

March 2, 2012

Mr. Steve Morgan
Solid Waste Section
Florida Department of Environmental Protection - Southwest District
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

Dept. of Environmental
Protection
MAR 06 2012
Southwest District

RE: Enterprise Recycling and Disposal Facility
Cell 6 Construction Completion Report – RAI No. 1 Response
Angelo's Aggregate Materials, Ltd.
FDEP Permit Nos. 177982-008-SC/T3 and 177982-007-SO/T3
WACS No.: 87895
Pasco County, Florida

Dear Mr. Morgan:

This letter is in response to the December 7, 2011 request for additional information (RAI) we received from you. In this response we've reiterated the Departments comments in italics, with our response immediately following.

1. *As indicated in of October 28, 2011 cover letter to the report, Specific Condition #B.2.a.(2) of Permit 177982-008-SC/T3 states that "The Record Documents shall include, but shall not be limited to, as-built elevations of the disposal areas (surveys), details and elevations of limerock encountered, and other details as appropriate." While the "Weekly Photographs" submitted with the certification report appear to show limerock encountered during construction, neither the certification report nor the record drawings surveys submitted appear to include "details and elevations of limerock encountered" during the construction of Cell 6. Please verify and revise the certification report to provide this information.*

Response: The requested information is enclosed and provided as "Attachment G - Limerock Details and Elevation Observations." Please append the *Cell 6 Construction Completion Report* dated October 28, 2011 by adding the enclosed Attachment G to the end of the report.

2. *In accordance with Specific Condition #E.3. of Permit 177982-007-SO/T3, monitoring wells MW-2A and MW-2B shall be installed at least 30 days prior to disposal of waste in Cell 6; documentation of MW-2A and MW-2B wells construction shall be submitted to the Department within 30 days of installation in accordance with Specific Condition #E.5.b., and #E.5.d.; initial sampling of MW-2A and MW-2B shall be conducted within 7 days of well installation and development for the parameters listed in Specific Condition #E.4.b; and the results of the initial sampling event shall be submitted to the Department within 30 days of receipt from the analytical laboratory. Please provide this information.*

Response: Installation, initial sampling, and reporting of the groundwater monitoring wells associated with Cell 6 construction is being coordinated by our sub-consultant, Mr. Lockleer P.G. All of the requested materials will be provided to the Department when available, in accordance with the referenced deadlines and requirements.

3. *Sub-Grade Survey: This survey indicates that the Cell 6 was excavated to an elevation inconsistent with the mining excavation grade for Cell 6 depicted on Drawing C-8A Filling Sequence 3A submitted on August 7, 2009 with Permit Modification 177982-017-SC/SM. The issue of inconsistencies in the permitted construction drawings was identified by the permittee in a December 27, 2010 e-mail to the Department. This e-mail included a drawing titled "Top of Clay Grading Plan" and stated that the "corresponding bottom of excavation would be 3' or greater in depth from the top of clay". The sub-grade excavation survey provided was evaluated based on the representations made in the December 27, 2010 email. However, this issue of permit drawing inconsistencies supports the conclusion that the current permit drawings need to be modified and updated drawings provided with the pending permit renewal application, as discussed during the November 30, 2011 pre-application meeting. **This comment is provided for information purposes only and does not necessarily require a response other than acknowledgement of the comment.***

Response: The comment is noted.

4. *Finished Grade Survey: This survey appears to indicate that the Cell 6 finished grade was completed along the north boundary of the Cell 6 footprint without construction of the cell side slope depicted on Drawing C-9A Filling Sequence 4 submitted on August 7, 2009 with Permit Modification 177982-017-SC/MM and shown on the "Top of Clay Grading Plan" drawing submitted to the Department via e-mail on December 27, 2010. Please verify this apparent construction deviation and discuss what corrective actions will be taken to reconstruct cell to the permitted design in this area.*

Response: In accordance with the February 28, 2012 email from Mr. Morgan, we request that Cell 6, with the exception of the area extending 50-foot south of the northern boundary line (which runs east-west), be certified for use. The excluded area would extend the entire width (280' +/-) of the Cell 6.

