

ARDAMAN & ASSOCIATES, INC. PROGRESS MEETING REPORT FOR PINEY POINT GYPSUM STACK SYSTEM CLOSURE		File No.: 06-110A	Page 1 of 5
		Meeting Date: <u>9/20/07</u>	
		Report No: <u>131</u>	Report Date: <u>9/26/07</u>
Project Name:	CLOSURE CONSTRUCTION - OGS & NGS SLOPES, NGS-N RELIEF DITCH, SCP-S AND SCP-N		Project Address: 13300 U.S. Highway 41 North Palmetto, Florida 34221 Manatee County
<u>ATTENDEES:</u> Ardaman: Rob Werner, John Cameron, Tony Deatherage FDEP: CDM: Dean Carter, Mike Cruz, Jack Partin, Jean Wilson, George Curry, Wayne Winner, Steinnes Jordan Comanco: Compass: Jeremy Giles HRK:			

COPY TO: FDEP: Phil Coram, Sam Zamani, John Coates
 Ardaman: Nadim Fuleihan, Rob Werner, Tom Leto, John Cameron, Tony Deatherage
 CDM: Dean Carter, Michael Edgar, Michael Cruz, Dick Slovarp, Jean Wilson
 Comanco: Tom Topp, Paul Moore
 Compass: Tim Morrow, Jeremy Giles
 HRK: Art Roth, Ivan Nance

Next Meeting is Scheduled for Thursday, September 27, 2007
Construction/Engineering Meeting at 9:00 am

1.0 REVIEW MINUTES OF PREVIOUS MEETING

- No corrections were reported.

2.0 SAFETY

- No incidents were reported.

3.0 SUMMARY OF WORK PERFORMED

Compass

- Water usage - no water trucked (well water); no water provided by irrigation.
- Continued washout repairs on OGS-S south slope; also on the NGS east and north slopes.
- Continued hauling soil from the Gulfstream II borrow area; reported 233,310 cy (estimated by truck count) hauled as of 9/15/07.
- Continued placing, grading and compacting soil cover on liner in the Phase II (NGS) stormwater ditches.
- Continued placing grading and compacting soil cover on liner in the SCP-N west compartment.
- Equipment: 6 dump trucks, 2 water trucks, 5 D6 dozers, 2 excavators, 1 motor grader, 3 club carts, 1 skidsteer bobcat, 1 fuel truck - 24 personnel.

Comanco

- Comanco was not represented at the meeting; a written was submitted via email.
- Continued liner deployment and detail work in the SCP-N west compartment. Liner deployed as of 9/18/07 (by Ardaman measurement): 301,943 sf 40-mil textured ; 1,770,769 sf 40-mil smooth; 10,306 sf 60-mil textured; 4,652 sf 80-mil textured.
- Continued miscellaneous repairs (for Compass and CDM) to isolated instances of liner damage.
- Equipment: 1 loader, 2 pick-up trucks, 1 excavator, 1 forklift, 1 QC trailer - 20 personnel.

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CDM

- Continued grading and compacting the SCP-N, and hauling/pushing excess material to the stockpile area; completed finish grading the Sludge Storage Area.
- Continued grading Basin 2 and hauling clean soil to the clean soil stockpile, and started grading the SCP-N north stormwater pond. Continued grading SCP-S south stormwater ditch.
- Continued installation of the SCP-N seepage collection drain system.
- Continued removal of gypsum sediment from the Phase II lined stormwater ditch.
- Equipment: 5 Terex dump trucks, 2 John Deere dump trucks, 2 loaders, 4 D6 dozers, 5 excavators, 2 compactors, 1 water truck - 31 personnel. Demobilized 1 John Deere excavator this reporting period.

4.0 PROJECTED WORK FOR NEXT WEEK

Compass

- Water seeded and sodded areas; repair washouts.
- Continue hauling from the Gulfstream II borrow area and placing in the Phase II stormwater ditches and SCP-N, as available. (Compass temporarily suspended hauling to the SCP on the morning of the meeting; final inspection of the liner within the southern half of the SCP-N east side was undertaken by Ardman after the meeting and the corresponding area was released for soil cover.)

Comanco

- Continue liner deployment (pending subgrade acceptance) and detail work in the SCP-N.
- Start liner in the Sludge Storage Area.
- Continue miscellaneous repairs (for Compass and CDM) to isolated instances of liner damage.

CDM

- Continue grading and compacting the SCP-N, and hauling/pushing excess material to the stockpile area. Continue grading Basin 2, the SCP-N north stormwater pond, and the SCP-S south stormwater ditch.
- Continue seepage collection drain west of SCP-N; install inlet structure #4.
- Continue removal of gypsum sediment from the Phase II lined stormwater ditch.

