

# HARTMAN & ASSOCIATES, INC.

engineers, hydrogeologists, surveyors & management consultants

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July 25, 2003



HAI #99-0331.007

Phase 4  
File 12.0

## Via UPS Overnight

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

**Subject: Cell 1 Construction Progress Report #3/CQA Plan  
Enterprise Recycling & Disposal Facility  
Angelo's Aggregate Materials, Ltd.  
FDEP Permit Nos. 177982-001-SC, 177982-002-SO  
Pasco County, Florida**

Dear Mr. Ford:

On behalf of Angelo's Aggregate Materials, Ltd. (Angelo's), Hartman & Associates, Inc. (HAI) is submitting this letter to update the Department on the construction activities and additional construction quality assurance (CQA) plan revisions at the above facility. The following information is provided as discussed during our conversation on July 23, 2003.

Initial groundwater sampling has been completed for monitor wells MW-1, MW-1B, MW-5A, MW-5B, MW-6, MW-7A, MW-7B, MW-8, MW-9 (Dry), and MW-10, and the samples are currently under analysis at ENCO Laboratories. An updated water level table, including water levels from three sets of measurement data, is attached in Appendix A.

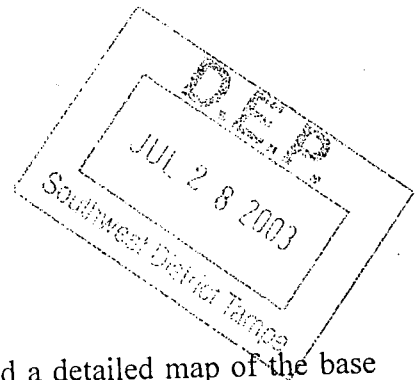
In order to assist the Department in understanding the method of construction, we have included copies of HAI's field notes from each day that our technician was present on-site. These field notes are attached in Appendix B. HAI has had a full-time inspector on-site since Cell 1 excavation went below a level of approximately 90-feet to 85-feet, NGVD. These notes will describe the method of excavation, the areas of excavation, and will list those individuals present on-site during construction activities. At this time, Cell 1 excavation is completed, Pond 1 construction is nearly complete, and the temporary pond construction is approximately two-thirds complete.

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Mr. Kim Ford, P.E.  
July 25, 2003  
Page 2



Based on survey data provided on July 14, 2003, HAI has prepared a detailed map of the base grades of the cell, including a surveyed outline of each limestone containing area encountered. This map is attached as Figure 1, in Appendix C. The limestone found appears to be weathered boulders and smaller rocks mixed with clay and sandy clay, and does not appear to be competent limestone connected to the Floridan aquifer. This is also supported by our observation of the excavation from about 90-feet to 85-feet, NGVD, to the cell base at 82-feet to 80-feet, NGVD, where the initial larger area limestone proved to be only limestone pebbles and cobbles (three inches to one-foot diameter) within a sandy clay matrix; therefore, clay has been encountered below the limestone in most excavated areas.

An overall map of Cell 1 has been prepared and is attached as Figure 2, in Appendix C. This figure includes references to the top of the cell slope, the toe of the cell slope, the current heavy equipment access ramp, delineation of the limestone containing areas, locations of additional planned auger borings, and the installed benchmark (southeast corner of Cell 1) and corner post locations.

### CQA Plan

A total of 25 auger borings (AS-1 through AS-25) have been completed in the base of the cell. Sieve analyses results for the first 12 boring locations have been provided by Universal Engineering Sciences and are attached for your review in Appendix D. All of the borings were abandoned with grout upon completion. One of these locations (AS-10) indicates sand is present from 0 to 3-feet in depth. Results for the initial permeability test are not yet available but are planned to be available by the middle of next week. Surveyed locations for the staked and numbered borings, and the delineated sand area, should be received in electronic format by HAI by Monday, July 28, 2003. An updated map with this data will be forwarded to the Department upon receipt of the data and preparation of the map (Figure 3). Mr. Miguel Garcia, hydrogeologist, of HAI has prepared boring logs for each of the 25 locations. These are attached for your review in Appendix E.

Two (2) of the original 12 boring locations encountered limestone. Test pits will be excavated in these locations for visual observation using the heavy equipment on-site to determine the extent of limestone in these locations. Additional test pits will be excavated as necessary, based on the results of the additional borings.

