 04

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

Thank you for using Return Receipt Service.

7002 3150 0003 8459 6382

U.S. Postal Service™

CERTIFIED MAIL™ RECEIPT

(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

OFFICIAL USE

Postage \$
Certified Fee
Return Receipt Fee
(Endorsement Required)
Restricted Delivery Fee
(Endorsement Required)

Total Postage

Sent To

Street, Apt. No.,
or PO Box No.
City, State, ZIP

Ms. Susan Metcalfe, P.G., Director
Citrus County Dept. of Public Works
Division of Solid Waste Management
P O Box 340
Lecanto, FL 34460

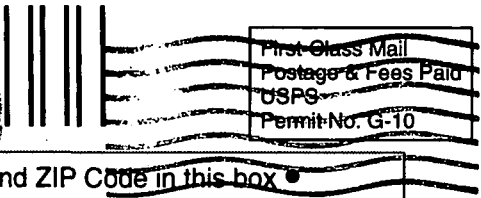
Mailed
10/26/2004

Postmark
Here

PS Form 3800, June 2002

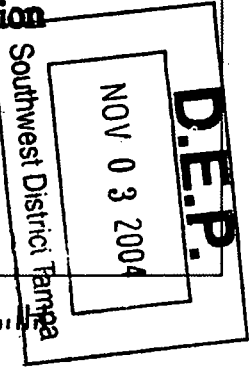
See Reverse for Instructions

UNITED STATES POSTAL SERVICE



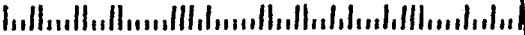
• Print your name, address, and ZIP Code in this box •

State of Florida
Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619-1352



Susan Peltz - SW

3619+1352





Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Colleen M. Castille
Secretary

CERTIFIED MAIL 7002 3150 0003 8459 6382
RETURN RECEIPT REQUESTED

October 26, 2004

NOTICE OF PERMIT

Citrus County Board of County Commissioners
C/o Ms. Susan J. Metcalfe, P.G.
P.O. Box 340
Lecanto, Fl. 34460

RE: Citrus Central Landfill Phase 2 Expansion
Modification #21375-007-SC to existing
Construction Permit 21375-004-SC

Dear Ms. Metcalfe:

Attached is modified Construction Permit 21375-004-SC, issued pursuant to Section(s) 403.087(1), Florida Statutes. The following Conditions have been revised in modification number 21375-007-SC:

SPECIFIC CONDITIONS	FROM	TO	TYPE OF MODIFICATION
1.	Existing	Amended	Permit documentation for GCL
13.	N/A	New	Authorization for use of GCL in liner system & testing requirements to be submitted as part of Certification

This letter and its attachments constitute a **complete permit** and **replace** all previous permits and permit modifications for the above referenced facility.

A person whose substantial interests are affected by this modification of permit 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 Department's Office of General Counsel, 3900 Commonwealth Blvd., Mail Station 35, Tallahassee, 32399-3000, within fourteen (14) days of receipt of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within fourteen (14) days shall constitute a waiver of any right such person has to an administrative determination (hearing) pursuant to Section 120.57, Florida Statutes.

"More Protection, Less Process"

Printed on recycled paper.

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;
- (f) A statement of which rules or statutes petitioner contends warrant 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.

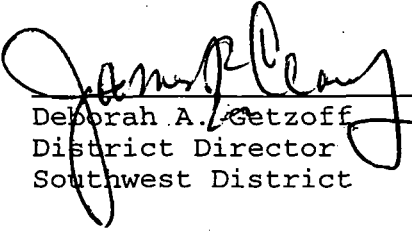
If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any decision of the Department with regard 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, 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, F.A.C. Mediation is not available in this proceeding.

This modified permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rules 62-110 and 28-106, F.A.C. Upon timely filing of a petition or a request for an extension of time this transfer of permit will not be effective until further Order of the Department.

When the Order is final, any party to the Order 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 Blvd., 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


Deborah A. Getzoff
District Director
Southwest District


DAG/sjp
Attachment

Citrus County Board of County Commissioners
Citrus County Notification List
John Banks, P.E., SCS Engineers, 3012 US Highway 301 North, Ste. 700, Tampa, Fl. 33619
Douglas Beason, FDEP OGC Tallahassee
Fred Wick, FDEP Tallahassee
William Kutash, Program Administrator, FDEP Tampa
Permit notebook

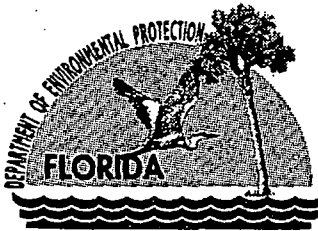
CERTIFICATE OF SERVICE

This undersigned duly designated deputy clerk hereby certifies that this **NOTICE OF PERMIT** and all copies were mailed before the close of business on Oct. 26, 2004 to the listed persons.
(date stamp)

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


Clerk

10/26/2004
Date



Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Colleen M. Castille
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 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°51'10"N
82°26'40"W
Sec/Town/Rge: 1/19S/18E
Project: Citrus 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:

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

Includes Modification #21375-007-SC, dated 10/26/2004.

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.

PERMITTEE: Citrus County
c/o Ms. Susan Metcalfe, P.G.

PERMIT NO.: 21375-004-SC
Citrus County Central Landfill
Phase 2 expansion

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 Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

PERMITTEE: Citrus County
c/o Ms. Susan Metcalfe, P.G.

PERMIT NO.: 21375-004-SC
Citrus County Central Landfill
Phase 2 expansion

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.

PERMITTEE: Citrus County
c/o Ms. Susan Metcalfe, P.G.

PERMIT NO.: 21375-004-SC
Citrus County Central Landfill
Phase 2 expansion

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 specification 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);
- Information concerning use of GCL submitted by SCS Engineers dated August 20, 2004 and August 30, 2004, including Specification Section 02077, Geosynthetic Synthetic Clay Liner.

Amended 10/26/2004 .

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)(q) 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).

SPECIFIC CONDITIONS:

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 periodic inspections during construction to ensure that design integrity is maintained. An updated construction schedule and progress chart shall be submitted to the Department **monthly**. 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 the 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.
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.

PERMITTEE: Citrus County
c/o Ms. Susan Metcalfe, P.G.

PERMIT NO.: 21375-004-SC
Citrus County Central Landfill
Phase 2 expansion

13. Geosynthetic Clay Liner.

a. This permit authorizes the use of a geosynthetic clay liner (GCL) in the bottom liner system of the Phase 2 expansion. The GCL may be used as a substitute for the 6-inch clay layer only in areas of the bottom liner where the slope is 2% or less (flatter).

b. The following information shall be submitted as part of the Certification of Construction Completion documentation required by Specific Condition #7 above (Rule 62-701.400(3)(d)10., F.A.C.):

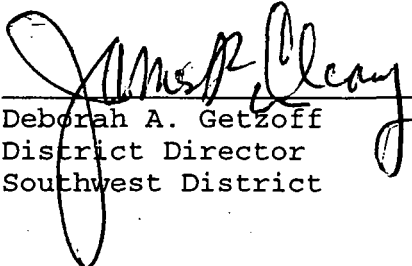
1) Results of interface friction testing of the GCL/soil and GCL/geomembrane (using materials actually used in the project) (Rule 62-701.400(3)(d)7., F.A.C.); and

2) Results of hydraulic conductivity testing required by Rule 62-701.400(3)(d)9., F.A.C.

New 10/26/2004 .