5. *Confining Layer Construction: This section states and the supporting information provided with the construction certification submittal appears to confirm that the 3-foot clay confining layer in the entirety of Cell 6 was constructed in three 1-foot lifts. However the permitted methodology for clay confining layer construction on side slopes depicted on Details 1A and 1B – "Typical Clay Side Slope Construction Detail" on Drawing C-23 Details, submitted on November 13, 2006 with Permit 177982-007-SC/T3 shows the construction of the 3-foot clay confining layer on side slopes in several 12 ft wide sections up the slope, with the excess soils removed after construction. Please verify and explain this apparent construction deviation and discuss what corrective actions will be taken to address this issue.*

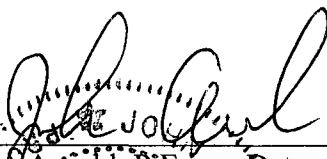
Response: The side slopes were constructed in several 12-foot wide layers with the excess material being removed after construction. The description of work (as referenced above) was only for the "bottom" portion of Cell 6 (excluding south slope of the clay layer that ties to existing grade). The report did not include a description of the side slope construction, which was a carry-over from the previous cell completion report (which was used as a template for this report). The Confining Layer Construction section of the *Cell 6 Construction Completion Report* has been revised to include a description of side slope construction. Please replace pages 1 and 2 of the previously submitted Engineering Report (Attachment C of the Cell 6 Construction Completion Report dated October 28, 2011) with the enclosed revised pages.

6. *The revised cost estimates provided in Attachment E (total for closing \$3,242,369.82 and long-term care \$163,854.8/year x 30 years = \$4,915,644.01), are approved (see attached letter). A copy of the approval letter will be forwarded to Mr. Frank Hornbrook, 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. Please provide proof of adequate funding.*

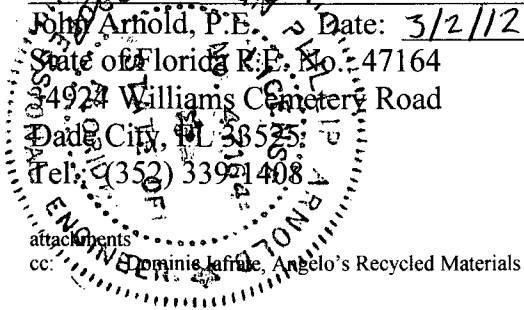
Response: The Letter of Credit used to provide financial assurance has been updated to include both the addition of Cell 6 and the 2012 annual inflation adjustment authorized by the Department. The Letter of Credit from our bank (Comerica) has been provided to Mr. Frank Hornbrook in the Solid Waste Section.

We trust this submittal, along with the financial assurance update, will satisfy the Department's certification requirements. Please call me at (352) 339-1408 if you have any questions or require any additional information.

Sincerely,



John Arnold, P.E. Date: 3/2/12
State of Florida R.E. No.: 47164
4924 Williams Cemetery Road
Dade City, FL 33525
Tel: (352) 339-1408



attachments
cc: Dominic Jaffee, Angelo's Recycled Materials

Attachment G

Limerock Details and Elevation Observations

Details and elevations of limerock observed during the construction of Cell 6 are based on the daily field observations performed by John Arnold, P.E. Limerock was observed at locations in testing grids B-5, B-4, B-3, and west of B-2, as shown in Figure 1. The lateral and vertical extents of the limerock are based on relative observations and field measurements made from construction grade stakes installed by the land surveyor, Simmons and Beall, Inc. On a weekly basis 10 to 20 grade control stakes were installed in the work area to facilitate construction and observation activities. Elevations refer to NGVD '29 datum.

Limerock in B-5 was encountered at latitude $28^{\circ} 19' 49''\text{N}$, longitude $82^{\circ} 08' 04''\text{W}$ at an elevation of approximately 100' NGVD. As excavation of the overburden progressed westward, the extent of the limerock was determined to be approximately 65' long by 75' wide. The limerock was firm to hard with a clay mantel. No soft zones or voids within the limerock were observed. The limerock pinnacle/outcrop maximum elevation was 115' NGVD (+/-). The west edge of the limerock pinnacle/outcrop extended to an elevation of 79' NGVD (+/-). All limerock exposed at this location was over-excavated to a depth of 3' as required to construct the 3' thick clay barrier layer.