In addition to the quality assurance testing completed by HAI, we are proposing additional tests to be performed within the next week. Six (6) additional auger borings, spaced on 100-foot centers, will be completed along the east boundary of the cell, in the side slope, to a depth of three-feet below the surface. Four (4) additional auger borings, spaced on 100-foot centers, will be completed along the south boundary of the cell, no further than 25-feet from the toe of slope.

Mr. Kim Ford, P.E.  
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Six (6) additional borings, spaced on 100-foot centers, will be completed at the top of the west slope of Cell 1 to a depth of three-feet below the base grade. These locations are indicated on Figure 2, in Appendix C. Soil samples for sieve analyses will be taken from each boring location ("most coarse or worst case scenario", as requested). Results will be forwarded to the Department upon receipt.

Five additional permeability test samples will be obtained (shelby tube samples) from Cell 1 as indicated on Figure 2, in Appendix C. Three sieve analyses will be conducted on each of the collected samples, one at each one-foot interval. Results will be forwarded to the Department upon receipt.

In order to demonstrate that the limestone encountered at the base grade elevations is not competent limestone, HAI plans to have a drilling service on site on July 28, 2003 to complete borings (flight auger) inside the limestone areas, prior to over-excavation. The borings will be completed to the necessary depth for the demonstration, expected to be between five (5) to ten (10) feet below grade. All borings will be properly abandoned with grout after completion. The borings will be numbered and logs will be provided to the Department prior to the August 1, 2003 site visit. Additionally, a boring will be completed through the current heavy equipment ramp in the southwest corner of the cell to a depth of at least 79 feet, NGVD to determine the presence of clay or sandy clay in this area.

Over-excavation of the limestone containing areas is planned to be completed July 30-31, 2003, prior to the Department's site visit. These areas will be excavated to three-feet below existing grade and left open to allow inspection on August 1, 2003. Small soil berms will be constructed around the over-excavated areas to prevent stormwater run-off from entering these areas.

#### Temporary Pond Area


The Department has requested quality assurance testing in the temporary pond at this time. Soil test results collected from the pond after construction are attached, indicating a sandy clay base. These results are provided in Appendix F. HAI's technician and geologist's construction observations during the temporary pond excavation indicate a consistent sandy clay to clay at the base of the pond, with the exception of a few small limestone boulders and cobbles within the clay matrix that was removed during excavation, see attached field notes in Appendix B and pictures in Appendix G. HAI intends to have a drilling service collect one shelby tube sample for permeability and sieve testing from each cell. Three auger borings will be completed for sieve analyses in each cell to confirm the presence of the confining unit. These borings will be located around the boundaries of the cells within 25-feet of the toe of slope. Surveyed locations of the borings and analytical results will be forwarded to the Department upon receipt.

Mr. Kim Ford, P.E.  
July 25, 2003  
Page 4

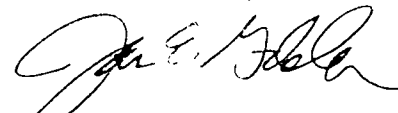
We trust this submittal will satisfy the Department. We look forward to meeting you and John Morris at the site on August 1, 2003. Please call me if you have any questions.

Very truly yours,

**Hartman & Associates, Inc.**



Jennifer L. Deal, P.E.  
Project Engineer



James E. Golden, P.G.  
Senior Hydrogeologist/Associate

JEG/JLD/cr/99.0331.007/corresp/Ford7.jld

cc: Dominic Iafrate, Angelo's  
Craig Bryan, Angelo's  
Miguel A. Garcia, HAI  
Dale Claytor, HAI  
John Morris, P.G., FDEP

# APPENDICES

**Ford, Kim**

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**From:** Ford, Kim

**Sent:** [REDACTED]

**To:** Pelz, Susan; Morris, John R.

**Subject:** conversation with Jennifer Deal and Jim Golden about Enterprise CIII

On July 23, 2003 at 4pm, John Morris and Kim Ford spoke with J.D. and J.G. (Hartman) and discussed the following:

- 1) I suggested that the certification for Cell 1 should also include the tempoary stormwater pond (Cells 15 and 16).
- 2) I requested worst case seive analysis at each boring. Jim said someone is at the site observing the clay as it comes out of the hole. I explained that the worst case seive analysis must include the percent passing the 200 seive.
- 3) J.D. and J.G. said the by Monday July 28th the following would be provided:
  - a) CQA Plan
  - b) Survey of all limerock and all borings locations
  - c) lab results for all tests
  - d) proposed boring locations for the tempoary stomwater pond
- 4) J.D. and J.G. said limerock will be excavated by August 1st (the date John and I said we would observe the site).