Executed in Tampa, Florida

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Deborah A. Getzoff
District Director
Southwest District

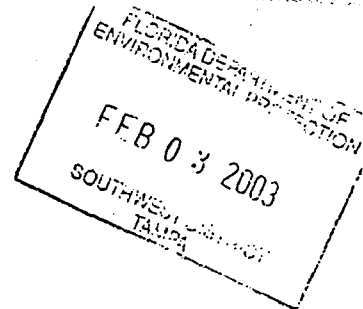
PERMITTEE: Citrus County
c/o Ms. Susan Metcalfe, P.G.

PERMIT NO.: 21375-004-SC
Citrus County Central Landfill
Phase 2 expansion

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.

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 1×10^{-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 than or equal to 1×10^{-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

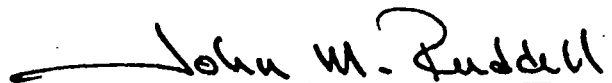
Department have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

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, 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.

Sabrina L. Peck
(Clerk)

1/29/03
(date)

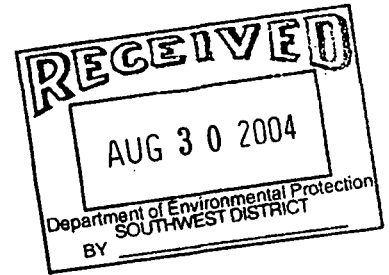
Copies furnished to:

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

SCS ENGINEERS

August 30, 2004
File No. 09199056.02

Ms. Susan Pelz, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, FL 33619



Subject: Citrus County Central Landfill, Permit No. 21375-004-SC
Request for Minor Permit Modification,
Use of GCL in place of Six-inch Thick Sub-base Layer

Dear Ms. Pelz:

This letter is in response to your email correspondence dated August 25, 2004 (attached) responding to our request for a minor permit modification for the Central Landfill Phase 2 Expansion to allow the use of a geosynthetic clay liner (GCL) as an option to replace the 6-inch thick soil sub-based that was specified in the permitted contract documents. We have provided enclosed with this letter, the signed forms and GCL specification as requested in your correspondence.

With regards to item 3 of your correspondence, provide results of the EPA 9100 leachate compatibility testing, SCS disagrees that this test is required for the GCL. The referenced Rule, 62-701.400 (3) (f) 2. F.A.C., refers to soil liner components. We understand that for some time leachate compatibility testing was requested for GCLs by the Department but this practice has been discontinued for typical MSW landfills because the results have shown that bentonite is not effected by normal leachate. We understand that applications where the leachate quality is expected to deviate from normal leachate, such as for an ash landfill, such testing is required. Since the Citrus County Landfill produces typical leachate, we request that the Department not require leachate compatibility testing results in order to install GCL as requested.

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

Very truly yours,

A handwritten signature in black ink, appearing to read "John A. Banks".

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

A handwritten signature in black ink, appearing to read "Raymond J. Dever".

Raymond J. Dever, P.E., DEE
Vice President
SCS ENGINEERS

cc: Susan J. Metcalfe, P.G., Citrus County



John A. Banks

From: Pelz, Susan [Susan.Pelz@dep.state.fl.us]
Sent: Wednesday, August 25, 2004 1:46 PM
To: P. E. John Banks (E-mail); Susan Metcalfe (E-mail)
Cc: Core, Simone
Subject: Citrus Co LF Construction- GCL Mod

John,

I looked over the information you sent for the minor modification to the construction permit to allow GCL under the geomembrane in the floor of the cell. In order to expedite the review of the application, the following information should be provided ASAP:

1. Please provide Page 40 of 40 of the application form that includes the applicant's signature.
2. Please specifications and QA (including conformance testing requirements) for the GCL (Rule 62-701.400(3)(e)7., F.A.C.).
3. Please provide the results of the EPA 9100 leachate compatibility test required by Rule 62-701.400(3)(f)2., F.A.C.).

If you have any questions, please call or email (email is better).

Susan J. Pelz, P.E.
Solid Waste Program Manager
Southwest District
813-744-6100 x 386
susan.pelz@dep.state.fl.us



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

DEP Form # 62-701.900(1)
Form Title <u>Solid Waste Management Facility Permit</u>
Effective Date <u>05-27-01</u>
DEP Application No. _____ (Filled by DEP)



**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**APPLICATION FOR A PERMIT TO CONSTRUCT,
OPERATE, MODIFY OR CLOSE
A SOLID WASTE MANAGEMENT FACILITY**

APPLICATION INSTRUCTIONS AND FORMS

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

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

INSTRUCTIONS TO APPLY FOR A SOLID WASTE MANAGEMENT FACILITY PERMIT

I. General

Solid Waste Management Facilities shall be permitted pursuant to Section 403.707, Florida Statutes, (FS) and in accordance with Florida Administrative Code (FAC) Chapter 62-701. A minimum of four copies of the application shall be submitted to the Department's District Office having jurisdiction over the facility. The appropriate fee in accordance with Rule 62-701.315, FAC, shall be submitted with the application by check made payable to the Department of Environmental Protection (DEP).

Complete appropriate sections for the type of facility for which application is made. Entries shall be typed or printed in ink. All blanks shall be filled in or marked "not applicable" or "no substantial change". Information provided in support of the application shall be marked "submitted" and the location of this information in the application package indicated. The application shall include all information, drawings, and reports necessary to evaluate the facility. Information required to complete the application is listed on the attached pages of this form.

II. Application Parts Required for Construction and Operation Permits

- A. Landfills and Ash Monofills - Submit parts A,B, D through T
- B. Asbestos Monofills - Submit parts A,B,D,E,F,G,J,L,N, P through S, and T
- C. Industrial Solid Waste Facilities - Submit parts A,B, D through T
- D. Non-Disposal Facilities - Submit parts A,C,D,E,J,N,S and T

NOTE: Portions of some parts may not be applicable.

NOTE: For facilities that have been satisfactorily constructed in accordance with their construction permit, the information required for A,B,C and D type facilities does not have to be resubmitted for an operation permit if the information has not substantially changed during the construction period. The appropriate portion of the form should be marked "no substantial change".

III. Application Parts Required for Closure Permits

- A. Landfills and Ash Monofills - Submit parts A,B,M, O through T
- B. Asbestos Monofills - Submit parts A,B,N, P through T
- C. Industrial Solid Waste Facilities - Submit parts A,B, M through T
- D. Non-Disposal Facilities - Submit parts A,C,N,S and T

NOTE: Portions of some parts may not be applicable.

IV. Permit Renewals

The above information shall be submitted at time of permit renewal in support of the new permit. However, facility information that was submitted to the Department to support the expiring permit, and which is still valid, does not need to be re-submitted for permit renewal. Portions of the application not re-submitted shall be marked "no substantial change" on the application form.