5.0 SURVEY NOTES

- CDM/Edgemon continued as-built surveys for liner subgrade in the SCP-N, including the Sludge Storage Area.
- As-built survey of OGS-S crest roads were provided by CDM to Ardaman by email on 8/16/07, and were updated with additional data on 8/16/07 as requested by Ardaman. Ardaman responded with additional comments on 9/19/07.
- CDM/Edgemon continued as-built surveys for the SCP seepage collection drain system.
- CDM/Edgemon continued built as-surveys on soil cover in the Phase II (NGS) stormwater ditches

6.0 PROJECT SCHEDULE

- No workdays were lost to rain this reporting period.
- The project schedule will next be updated on the Tuesday before the next Program Manager's meeting.
- CDM indicated that changes are in progress to add activities for the Plant Watershed Reduction, the Buckeye Road Groundwater Collection System, and the NGS crest road closures.
- At the 9/13/07 meeting, FDEP reiterated the importance of soil quantity planning to assure a continuous supply of soil fill as needed for the project. CDM/Compass were requested to provide results of their planned survey (on 9/14/07) of the Gulfstream II borrow area property for determination of remaining fill quantity. CDM/Compass were also requested to keep the Department advised of efforts to modify the ERP, SWFWMD and Manatee County Operating

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permits to include wetland #3 (estimated fill quantity of 100,000 to 150,000 cy). Compass indicated at the 9/13/07 meeting that discussions were in progress with SWFWMD and Manatee County (last meeting was on 9/7/07) - estimated duration to obtain the permit modifications was 2 -3 months at that time.

- Weekend work schedule: CDM and Compass on Saturday.

7.0 SHOP DRAWINGS and SUBMITTALS

All shop drawings and submittals should be submitted to Rob Werner (Ardaman) for approval, with transmittals only copied to John Cameron (Ardaman) and Mike Cruz (CDM).

- Comanco requested last meeting to reverse the direction of liner placement in the SCP Sludge Storage Area. As requested by Ardaman, the panel placement drawing was revised accordingly and submitted for the record by Comanco on 9/16/07.

8.0 TECHNICAL ITEMS/CLARIFICATIONS AND QUALITY ASSURANCE

Current Closure Construction Drawing Versions are summarized below. (See Meeting Minutes No. 122 or earlier for detailed version control background information):

- NGS-S Cap and NGS-N Relief Ditch: Sets dated 9/28/05.
- Phase I Slope Closure: Sets dated 9/28/05; except drawing Nos. C-2, C-5, C-6, D-6, D-9, D-10, D-11, revised date 2/15/06 (various revision nos.).
- Slope Cover Construction - OGS Ponds: Sets dated 12/16/05.
- Phase II Slope Closure: Sets dated 12/22/05; except for drawing nos. C-1 (rev. 2) and D-2 (rev. 1) dated 12/13/06.
- SCP-South Compartment Closure (LPWS): Sets dated 1/11/06; except drawing No. D-6, dated 2/15/06 (Rev. 1). Note that finish grades for the SCP-S Process Water Sump were revised per the drawing provided by Ardaman at the 7/6/06 construction meeting (and attached to meeting minutes) indicating optional design grades for the pond bottom area, which were adopted by CDM/Compass.
- SCP-S, SCP-N & Basin 2 Closure: Sets dated 11/8/08. Note that supplemental drawings were distributed at the 3/29/07 meeting to clarify installation of the SCP-S seepage collection drain system between point nos. 14 and 23 (end of drain). It was noted at the 4/5/07 meeting, the east end of the drain and limits of the lined stormwater ditch will be shortened to accommodate installation of a cut-off wall associated with the proposed Buckeye Road groundwater collection drain. See 8.0 Technical Items - Miscellaneous for more.

Regarding specifications, pertinent Phase III - NGS-S Reservoir Closure Specifications and ITN specification documents shall be used. Pertinent ITN specifications, along with specifications for HDPE panel drains and concrete erosion control mats, were compiled in a specification document (Sections 24, 25, 26, 27, 28, 29 and 30, all revision 0, dated 7/6/05) on 7/7/05. Additional supplemental specifications for "Woven Geotextile" and "General Earthwork Using Soil" (Sections 31 and 32, both revision 1, dated 1/4/06) were distributed at the meeting on 1/5/06.

- Ardaman issued preliminary drawing sets, dated 8/8/07, rev. P1 - For Review, for the Buckeye Road Groundwater Collection System at the meeting. These drawings include the revised design for the south drain and lined ditch segments east of Outfall 003 (for compatibility with the proposed collection drain and cutoff wall).
- Drawings were distributed by Ardaman at the 7/20/06 meeting for additional panel drains required in the following areas: OGS Slope Pond, OGS-N Cap, OGS west and south ditches, and the NGS-S east ditch. Copies of these figures were attached to the electronic version of the meeting minutes.
- Drawings C-1, C-2, D-1, D-2 and D-3 were distributed at the 4/5/07 meeting for the First 50 percent - Plant Watershed Areas. Drawing C-1, revision 1 and a CD were distributed at the meeting for use as an interim grading plan.
- Ardaman distributed a detailed grading plan figure at the 5/10/07 meeting to clarify the transition from typical berm section to outlet pipe profile at the locations of the SCP cap outlets; additional clarifications were sent by email to CDM on 5/21/03 and 5/23/07.