Kim

8/7/2003

**Ford, Kim**

---

**From:** Ford, Kim  
**Sent:** Wednesday, July 23, 2003 3:10 PM  
**To:** Pelz, Susan  
**Cc:** Morris, John R.  
**Subject:** conversation with Jennifer Deal and Jim Golden about Enterprise CIII

On July 23, 2003 at 4pm John Morris and Kim Ford discussed Enterprise CIII with J.D. and J.G. (Hartman & Associates) as follows:

- 1) Certification should include Cell1 and the stormwater pond because the temporary stormwater pond must be certified and the certification approved prior to the future disposal in the pond area.
- 2) Borings were requested along the sides of the temporary stormwater pond at this time because the pond has water over the bottom, and more boring may be required in the future prior to disposal in the pond area.
- 3) Requested "worst case" seive analysis at each boring with percent passing the 200 seive.
- 4) By Monday 7/28/03, J.D and J.G. will propose: a CQA plan, provide a survey of all L.R. areas and borings, will provide all lab results for the 12 completed borings and the one permeability test, will propose borings for the temporary stormwater pond;
- 5) will excavate L.R. areas by Friday August 1st.

Kim

7/30/2003

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engineers, hydrogeologists, surveyors & management consultants

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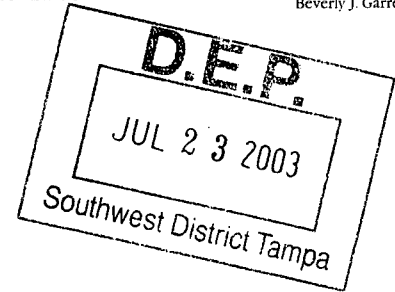
*Joetn*  
*SSAN*  
*JEM 7/22/03*  
*7/30*

July 22, 2003

HAI #99.0331.007

Phase 4

File 12.0



Via Facsimile and UPS Overnight

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

**Subject: Additional Quality Assurance Testing  
Enterprise Recycling & Disposal Facility  
Angelo's Aggregate Materials, Ltd.  
FDEP Permit Nos. 177982-001-SC, 177982-002-SO  
Pasco County, Florida**

Dear Mr. Ford:

On behalf of Angelo's Aggregate Materials, Ltd. (Angelo's), Hartman & Associates, Inc. (HAI) is submitting this letter to inform you of the additional quality assurance testing to be performed at the above facility. The following will be conducted based on your conversation with Jennifer Deal of HAI on July 17, 2003.

Thirteen auger borings will be completed in addition to the 12 samples already submitted to the laboratory for testing, for a total of 25 borings, or a grid of approximately 75-feet by 150-feet. This grid spacing will allow us to include the completed boring locations. From these additional borings, four additional permeability tests and thirteen additional sieve tests will be conducted. From these additional borings, four additional permeability tests and thirteen additional sieve tests will be conducted. Test results for the original 12 boring samples have not yet been received. If these results indicate the absence of a confining layer (low clay content) in any of those locations, additional deeper auger borings on a tighter grid will be performed in those areas until the confining layer is encountered and additional samples will be taken for sieve analyses. Please see the attached figure showing the boring locations. Although this additional testing is in exceedance of that required by the permit for the areas with consistent base soils, we will agree in order to expedite cell certification review.

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(see Band report)



Mr. Kim Ford, P.E.  
July 22, 2003  
Page 2

Limestone was encountered in two of the first 12 borings. Test pits will be excavated in these locations using the heavy equipment on-site to determine the extent of limestone in these locations. Additional test pits will be excavated as necessary, based on the results of the additional borings.


HAI personnel will be on-site tomorrow, July 23, 2003, to mark locations for the borings, and to possibly begin sample collection. We believe it would be advantageous for DEP staff to meet with us at the site to observe the overall good coverage of confining soils present at the cell base grades and to further discuss the field testing. This would alleviate some of the waiting time for our client to continue with construction operations. If DEP staff are unable to make this date, we would be glad to meet you on-site at your earliest convenience.