V. Application Codes

S	-	Submitted
LOCATION	-	Physical location of information in application
N/A	-	Not Applicable
N/C	-	No Substantial Change

VI. LISTING OF APPLICATION PARTS

PART A:	GENERAL INFORMATION
PART B:	DISPOSAL FACILITY GENERAL INFORMATION
PART C:	NON-DISPOSAL FACILITY GENERAL INFORMATION
PART D:	PROHIBITIONS
PART E:	SOLID WASTE MANAGEMENT FACILITY PERMIT REQUIREMENTS, GENERAL
PART F:	LANDFILL PERMIT REQUIREMENTS
PART G:	GENERAL CRITERIA FOR LANDFILLS
PART H:	LANDFILL CONSTRUCTION REQUIREMENTS
PART I:	HYDROGEOLOGICAL INVESTIGATION REQUIREMENTS
PART J:	GEOTECHNICAL INVESTIGATION REQUIREMENTS
PART K:	VERTICAL EXPANSION OF LANDFILLS
PART L:	LANDFILL OPERATION REQUIREMENTS
PART M:	WATER QUALITY AND LEACHATE MONITORING REQUIREMENTS
PART N:	SPECIAL WASTE HANDLING REQUIREMENTS
PART O:	GAS MANAGEMENT SYSTEM REQUIREMENTS
PART P:	LANDFILL CLOSURE REQUIREMENTS
PART Q:	CLOSURE PROCEDURES
PART R:	LONG TERM CARE REQUIREMENTS
PART S:	FINANCIAL RESPONSIBILITY REQUIREMENTS
PART T:	CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER

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 ☐ Ash Monofill
 ☐ Class II Landfill ☐ Asbestos Monofill
 ☐ Class III Landfill ☐ Industrial Solid Waste
 ☒ Other Describe: Yard Waste mulching and consumer goods recycling.
- ☐ 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 ☐ Substantial Modification
☐ Renewal ☐ Intermediate Modification
 ☒ Minor Modification

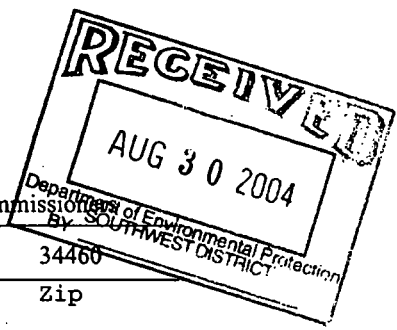
4. Facility name: Citrus County Central Landfill

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: \$ ~4.0 million Closing Costs: \$ Approximately 3.1 million*

16. Anticipated construction starting and completion dates:
From: April 2003 To: October 2004

17. Expected volume or weight of waste to be received:
_____ yds³/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.

B. DISPOSAL FACILITY GENERAL INFORMATION

1. Provide brief description of disposal facility design and operations planned under this application:

Expand Citrus County Landfill Class I waste disposal area with the addition of a new 5.75-acre cell (Phase 2).

2. Facility site supervisor: Prime DeVaugn or Carmen Bruno
Title: Crew Leaders Telephone: (352) 527-7670

E-Mail address (if available)

3. Disposal area: Total 80* acres; Used 19.1** acres; Available 60.9 acres.
4. Weighing scales used: ☒ Yes ☐ No
5. Security to prevent unauthorized use: ☒ Yes ☐ No
6. Charge for waste received: _____ \$/yds³ 30 \$/ton
7. Surrounding land use, zoning:

<input type="checkbox"/> Residential	<input checked="" type="checkbox"/> Industrial
<input type="checkbox"/> Agricultural	<input type="checkbox"/> None
<input checked="" type="checkbox"/> Commercial	<input type="checkbox"/> Other Describe: <u>Conservation</u>

8. Types of waste received:

<input checked="" type="checkbox"/> Residential	<input checked="" type="checkbox"/> C & D debris
<input checked="" type="checkbox"/> Commercial	<input type="checkbox"/> Shredded/cut tires
<input type="checkbox"/> Incinerator/WTE ash	<input checked="" type="checkbox"/> Yard trash
<input type="checkbox"/> Treated biomedical	<input type="checkbox"/> Septic tank
<input type="checkbox"/> Water treatment sludge	<input checked="" type="checkbox"/> Industrial
<input type="checkbox"/> Air treatment sludge	<input type="checkbox"/> Industrial sludge
<input type="checkbox"/> Agricultural	<input checked="" type="checkbox"/> Domestic sludge
<input checked="" type="checkbox"/> Asbestos	
<input type="checkbox"/> Other Describe: _____	

9. Salvaging permitted: ☐ Yes ☒ No
10. Attendant: ☒ Yes ☐ No Trained operator: ☒ Yes ☐ No
11. Spotters: Yes ☒ No ☐ Number of spotters used: minimum of one
12. Site located in: ☐ Floodplain ☐ Wetlands ☒ Other Upland

*Total Citrus County Central Landfill Site

**Existing Phase I and IA disposal areas

13. Property recorded as a Disposal Site in County Land Records: ☒ Yes ☐ No
14. Days of operation: Monday - Saturday
15. Hours of operation: Monday-Friday: 6:30 am - 5:00 pm Holidays and Saturdays: 6:30 am - 3:00 pm
16. Days Working Face covered: Monday-Saturday
17. Elevation of water table: 7 Ft. (NGVD 1929)
18. Number of monitoring wells: 14
19. Number of surface monitoring points: 0
20. Gas controls used: ☐ Yes ☒ No Type controls: ☐ Active ☐ Passive
 Gas flaring: ☐ Yes ☒ No Gas recovery: ☐ Yes ☒ No
21. Landfill unit liner type:
☐ Natural soils ☒ Double geomembrane
☐ Single clay liner ☐ Geomembrane & composite
☐ Single geomembrane ☐ Double composite
☐ Single composite ☐ None
☐ Slurry wall
☐ Other Describe: _____
22. Leachate collection method:
☒ Collection pipes ☐ Sand layer
☒ Geonets ☐ Gravel layer
☐ Well points ☐ Interceptor trench
☐ Perimeter ditch ☐ None
☐ Other Describe: _____
23. Leachate storage method:
☒ Tanks
☐ Surface impoundments
☐ Other Describe: _____
24. Leachate treatment method:
☐ Oxidation ☒ Chemical treatment
☐ Secondary ☐ Settling
☒ Advanced
☐ None
☐ Other _____

25. Leachate disposal method:

- | | |
|--|--|
| <input type="checkbox"/> Recirculated | <input type="checkbox"/> Pumped to WWTP |
| <input type="checkbox"/> Transported to WWTP | <input type="checkbox"/> Discharged to surface water |
| <input type="checkbox"/> Injection well | <input type="checkbox"/> Percolation ponds |
| <input type="checkbox"/> Evaporation | |
| <input checked="" type="checkbox"/> Other | Dry Percolation Basin |

26. For leachate discharged to surface waters:

Name and Class of receiving water: _____

27. Storm Water:

Collected: ☒ Yes ☐ No

Type of treatment: _____ Dry Retention/percolation

Name and Class of receiving water: _____ None

28. Environmental Resources Permit (ERP) number or status: _____ Southwest Florida

Water Management District #402023.02

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>
----------	-----------------	------------	------------

—	—	—	✓
---	---	---	---

—	—	—	✓
---	---	---	---

✓	See Attached	—	—
---	--------------	---	---

—	—	—	✓
---	---	---	---

PART H CONTINUED

c. Double liners; (62-701.400(3)(c),FAC)

- (1) Upper and lower geomembrane thicknesses and properties;
- (2) Design leachate head for primary LCRS to limit the head to one foot above the liner;
- (3) Lower geomembrane sub-base design;
- (4) Leak detection and secondary leachate collection system minimum design criteria ($k \geq 10$ cm/sec, head on lower liner ≤ 1 inch, head not to exceed thickness of drainage layer);

d. Standards for geosynthetic components; (62-701.400(3)(d),FAC)

—	—	—	✓
---	---	---	---

—	—	—	✓
---	---	---	---

—	—	—	✓
---	---	---	---

—	—	—	✓
---	---	---	---

—	—	—	✓
---	---	---	---

—	—	✓	—
---	---	---	---

—	—	—	✓
---	---	---	---

—	—	—	✓
---	---	---	---

—	—	✓	—
---	---	---	---

- (1) Field seam test methods to ensure all field seams are at least 90 percent of the yield strength for the lining material;
- (2) Geomembranes to be used shall pass a continuous spark test by the manufacturer;
- (3) Design of 24-inch-thick protective layer above upper geomembrane liner;
- (4) Describe operational plans to protect the liner and leachate collection system when placing the first layer of waste above 24-inch-thick protective layer.
- (5) HDPE geomembranes, if used, meet the specifications in GRI GM13;
- (6) PVC geomembranes, if used, meet the specifications in PGI 1197;
- (7) Interface shear strength testing results of the actual components which will be used in the liner system;
- (8) Transmissivity testing results of geonets if they are used in the liner system;
- (9) Hydraulic conductivity testing results of geosynthetic clay liners if they are used in the liner system;

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: 8/25/04

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.