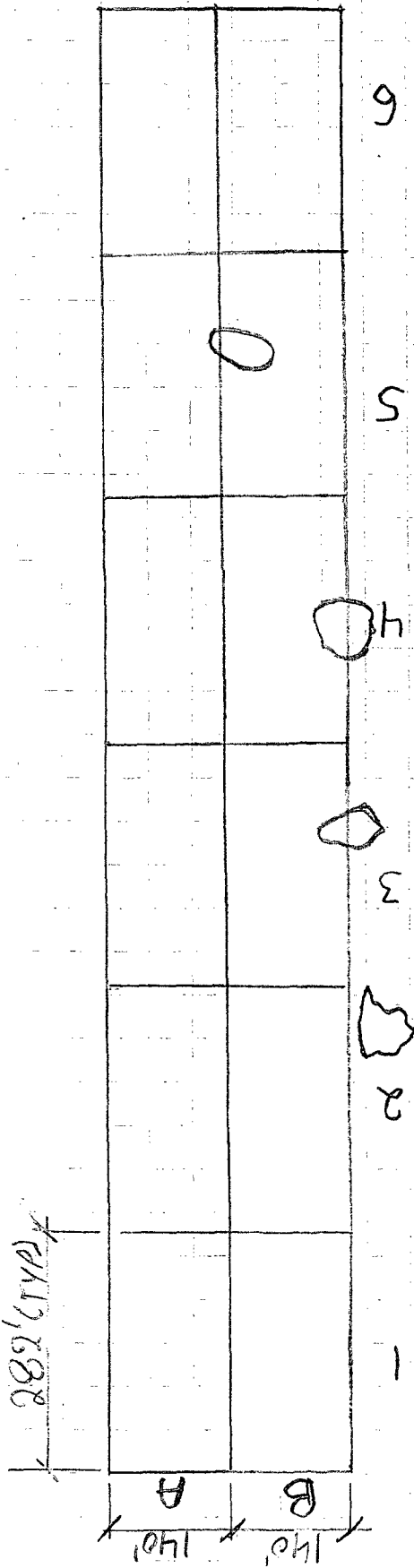
Limerock in B-4 was encountered at latitude $28^{\circ} 19' 52''\text{N}$, longitude $82^{\circ} 08' 04.8''\text{W}$ at an elevation of approximately 108' NGVD. As excavation of the overburden progressed westward, the extent of the limerock was determined to be approximately 75' long by 50' wide. The western most extent of the limerock will be determined at a later date with the mining of the area west of Cell 6. The limerock was firm to hard with a clay mantel. No soft zones or voids within the limerock were observed. The exposed limerock pinnacle/outcrop maximum elevation was 110' NGVD (+/-) and minimum elevation of 79' NGVD (+/-). All limerock exposed at this location was over-excavated to a depth of 3' as required to construct the 3' thick clay barrier layer.

Limerock in B-3 was encountered at latitude $28^{\circ} 19' 54''\text{N}$, longitude $82^{\circ} 08' 05''\text{W}$ at an elevation of approximately 112' NGVD. As excavation of the overburden progressed westward, the extent of the limerock was determined to be approximately 50' long by 80' wide. The western most extent of the limerock will be determined at a later date with the mining of the area west of Cell 6. The limerock was firm to hard with a clay mantel. No soft zones or voids within the limerock were observed. The limerock pinnacle/outcrop maximum elevation was 115' NGVD (+/-) and minimum elevation of 79' NGVD (+/-). All limerock exposed at this location was over-excavated to a depth of 3' as required to construct the 3' thick clay barrier layer.

Limerock in the area west of B-2 was encountered at latitude $28^{\circ} 19' 56''\text{N}$, longitude $82^{\circ} 08' 06.8''\text{W}$ at an elevation of approximately 90' NGVD. As excavation of the overburden progressed westward, the extent of the limerock was determined to be approximately 100' long by 40' wide. The western most extent of the limerock will be determined at a later date with the mining of the area west of Cell 6. The limerock was firm to hard with a clay mantel. No soft zones or voids within the limerock were observed. The limerock pinnacle/outcrop maximum elevation was 112' NGVD (+/-) and minimum elevation of 88' NGVD (+/-). Limerock exposed at this location was over-excavated to a depth of 3' as required to construct the 3' thick clay barrier layer.