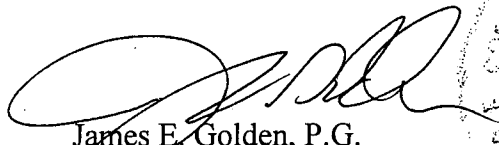
Initial Groundwater Sampling has been completed and all samples have been sent to ENCO Laboratories for analyses. A Summary Report will be completed and submitted to the FDEP after review of the analytical data.

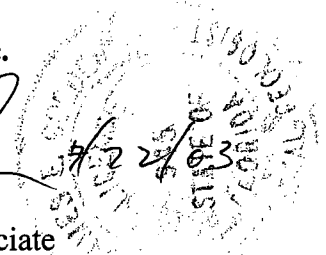
We trust this submittal will satisfy the Department. Please call me if you have any questions.

Very truly yours,

**Hartman & Associates, Inc.**

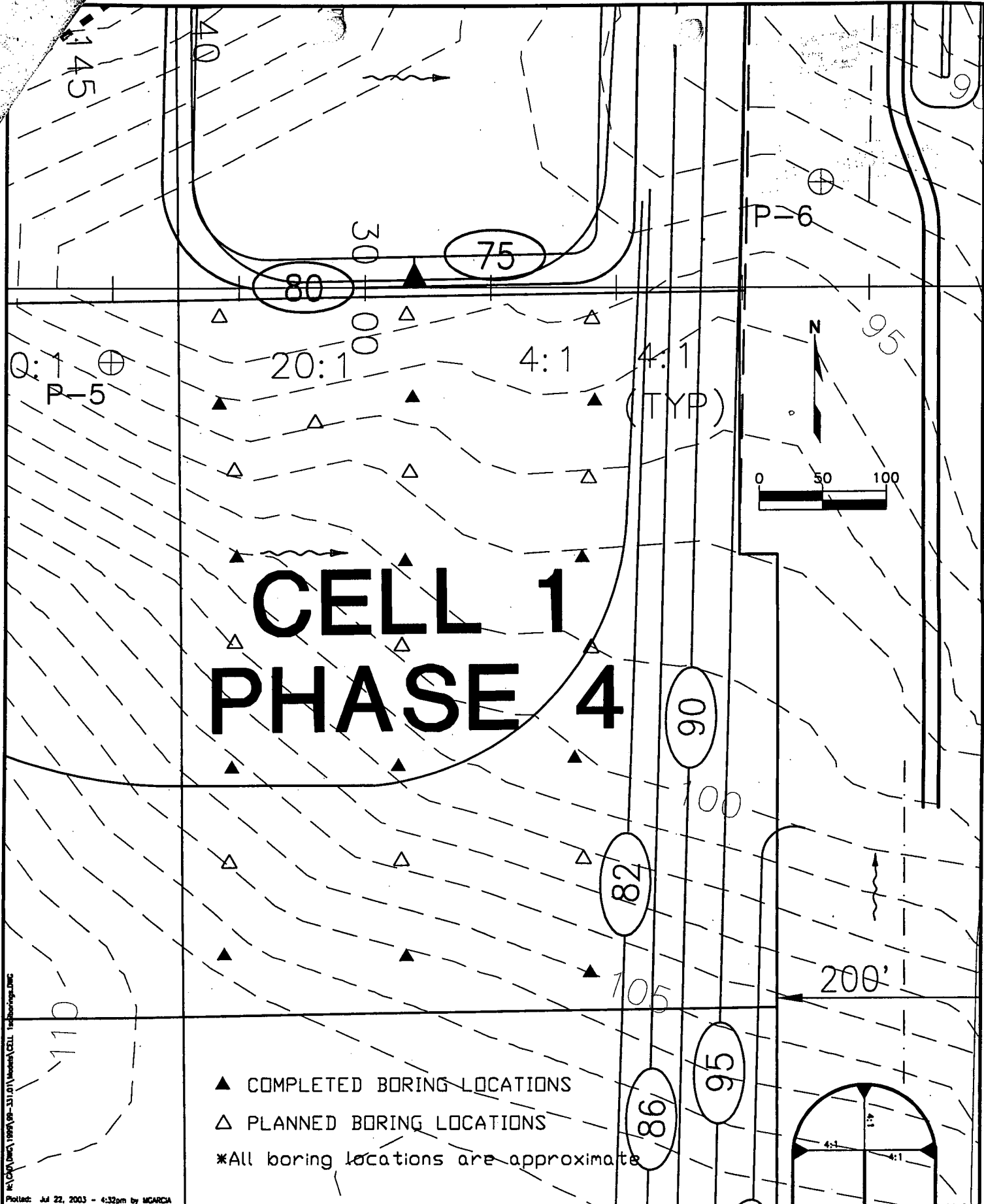
  
Jennifer L. Deal, P.E.  
Project Engineer

  
James E. Golden, P.G.  
Senior Hydrogeologist/Associate



JEG/JLD/cr/99.0331.007/corresp/Ford6.jeg

cc: Dominic Iafrate, Angelo's  
Craig Bryan, Angelo's  
Miguel A. Garcia, HAI  
Dale Claytor, HAI



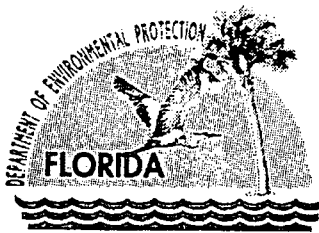
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 201 EAST PINE STREET - SUITE 1000 - ORLANDO, FL 32801  
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**CELL 1 BORING LOCATIONS  
 ENTERPRISE RECYCLING DISPOSAL FACILITY  
 DADE CITY, FLORIDA**

**FIGURE  
 1**



# Department of Environmental Protection

Jeb Bush  
Governor

Southwest District  
3804 Coconut Palm Drive  
Tampa, Florida 33619

David B. Struhs  
Secretary

Mr. Dominic Iafrate  
Angelo's Aggregate Materials, Ltd.  
1755 20<sup>th</sup> Ave. S.E.  
Largo, Fl. 33771

July 21, 2003

RE: Enterprise Recycling & Disposal Class III Landfill  
Located west of Auton Road, Dade City, Fl.  
Financial Assurance Cost Estimates  
Permit Nos.: 177982-001-SC and 177982-002-SO, Pasco County

Dear Mr. Iafrate:

This letter is to acknowledge receipt of the revised cost estimates dated July 8, 2003 (received July 9, 2003), for closing and long-term care of the Enterprise Recycling Class III Landfill. The cost estimates received July 9, 2003 (total closing \$200,372.16 and \$46,937.26/year x 30 years = \$1,408,117.80 total long-term care), are **APPROVED for 2003**. The approved cost estimates are for closing and long-term care of **6.08 acres** (Cell 1, Phase 4) only. Due to recent revisions of Rule 62-701.630, F.A.C., the next annual update (revised or inflation-adjusted estimates) is due no later than March 1, 2004.