John Banks
Signature
John Banks, P.E., Solid Waste Division Director
Name and Title (please type)
9397
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: _____

SECTION 02077
GEOSYNTHETIC CLAY LINER (GCL)

Part 1 - GENERAL

1.01 DESCRIPTION

- A. The WORK specified in this Section includes manufacturing and installation of the GCL components of the liner system as specified herein.
- B. All materials shall conform to the following requirements and shall be of new stock of the highest grade available, free from defects, and recently manufactured.
- C. The CONTRACTOR shall coordinate the progress of GCL installation with the subgrade excavation and grading, and with installation of the geomembrane and geocomposite components of the liner system.
- D. All installation shall be in conformance with manufacturer's recommendations and with current industry standards.

1.02 SUBMITTALS

- A. The MANUFACTURER shall provide the CQA Consultant with the Manufacturer Quality Assurance/Manufacturer Quality Control (MQA/MQC) certifications for each shipment of GCL. The certifications shall be signed by a responsible party employed by the manufacturer such as the MQA/MQC Manager, Production Manager, or Technical Services Manager. The MQA/MQC certifications shall include:

- 1. GCL lot and roll numbers (with corresponding shipping information).
- 2. The results of quality assurance/quality control testing performed by the manufacturer. At a minimum, the following tests shall be performed:

<u>TEST</u>	<u>PROCEDURE</u>	<u>FREQUENCY</u>
Grab Strength	ASTM D6768	200,000 SF
Permeability	ASTM D5887	Weekly, min. 20 values reported
Mass Per Unit Area	ASTM D5993	40,000 SF

- B. The Manufacturer shall provide, in writing, the proper size equipment, loading, unloading, and handling procedures for all products delivered to the project.
- C. The Manufacturer shall provide proper storage procedures for keeping the GCL from begin damaged or pre-hydrated by weather or outdoor exposure.

D. Installation Plan as submitted by the CONTRACTOR, including:

1. Quality Control Plan. Plan shall be site-specific, and shall designate personnel, responsibilities, and lines of authority.
2. Panel layout plan with panel location, orientation and identification.
3. Complete set of forms used to record installation quality control data.
4. Copies of the warranties to be provided at the completion of installation.

The Installation Plan shall be submitted for approval at least 7 days prior to delivery of the GCL materials to the site. ENGINEER reserves the right to require changes to the Installation Plan.

E. Documentation to verify the installer's experience in GCL.

1.03 REFERENCES

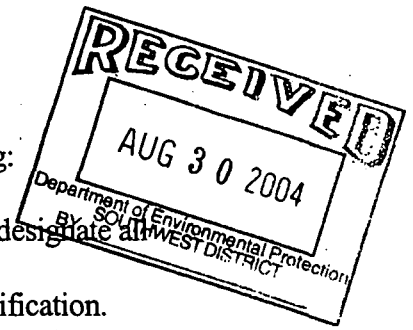
A. American Society of Testing and Materials (ASTM):

1. D2216 - Lab Determination of Water (Moisture) Content in Soil and Rock.
2. D4632 - Grab Breaking Load and Elongation of Geotextiles
3. D4643 - Determination of Water (Moisture) Content of Soil by the Microwave Oven
4. D4833 - Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products
5. D5199 - Measuring Nominal Thickness of Geotextiles and Geomembranes
6. D5084 - Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter.
7. D5321- Standard Test Method for Determining the Coefficient of Soil and Geosynthetic or Geosynthetic and Geosynthetic Friction by the Direct Shear Method
8. D5887- Standard Test Method for Measurement of Index Flux Through Saturated Geosynthetic Clay Liner Specimens Using a Flexible Wall Permeameter
9. D5890 - Swell Index of Clay Mineral Component of Geosynthetic Clay Liners
10. D5891 - Fluid Loss of Clay Component of Geosynthetic Clay Liners
11. D5993 - Measuring Mass Per Unit Area of Geosynthetic Clay Liners
12. D6243- Standard Test Method for Determining the Internal and Interface Shear Resistance of Geosynthetic Clay Liner by the Direct Shear Method

Part 2 - PRODUCT

2.01 MATERIALS

- A. The GCL shall be comprised of new, first-quality products designed and manufactured specifically for the purpose intended. The GCL shall be stitch-bonded or a needle-punched, reinforced product. Adhesive or glued GCL's are not



acceptable. The product shall be Claymax 200R as manufactured by CETCO Lining Technologies or approved equal.

B. The GCL shall be so produced as to be free of holes, blisters, or contamination by foreign matter.

1. The sodium bentonite utilized in the manufacture of the GCL, as well any accessory bentonite provided for seaming and detail work, shall be granular sodium bentonite with the properties listed below:

<u>TEST</u>	<u>PROCEDURE</u>	<u>VALUE</u>
Swell Index	ASTM D5890	24 ml/2g (min.)
Fluid Loss	ASTM D5891	18 ml (max.)

2. The finished GCL shall have the physical properties listed below.

<u>TEST</u>	<u>PROCEDURE</u>	<u>VALUE</u>
Mass/Area (psf)	D5993	0.75 (at 0% moisture)
Grab Strength (lbs/in)	D6768	25
Permeability (cm/sec)	D5887	5×10^{-9} *

* At 80 psi cell pressure, 77 psi headwater pressure, and 75 psi tailwater pressure.

D. Conformance Testing Requirements(CQA testing to be conducted by the CONTRACTOR upon delivery of material to the site):

- a. Mass Per Unit Area (ASTM 5993)(One test per 40,000 square feet).
- b. Bentonite Swell Index (ASTM D5890)(One test per 100,000 square feet).
- c. Permeability (ASTM D5887). (One test per 100,000 square feet)

1. The CONTRACTOR shall inform, in writing, the COUNTY 14 days prior to the actual date of shipment of material to the site.
2. Conformance sample(s) of the GCL will be collected and tested, by the CQA Consultant. If the material is shipped to the project and does not meet the project specifications, then all cost associated with collecting, testing, and shipping samples from the project will be CONTRACTOR'S responsibility.

2.02 PANEL DIMENSIONS

- A. The dimensions of the full-size panels shall be a minimum width of 12 feet, and a minimum length of 150 feet.

2.03 SEAM OVERLAP LINES

- A. A 6-inch "lap" line and a 9-inch "match" line shall be marked on both edges of the upper geotextile component of the GCL as a means for providing quality assurance of the overlap. Lines shall be printed in easily visible, non-toxic ink.

2.04 LABELING, PACKING

- A. Each roll shall be given prominent, unique, indelible, identifying labeling indicating the following characteristics:
 - 1. Product identification information (manufacturer name and address, brand name, product code).
 - 2. Lot number and roll number.
 - 3. Date of fabrication.
 - 4. Roll length and width.
 - 5. Total roll weight.
 - 6. Proper direction of unrolling and/or unfolding to facilitate layout and positioning in field.
- B. Each roll shall be individually packaged and protected to prevent damage during shipment. Each package shall be prominently identified in the same manner as the product within and showing the date of shipment.
- C. All rolls shall be labeled and bagged in packaging that is resistant to degradation by ultraviolet (UV) light, and is moisture resistant.