Enterprise Class III Landfill
 Cell 6 Limerock Observations

Figure 1



Legend
 Limerock Area

1" = 200'
 N

Background

This report documents the activities and methods of construction for Cell 6 (approximately 10.86 acres in size) in accordance with FDEP Permit No. 177982-008-SC/T3.

Record Drawings of the tops of both the subgrade and 3' clay layer were performed by the Surveyor and evaluated by the Engineer of Record (Engineer) for conformance with the Department requirements. The Record Drawings are provided in Attachment B. The surveys show that the subgrade was over-excavated a minimum of 3-feet and backfilled with clay to the prescribed minimum finished grades, or higher. The clay was placed in three (3) 12-inch thick compacted lifts. Tests for each completed clay lift were performed to ensure compliance with the Department requirements. The top of the finished clay layer is higher than the minimum elevations shown on the approved plans.

Universal Engineering Sciences, Inc. (UES) performed all field and laboratory testing in accordance with the Construction Quality Assurance (CQA) requirements. Simmons and Beall Land Surveyors provided layout control throughout construction activities and performed Record Surveys of both the over-excavated (subgrade) surface and top-of-clay surface. Mr. John Arnold, P.E. served as the professional engineer of record and he, or his designee was on-site at all times during construction to monitor construction activities.

Confining Layer Construction

Cell 6 was over-excavated by a minimum of 3 feet below the finished grade of the top of the clay layer. This was primarily accomplished as part of the mining activities associated with this site. The over-excavation was performed using tracked excavating equipment. The Surveyor provided grade stakes and performed field layout services to verify that the excavation was sufficient to meet the 3-foot over-excavation criteria. In the bottom (excludes southern side slope) of Cell 6, clay was placed and compacted in the over-excavated cell area using 12-inch lifts to construct the confining layer. The side slope along the south side of Cell 6 was constructed in accordance with Details 1A and 1B – “Typical Clay Side Slope Construction Detail” on Drawing C-23 Details, submitted on November 13, 2006 with Permit 177982-007-SC/T3. Clay was placed in several 12 ft wide sections (approximately 2' thick) and compacted up the side slope, with the excess soils removed after construction. Signed and Sealed drawings documenting the As-Built conditions of the tops of both the over-excavation and confining layer are provided in Attachment B.

Clay from on-site was used to construct the confining layer. The clay was installed and compacted to within at least 95% of the maximum dry density in accordance with ASTM D698. The clay for each lift was spread with a bull dozer and compacted with multiple passes of loaded off-road (articulating) dump trucks. The in-place density and moisture content for each lift of the confining layer was evaluated by the Universal representative using nuclear-density testing and Speedy Moisture Content devices, respectively. Cell 6 was subdivided by row and column into 12 sections for testing. Each section was less than 1 acre in size, which was the approved testing frequency used for in-place materials, per lift. Lifts were designated as Lift 1, 2, or 3 (from bottom to top). Columns A and B ran north-south and are 140' wide. Rows 1 thru 6 rows ran east-west and are approximately 282' long. A figure depicting the Cell 6 Test Plan is attached.

The UES field technician collected undisturbed Shelby tube samples for each test section, per completed lift, to verify that the installed permeability met or exceeded the Department approved criteria. Permeability testing was performed on the undisturbed Shelby tube samples in the laboratory using a triaxial-permeameter device. The collected samples were also used to evaluate Atterberg Limits.

Results of the density, permeability, and moisture content tests, including the testing plan key map, are in the Universal Testing Report provided as Attachment C.

Field Inspection, Review, Conformance Assessment, and Major Deviations

John Arnold, P.E., serving as the Engineer of Record, reviewed the UES Testing Report, As-Built (Record) drawings, performed daily field inspections/observations, and prepared and submitted this report and Certification of Construction Completion to the Department for review and approval. In accordance with requirements of Specific Condition 177982-008-SC/T3, Part B, 6.b.:

1. There were no occurrences of sinkholes, soft zones, ravel areas, or unstable conditions associated with construction of Cell 6.
2. There were no submittal or change orders associated with construction of Cell 6.
3. Weekly progress meeting were informal and minutes were not taken.
4. Daily observation reports and photographs of construction activity are attached to this Engineer of Record Narrative Report.

Summary

Review of the UES Testing Report, Record Drawings, and field observations during construction indicate that Cell 6 has been constructed in substantial accordance with the Department approved permit requirements.