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

Sincerely,

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

sjp  
cc: Jennifer Deal, P.E., Hartman & Associates, 201 E. Pine St., Ste. 1000, Orlando, Fl. 32801  
Fred Wick, FDEP, Tallahassee, w/attachment  
Kim Ford, P.E., FDEP Tampa

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**Ford, Kim**

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**From:** Ford, Kim  
**Sent:** Friday, July 18, 2003 4:00 PM  
**To:** Pelz, Susan; Morris, John R.  
**Subject:** conversation with Jennifer Deal - Enterprise CIII

On July 17, 2003 at 4:15pm I spoke with J.D. I explained :

- 1) that we should agree on the CQA plan now.
- 2) J.D. said that we approved a CQA plan on pg 3-17 of the engineering report.
- 3) I reviewed it and said that it includes minimums for sampling and that was for the condition of continuous clay at the base everywhere with no limerock.
- 4) I asked for the CQA in steps with:
  - 5) Step 1 to identify the extent of limerock and determine where the clay layer is at the base or deeper after they receive their one permeability and their 12 seive test results.
  - 5) Step 2 then propose a CQA with more permeability tests (4), and seive analysis on a 100 feet grid (equals about 25 seives if the clay is at the base not deeper, and maybe a 50 feet grid if the clay is deeper than the base), and 3 seive tests at each permeability test location (one separate seive analysis for each foot of thickness), and test pits (6).
  - 6) Step 3 to overexcavate the limerock and cover with the required clay layer, and complete the CQA tests.

Kim

7/18/2003