Part 3 - EXECUTION

3.01 SHIPPING AND HANDLING

- A. The CONTRACTOR shall provide the proper equipment and labor to unload the material upon delivery to the project. All costs associated with providing unloading of the material and return of equipment and labor are to be included in the price for the material.
- B. The manufacturer shall identify, in writing, the proper equipment and methods for loading, shipping, and unloading materials to the project.
- C. The manufacturer shall provide, in writing, the proper storage procedures for the products delivered to the site. Prior to departing the site, the manufacturer or manufacturers representative will inspect the storage of the material for compliance with the procedures outlined by the manufacturer.

3.02 STORAGE

- A. Storage of the GCL rolls shall be the responsibility of the CONTRACTOR. A dedicated storage area shall be selected at the job site that is away from high traffic areas and is level, dry, and well-drained.

- B. Rolls should be stored in a manner that prevents sliding or rolling from the stacks and may be accomplished by the use of chock blocks or by use of the dunnage shipped between rolls. Rolls should be stacked at a height no greater than the lifting apparatus can be safely handled (typically no higher than two or three rolls).
- C. All stored GCL materials and the accessory bentonite must be covered with a plastic sheet, waterproof cover or tarpaulin until their installation.
- D. Rolls that exhibit swelling or partial hydration during storage may be rejected by the ENGINEER.

3.03 SUBGRADE PREPARATION

- A. The subgrade upon which the GCL is installed will be prepared by the County.
- B. It shall be the CONTRACTOR's responsibility to indicate to the ENGINEER any change in the condition of the subgrade that could cause the subgrade to be unacceptable for GCL deployment.

3.04 GCL PLACEMENT

- A. Placement of the GCL shall be conducted in accordance with the approved Installation Plan and Drawings, and manufacturer's recommendations.
- B. The use of equipment capable of freely suspending the GCL roll is required. A spreader bar and core pipe are also required for supporting the roll and allowing it to unroll freely. The core pipe and spreader bar shall not bend or flex excessively when a full roll is lifted.
- C. Unless otherwise instructed by the ENGINEER, GCL panels shall be placed as follows:
 - 1. Non-woven geotextile facing down.
 - 2. To facilitate drainage in the event of precipitation.
 - 3. Free of tension or stress yet without wrinkles or folds.
 - 4. It is not permissible to stretch the GCL in order to fit a designated area.
 - 5. Panels shall not be dragged across the subgrade into position except where necessary to obtain the correct overlap for adjacent panels.
- D. Panels shall not be placed during adverse weather conditions, including rain, high wind, or any other weather conditions which might be deleterious to the subgrade, materials, or the installation.

- F. The CONTRACTOR shall unwrap and install only as much GCL in one working day as can be covered with a geomembrane. In no case shall the GCL be exposed to the elements at the end of the day.
- G. Cover as soon as possible to protect the GCL from hydration, environmental effects and damage.
- H. Remove and replace panels hydrated or partially hydrated without geomembrane cover.

3.05 GCL PANEL SEAMING

- A. All GCL seams shall be formed in accordance with manufacturer's recommendations. A continuous bead of powdered bentonite shall be placed in seams to ensure that a continuous seal is achieved between panels.
- B. A 6-inch to 9-inch overlap should exist at seam locations. The lap line and match lines marked on the panels shall be used to assist in obtaining this overlap. The edges of the GCL panels should be adjusted to smooth out any wrinkles, creases, or "fishmouths" to maximize contact with the underlying panel.
- C. After the overlying panel is placed, its edge shall be pulled back to expose the overlap zone. Any soil or debris present in the overlap zone or entrapped in the geotextiles shall be removed. A fillet of granular bentonite shall then be poured in a continuous manner along the overlap zone (between the edge of the panel and the 6-inch line), at a rate of at least one-quarter pound per linear foot.

3.06 DAMAGE REPAIR

- A. Any damage in the form of cuts or tears in the GCL or hydrated areas, shall be identified and repaired by the installer by cutting a patch from undamaged GCL and placing it over the affected area.
- B. All dirt and debris shall be removed from the damaged area. A patch of GCL shall be cut to fit over the damaged area and to extend one foot in all directions around it. Accessory bentonite shall then be placed around the perimeter of the affected area at the rate of one-half pound per linear foot, and the patch shall be placed over the damage. An epoxy-based adhesive shall be used to keep the patch in position during backfill operations.

3.07 DETAIL WORK

- A. Detail Work, defined as the WORK necessary to seal the liner to pipe penetrations, foundation walls, drainage structures, spillways, and other appurtenances, shall be performed as recommended by the GCL Manufacturer. Recommended installation details shall be provided in the Installation Plan. The installer shall provide reasonable assurance to the ENGINEER of an acceptable installation.

3.08 PLACEMENT OF OVERLYING MATERIALS

- A. During placement of geomembrane upon the GCL, precautions shall be taken to prevent damage the GCL by restricting heavy equipment traffic. Unrolling the geomembrane can be accomplished through the use of lightweight, rubber-tired equipment such as a 4-wheel all-terrain vehicle (ATV). No vehicles larger than a ATV are allowed in direct contact with the GCL. This vehicle can be driven directly on the GCL, provided the ATV makes no sudden stops, starts, or turns.
- B. Any leading edge of panels left uncovered shall be protected at the end of the working day with a waterproof sheet which is adequately secured with sandbags or other ballast.
- C. When textured geomembrane is installed over the GCL, a temporary geosynthetic slip sheet can be used to minimize friction during placement of the geomembrane. The slip sheet shall be removed completely upon placement of the geomembrane.

END OF SECTION

Citrus Phase 2A
construction

Pelz, Susan

From: Pelz, Susan
Sent: Wednesday, August 25, 2004 1:46 PM
To: P. E. John Banks (E-mail); Susan Metcalfe (E-mail)
Cc: Core, Simone
Subject: Citrus Co LF Construction- GCL Mod

John,

I looked over the information you sent for the minor modification to the construction permit to allow GCL under the geomembrane in the floor of the cell. In order to expedite the review of the application, the following information should be provided ASAP:

1. Please provide Page 40 of 40 of the application form that includes the applicant's signature.
2. Please specifications and QA (including conformance testing requirements) for the GCL (Rule 62-701.400(3)(e)7., F.A.C.).
3. Please provide the results of the EPA 9100 leachate compatibility test required by Rule 62-701.400(3)(f)2., F.A.C.).

If you have any questions, please call or email (email is better).

Susan J. Pelz, P.E.
Solid Waste Program Manager
Southwest District
813-744-6100 x 386
susan.pelz@dep.state.fl.us

Tracking:

Recipient

P. E. John Banks (E-mail)
Susan Metcalfe (E-mail)
Core, Simone

Read

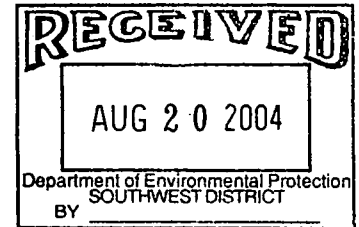
Read: 8/25/2004 4:23 PM

SCS ENGINEERS

August 20, 2004

File No. 09199056.02

Ms. Susan Pelz, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, FL 33619



Subject: Citrus County Central Landfill, Permit No. 21375-004-SC
Request for Minor Permit Modification,
Use of GCL in place of Six-inch Thick Sub-base Layer

Dear Ms. Pelz:

On behalf of Citrus County, SCS Engineers (SCS) is requesting a minor permit modification for the Central Landfill Phase 2 Expansion to allow the use of a geosynthetic clay liner (GCL) as an option to replace the 6-inch thick soil sub-based that was specified in the permitted contract documents. We have enclosed four copies of the relevant pages of the permit application form and a check in the amount of \$250 for the minor permit modification fee.

The County is making this request due to the consistent rain events that have prevented any meaningful progress on the construction project over the past 30 days and use of a GCL could allow for progress on the construction during this time. With a GCL, the time needed to properly deploy the material without being impacted by the weather is much less than needed for installation of the clay sub-base (i.e., two good weather days as opposed to over a week). This is because in one day an area can be prepared and in the second day the GCL and first layer of geomembrane can be deployed, thus protecting the GCL from the next rain event. In this way progress can be made on liner deployment in between rainfall events. Currently we see no way to make progress until more than a full week of continuous dry weather has occurred. Several days of dry weather will be needed to allow drying of the clay materials and then about another week is needed for the installation of the clay liner. This scenario is not likely to happen for at least another 30 days.

SCS feels the Department should consider this request a minor modification because it should involve minimal review. Our opinion is based on the fact that use of the GCL in the application requested is already specifically allowed by Rule 62-701.400(3)(c) 1., F.A.C. Also, the request for use of the GCL is only for the bottom of the cell with a two percent slope, thus there is not an issue with regards to slope stability. Because the purpose of this request is to expedite the completion of the project, we are requesting an expeditious review of this request.



Ms. Susan Pelz, P.E.

August 20, 2004

Page 2

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

Very truly yours,

A handwritten signature in black ink, appearing to read "John A. Banks", with a date stamp "8/20/04" written below it.

John A. Banks, P.E.

Project Manager

A handwritten signature in black ink, appearing to read "Raymond J. Dever".

Raymond J. Dever, P.E., D.E.E

Vice President

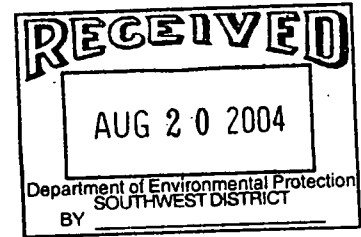
SCS ENGINEERS

cc: Susan J. Metcalfe, P.G., Citrus County



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

DEP Form # 62-701.900(1)
Form Title <u>Solid Waste Management Facility Permit</u>
Effective Date <u>05-27-01</u>
DEP Application No. _____ (Filed by DEP)



**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**APPLICATION FOR A PERMIT TO CONSTRUCT,
OPERATE, MODIFY OR CLOSE
A SOLID WASTE MANAGEMENT FACILITY**

APPLICATION INSTRUCTIONS AND FORMS

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

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

*Revised
8/30/04*

INSTRUCTIONS TO APPLY FOR A SOLID WASTE MANAGEMENT FACILITY PERMIT

I. General

Solid Waste Management Facilities shall be permitted pursuant to Section 403.707, Florida Statutes, (FS) and in accordance with Florida Administrative Code (FAC) Chapter 62-701. A minimum of four copies of the application shall be submitted to the Department's District Office having jurisdiction over the facility. The appropriate fee in accordance with Rule 62-701.315, FAC, shall be submitted with the application by check made payable to the Department of Environmental Protection (DEP).

Complete appropriate sections for the type of facility for which application is made. Entries shall be typed or printed in ink. All blanks shall be filled in or marked "not applicable" or "no substantial change". Information provided in support of the application shall be marked "submitted" and the location of this information in the application package indicated. The application shall include all information, drawings, and reports necessary to evaluate the facility. Information required to complete the application is listed on the attached pages of this form.

II. Application Parts Required for Construction and Operation Permits

- A. Landfills and Ash Monofills - Submit parts A,B, D through T
- B. Asbestos Monofills - Submit parts A,B,D,E,F,G,J,L,N, P through S, and T
- C. Industrial Solid Waste Facilities - Submit parts A,B, D through T
- D. Non-Disposal Facilities - Submit parts A,C,D,E,J,N,S and T

NOTE: Portions of some parts may not be applicable.

NOTE: For facilities that have been satisfactorily constructed in accordance with their construction permit, the information required for A,B,C and D type facilities does not have to be resubmitted for an operation permit if the information has not substantially changed during the construction period. The appropriate portion of the form should be marked "no substantial change".

III. Application Parts Required for Closure Permits

- A. Landfills and Ash Monofills - Submit parts A,B,M, O through T
- B. Asbestos Monofills - Submit parts A,B,N, P through T
- C. Industrial Solid Waste Facilities - Submit parts A,B, M through T
- D. Non-Disposal Facilities - Submit parts A,C,N,S and T

NOTE: Portions of some parts may not be applicable.

IV. Permit Renewals

The above information shall be submitted at time of permit renewal in support of the new permit. However, facility information that was submitted to the Department to support the expiring permit, and which is still valid, does not need to be re-submitted for permit renewal. Portions of the application not re-submitted shall be marked "no substantial change" on the application form.

V. Application Codes

S	-	Submitted
LOCATION	-	Physical location of information in application
N/A	-	Not Applicable
N/C	-	No Substantial Change

VI. LISTING OF APPLICATION PARTS

PART A:	GENERAL INFORMATION
PART B:	DISPOSAL FACILITY GENERAL INFORMATION
PART C:	NON-DISPOSAL FACILITY GENERAL INFORMATION
PART D:	PROHIBITIONS
PART E:	SOLID WASTE MANAGEMENT FACILITY PERMIT REQUIREMENTS, GENERAL
PART F:	LANDFILL PERMIT REQUIREMENTS
PART G:	GENERAL CRITERIA FOR LANDFILLS
PART H:	LANDFILL CONSTRUCTION REQUIREMENTS
PART I:	HYDROGEOLOGICAL INVESTIGATION REQUIREMENTS
PART J:	GEOTECHNICAL INVESTIGATION REQUIREMENTS
PART K:	VERTICAL EXPANSION OF LANDFILLS
PART L:	LANDFILL OPERATION REQUIREMENTS
PART M:	WATER QUALITY AND LEACHATE MONITORING REQUIREMENTS
PART N:	SPECIAL WASTE HANDLING REQUIREMENTS
PART O:	GAS MANAGEMENT SYSTEM REQUIREMENTS
PART P:	LANDFILL CLOSURE REQUIREMENTS
PART Q:	CLOSURE PROCEDURES
PART R:	LONG TERM CARE REQUIREMENTS
PART S:	FINANCIAL RESPONSIBILITY REQUIREMENTS
PART T:	CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER

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

☐ Ash Monofill

☐ Class II Landfill

☐ Asbestos Monofill

☐ Class III Landfill

☐ Industrial Solid Waste

☒ Other Describe: Yard Waste mulching and consumer goods recycling.

☐ 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

☐ Substantial Modification

☐ Renewal

☐ 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: \$ ~4.0 million Closing Costs: \$ Approximately 3.1 million*
16. Anticipated construction starting and completion dates:
From: April 2003 To: October 2004
17. Expected volume or weight of waste to be received:
_____ yds³/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.

B. DISPOSAL FACILITY GENERAL INFORMATION

1. Provide brief description of disposal facility design and operations planned under this application:

Expand Citrus County Landfill Class I waste disposal area with the addition of a new 5.75-acre cell (Phase 2).

2. Facility site supervisor: Prime DeV Vaughn or Carmen Bruno
Title: Crew Leaders Telephone: (352) 527-7670

E-Mail address (if available)

3. Disposal area: Total 80* acres; Used 19.1** acres; Available 60.9 acres.
4. Weighing scales used: ☒ Yes ☐ No
5. Security to prevent unauthorized use: ☒ Yes ☐ No
6. Charge for waste received: _____ \$/yds³ 30 \$/ton
7. Surrounding land use, zoning:

<input type="checkbox"/> Residential	<input checked="" type="checkbox"/> Industrial
<input type="checkbox"/> Agricultural	<input type="checkbox"/> None
<input checked="" type="checkbox"/> Commercial	<input type="checkbox"/> Other Describe: <u>Conservation</u>

8. Types of waste received:

<input checked="" type="checkbox"/> Residential	<input checked="" type="checkbox"/> C & D debris
<input checked="" type="checkbox"/> Commercial	<input type="checkbox"/> Shredded/cut tires
<input type="checkbox"/> Incinerator/WTE ash	<input checked="" type="checkbox"/> Yard trash
<input type="checkbox"/> Treated biomedical	<input type="checkbox"/> Septic tank
<input type="checkbox"/> Water treatment sludge	<input checked="" type="checkbox"/> Industrial
<input type="checkbox"/> Air treatment sludge	<input type="checkbox"/> Industrial sludge
<input type="checkbox"/> Agricultural	<input checked="" type="checkbox"/> Domestic sludge
<input checked="" type="checkbox"/> Asbestos	
<input type="checkbox"/> Other Describe: _____	

9. Salvaging permitted: ☐ Yes ☒ No
10. Attendant: ☒ Yes ☐ No Trained operator: ☒ Yes ☐ No
11. Spotters: Yes ☒ No ☐ Number of spotters used: minimum of one
12. Site located in: ☐ Floodplain ☐ Wetlands ☒ Other Upland

*Total Citrus County Central Landfill Site

**Existing Phase 1 and 1A disposal areas

13. Property recorded as a Disposal Site in County Land Records: ☒ Yes ☐ No
14. Days of operation: Monday - Saturday
15. Hours of operation: Monday-Friday: 6:30 am - 5:00 pm Holidays and Saturdays: 6:30 am - 3:00 pm
16. Days Working Face covered: Monday-Saturday
17. Elevation of water table: 7 Ft. (NGVD 1929)
18. Number of monitoring wells: 14
19. Number of surface monitoring points: 0
20. Gas controls used: ☐ Yes ☒ No Type controls: ☐ Active ☐ Passive
 Gas flaring: ☐ Yes ☒ No Gas recovery: ☐ Yes ☒ No
21. Landfill unit liner type:
☐ Natural soils ☒ Double geomembrane
☐ Single clay liner ☐ Geomembrane & composite
☐ Single geomembrane ☐ Double composite
☐ Single composite ☐ None
☐ Slurry wall
☐ Other Describe: _____
22. Leachate collection method:
☒ Collection pipes ☐ Sand layer
☒ Geonets ☐ Gravel layer
☐ Well points ☐ Interceptor trench
☐ Perimeter ditch ☐ None
☐ Other Describe: _____
23. Leachate storage method:
☒ Tanks
☐ Surface impoundments
☐ Other Describe: _____
24. Leachate treatment method:
☐ Oxidation ☒ Chemical treatment
☐ Secondary ☐ Settling
☒ Advanced
☐ None
☐ Other _____

25. Leachate disposal method:

- | | |
|--|--|
| <input type="checkbox"/> Recirculated | <input type="checkbox"/> Pumped to WWTP |
| <input type="checkbox"/> Transported to WWTP | <input type="checkbox"/> Discharged to surface water |
| <input type="checkbox"/> Injection well | <input type="checkbox"/> Percolation ponds |
| <input type="checkbox"/> Evaporation | |
| <input checked="" type="checkbox"/> Other | Dry Percolation Basin |

26. For leachate discharged to surface waters:

Name and Class of receiving water: _____

27. Storm Water:

Collected: ☒ Yes ☐ No

Type of treatment: _____ Dry Retention/percolation

Name and Class of receiving water: _____ None

28. Environmental Resources Permit (ERP) number or status: _____ Southwest Florida

Water Management District #402023.02

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>
_____	_____	_____	✓
_____	_____	_____	✓
✓	See Attached	_____	_____
_____	_____	_____	✓
_____	_____	_____	✓
_____	_____	_____	✓
_____	_____	_____	✓
_____	_____	✓	_____
_____	_____	_____	✓
_____	_____	_____	✓
_____	_____	✓	_____

PART H CONTINUED

c. Double liners; (62-701.400(3)(c), FAC)

- (1) Upper and lower geomembrane thicknesses and properties;
- (2) Design leachate head for primary LCRS to limit the head to one foot above the liner;
- (3) Lower geomembrane sub-base design;
- (4) Leak detection and secondary leachate collection system minimum design criteria ($k > 10$ cm/sec, head on lower liner ≤ 1 inch, head not to exceed thickness of drainage layer);

d. Standards for geosynthetic components; (62-701.400(3)(d), FAC)

- (1) Field seam test methods to ensure all field seams are at least 90 percent of the yield strength for the lining material;
- (2) Geomembranes to be used shall pass a continuous spark test by the manufacturer;
- (3) Design of 24-inch-thick protective layer above upper geomembrane liner;
- (4) Describe operational plans to protect the liner and leachate collection system when placing the first layer of waste above 24-inch-thick protective layer.
- (5) HDPE geomembranes, if used, meet the specifications in GRI GM13;
- (6) PVC geomembranes, if used, meet the specifications in PGI 1197;
- (7) Interface shear strength testing results of the actual components which will be used in the liner system;
- (8) Transmissivity testing results of geonets if they are used in the liner system;
- (9) Hydraulic conductivity testing results of geosynthetic clay liners if they are used in the liner system;

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.

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

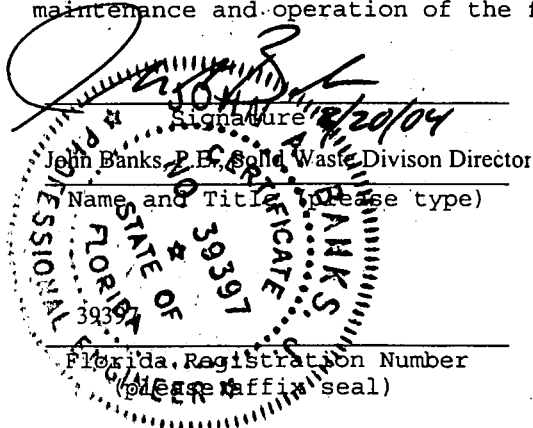
Telephone Number

Date: _____

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
John Banks, P.E., Solid Waste Division 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: _____



Certified Properties

CLAYMAX® 200R CERTIFIED PROPERTIES

MATERIAL PROPERTY	TEST METHOD	TEST FREQUENCY ft ² (m ²)	REQUIRED VALUES
Bentonite Swell Index ¹	ASTM D 5890	1 per 50 tonnes	24 mL/2g min.
Bentonite Fluid Loss ¹	ASTM D 5891	1 per 50 tonnes	18 mL max.
Bentonite Mass/Area ²	ASTM D 5993	40,000 ft ² (4,000 m ²)	0.75 lb/ft ² (3.6 kg/m ²) min
GCL Grab Strength ³	ASTM D 4632 ASTM D 6768	200,000 ft ² (20,000 m ²)	100 lbs (445 N) min 25 lbs/in (44 N/cm) min
GCL Peel Strength ³	ASTM D 4632 ASTM D 6496	N/A	N/A
GCL Index Flux ⁴	ASTM D 5887	Weekly	1 x 10 ⁻⁸ m ³ /m ² /sec max
GCL Hydraulic Conductivity ⁴	ASTM D 5887	Weekly	5 x 10 ⁻⁹ cm/sec max
GCL Hydrated Internal Shear Strength ⁵	ASTM D 5321 ASTM D 6243	Periodic	50 psf (2.4 kPa) typical

Claymax 200R is an unreinforced GCL consisting of a layer of sodium bentonite between two nonwoven geotextiles, which are continuously adhered together.

Notes

¹ Bentonite property tests performed at a bentonite processing facility before shipment to CETCO's GCL production facilities.

² Bentonite mass/area reported at 0 percent moisture content.

³ All tensile strength testing is performed in the machine direction using 4 inch grips per modified ASTM D 4632. Results are reported as minimum average roll values unless otherwise indicated. Upon request, tensile strength can be reported per ASTM D 6768.

⁴ Index flux and permeability testing with deaired distilled/deionized water at 80 psi (551 kPa) cell pressure, 77 psi (531 kPa) headwater pressure and 75 psi (517 kPa) tailwater pressure. Reported value is equivalent to 925 gal/acre/day. Actual flux values vary with field condition pressures. The last 20 weekly values prior the end of the production date of the supplied GCL may be provided.

⁵ Peak value measured at 200 psf (10 kPa) normal stress for a specimen hydrated for 48 hours. Site-specific materials, GCL products, and test conditions must be used to verify internal and interface strength of the proposed design.



1500 W. Shure Drive Arlington Heights, IL 60004 USA 800.527.9948 Fax 847.577.5571

For the most up-to-date information please visit our website, www.cetco.com

A wholly owned subsidiary of AMCOL International

The information and data contained herein are believed to be accurate and reliable. CETCO makes no warranty of any kind and accepts no responsibility for the results obtained through application of this information.

Revised 01/04
TR 401-CMR

24515517011, 17155, 1111

SOUTHWEST DISTRICT
FDEP

**Solid Waste Program
Permitting Application**

New Site

Site Name:
Site Address:
County:
Type/Subcode:

Existing Site

Site ID:	21375-007		
Project Name:	Citrus Co Phase 2 - BCL Mod		
Type/Subcode:	SC MM		
Fee Submitted:	\$250	<input checked="" type="checkbox"/> correct	() incorrect
Fee Refund \$	_____		
Fee Request \$	_____		

Related Party

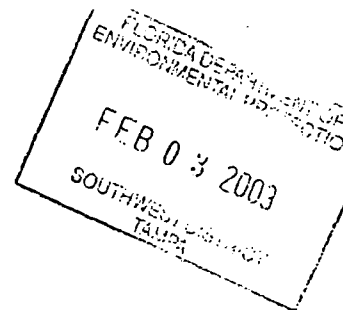
Role:	Applicant
Name:	Susie Metcalfe
Company:	Susor
Street:	ON file
City:	
Zip Code:	
Phone:	

Distribution Date: _____

Fee Checked By: PELT

Date: 8/26/04

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 1×10^{-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 than or equal to 1×10^{-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, 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.

Sabrina 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

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 #: 0021375 - 007 - SC Project #: 007 Received: 08/20/2004 CRA #: 192140
 Permit Office: SWD (DISTRICT) Agency Action: Issued
 Project Name: CITRUS CO PHASE 2-GCL MOD Desc: mod to 21375.004-SC-Phase 2 construction
 Type/Sub/Des: SC / MM MINOR MODIFICATION COE #:
 Logged: 08/27/2004 Issued: 10/26/2004 Expires: 03/15/2008 OGC:
 Fee: 250.00 Fee Recd: 250.00 Dele: Override: NONE

Related Party

Role: APPLICANT Begin: 08/27/2004 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: Email:

Processors

Processor: PELZ_S Y Active: 08/27/2004 Inactive: Events

Permitting Application - Events

Events Scheduled

Site #: 0021375 Site Name: CITRUS CO CENTRAL SLF (LF1)
 Permit #: 0021375.007-SC Type/Subtype: SC / MM Received: 08/20/2004
 Project #: 007 Project Name: CITRUS CO PHASE 2-GCL MOD

> ISSUE PERMIT: Issued

Event	Begin Date	Period	Due Date	Rmn	Status	End Date
Receive Request	08/20/2004	1	08/21/2004		Done	08/20/2004
Fee Verification	08/20/2004	2	08/22/2004		Sufficient Fee	08/20/2004
Completeness Review	08/20/2004	30	09/19/2004		Complete	08/20/2004
Determine Agency Action	08/20/2004	90	11/18/2004		Issue	10/26/2004
Issue Final Permit	10/26/2004	14	11/09/2004		Issued	10/26/2004
ISSUE PERMIT	10/26/2004	1	10/27/2004		Issued	10/26/2004
STOP CLOCK	10/26/2004	1	10/27/2004		Done	10/26/2004

Oracle Developer Forms Runtime - Web

Query Coll Rpts Rmd Exit CRA Window

Cash Receiving Application - Collection Point Log Remittance

Collection Point Log Remittance

AREA **SWD** Total **CRAF006A \$250.00**

Remittance **584295** Type **CP** Received Date **08/20/2004** Status **RECEIVED**

SYS\$RCPT **468416** PNR **PNR** Check # **5925** Amount **250.00**

SSNFEI# **SSNFEI#** Name **SCS ENGINEERS**

First **First** Middle **Middle** Title **Title** Suf **Suf**

Address1 **3012 US HWY. 301 NORTH** Short Comments **Short Comments**

Address2 **SUITE 700** **K-SW 21375-007**

City **TAMPA** ST **FL** Zip **33619** Country **Country**

PAYMENT(S)

Payment#	Distr	CL	Object	Payment	Reference#	Applic/	Fund *	status
	Area		Code/Description	Amount		PA	PFTF	
638234	SWD		002244 SOLID WASTE-CON	\$250.00		PA	PFTF	COMPLETE

COMMIT FREQUENTLY **\$250.00** Payment total

Press <TAB> to accept Collection Point or enter F&A

start 4 Internet Explorer - Inbox - Microsoft Ou... 8:48 AM

Oracle Developer Forms Runtime - Web

Permits Events Payment Site Facility Party Lct Help Exit Window

Permitting Application - Permit Detail and Log Permit

SITE Permit

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

County **CITRUS** Comments **Y** RPAs **N** # Cases **0**

Project

Permit # **Permit #** Project # **007** Received **08/20/2004** CRA # **192140**

Permit Office **SWD (DISTRICT)** Agency Action **Pending**

Project Name **CITRUS CO PHASE 2-GCL MOD** Desc **Desc**

Type/Sub/Des **SC / MM MINOR MODIFICATION** COE # **COE #**

Logged **08/27/2004** Issued **Issued** Expires **Expires** OGC **OGC**

Fee **250.00** Fee Recd **250.00** Delc **Delc** Override **NONE**

Related Party

Role **APPLICANT** Begin **08/27/2004** End **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 **Fax** Email **Email**

Processors

Processor **PELZ_S** Active **08/27/2004** Inactive **Inactive** Events **Events**

Enter 'Y' if this is the PRIMARY processor

start 4 Intern... - Inbox - M... Document... 8:49 AM

02/8
3/5

SCS ENGINEERS
PHONE 813-621-0080
3012 U.S. HIGHWAY 301 N. STE. 700
TAMPA, FL 33619

5925

DATE 8/20/04

63-27/531 FL 28

PAY TO THE ORDER OF Florida Department of Environmental Protection \$ 250.00

Two hundred fifty and no/100-- DOLLARS

Bank of America

ACH RVT 063100277

FOR Permit Modification

[Redacted Signature]



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 Statutes.

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

"More Protection, Less Process"

Printed on recycled paper.

Ms. Susan Metcalfe, P.E.
Permit No.: 21375-004-SC

March 19, 2003
Page Two

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.

Anna Black
Clerk

03/19/2003
Date