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- Regarding closure of the NGS-N crest roads, Ardaman replied to CDM's proposed location for placement of gypsum to be excavated to lower the crest roads to grade in a 6/6/07 email. A marked-up copy of the proposed typical cross section for placement of gypsum on the north end of the NGS-S east slope was provided at the meeting. See 8.0 Technical Items, Miscellaneous for more.
- Regarding NGS Relief Ditch erosion protection at the discharge end of the NGS-S Cap outlet pipe, a sketch was distributed by email on 7/18/07, showing a revised scheme proposed to accommodate the un-depressed liner.

Quality Control Activities

- Ardaman had 10 technicians on site this reporting period.
- In-place gypsum/soil density tests
Phase II SCP closure - 257 passing, none failing, 8 pending.
- In-place soil cover density tests
Phase II stormwater ditches soil cover - no change - 39 passing, none failing, none pending.
- Liner conformance testing
Table 1 revision 7 was last updated on 8/8/07 for SCP 40-mil smooth and 40-mil textured. Table 2 revision 8 was last updated on 8/29/07 for 80-mil textured. Table 3 revision 10 was updated on 9/19/07 and was distributed at the meeting for 60-mil textured; 108 of 115 rolls have been tested and conditionally approved. CDM/Comanco were requested to submit a small coupon of roll # 126581-07 for re-testing carbon content.
- Liner destructive tests (DT's)
SCP Phase II pond - 195 marked, 171 passing, 2 failing (DT-175, -179), 11 pending.
- Liner anchor trench compaction tests
SCP Phase II pond - no change - 17 passing, none failing, none pending.

Miscellaneous

- Rainfall was reported by CDM at 0.37" from 9/12/07 through 9/18/07.
- CDM and Ardaman continue to monitor the Granddaddy Boil location.
- Protection of the twin 18" gate valves on the NGS-N outlet pipeline and plans for final grading of the existing low area around the valves at the northwest corner on the NGS-N were discussed at the 5/17/07 meeting. Ardaman will provide a sketch for HRK's review and then to CDM for execution.
- Regarding removal and placement of gypsum from the NGS-N northern and western crest roads, Ardaman indicated to CDM by email on 6/8/07 that the capacity of the proposed placement area on the NGS-N northeast slope (station 26+50 to 30+50) is approximately 2,000 cy, whereas the anticipated cut volume is approximately 4,000 cy. CDM indicated at the 9/13/07 meeting that they no longer plan to place excess gypsum at this location. Additional gypsum placement areas have since been identified, including: the gypsum ramp at the northeast corner of the NGS-N (1,500 cy); the wide road west of the Relief Ditch (1,200 to 1,500 cy); NGS-N slope at the northwest corner. It was noted at the 7/5/07 meeting that some gypsum could also potentially be placed on the wide road between the NGS-S Cap and the NGS-S to restore the correct surface gradient. CDM provided survey information to Ardaman by email on 7/25/07. It was noted at the meeting that the timing for final placement and grading of the fill would need to be coordinated with the crest road closure work to avoid contact runoff from the regraded gypsum road into the NGS-S compartment. However, CDM may store some gypsum from the NGS-N dikes for future final crest grade restoration.
- Regarding erosion repairs presently being performed by Compass on the Phase II slopes, it was noted during the 6/21/07 site tour that erosion gullies were being filled with loose dry soil, which has a high erosion potential. It was suggested that CDM/Compass consider wetting, scarifying, dressing and recompacting (tracking in with a dozer) the eroded gypsum surface prior to placement of soil dressing and re-seeding. CDM/Compass concurred and agreed to revisit and revise slope repair protocols. It was noted during the 9/13/07 site tour that Compass' procedure at a location on the east slope was essentially the same as was observed on 6/21/07. CDM/Compass were again requested to revisit slope repair protocols. CDM/Compass will regrade and maintain the gypsum crest road upgradient of slope repair areas to reduce concentrated stormwater runoff.
- It was noted during the 7/12/07 site tour that deep erosion gullies (up to 2' deep) are present at many locations on the lower slope (such as those observed on the NGS-N north slope just above the 1:1 cut). CDM/Compass indicated that

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erosion gullies such as these would be opened up by ripping, followed by wetting and recompaction prior to re-seeding or sodding. CDM indicated that they plan to undertake the repair work once soil cover is placed in the adjacent stormwater ditch (for access). It was noted at the 9/6/07 and subsequent meetings that soil cover placement in the ditches is presently approaching areas which need such repairs.

- It was noted at the 7/5/07 meeting that the 24" NGS-N outlet along the NGS-N west road was gouged at several locations; CDM will be advised whether or not repairs are necessary.
- Monitor Well MW-10A was damaged on or about 7/19/07. Ardaman indicated at the 8/23/07 meeting that the well should be replaced at the same location. CDM indicated that the well will be replaced mid-month by ATI.
- Regarding liner installation for closure of the NGS-N south crest road, acceptable methods for lining around the existing (and in-service) spray system tie-down bollards was discussed at the 8/23/07 meeting. Ardaman will provide a sketch. Additionally, a plan will need to be formulated regarding logistics for handling the SE-1 spray evaporation system header that currently exists along the inboard edge of the crest road.
- SCP drawing C-1 revision 3 dated 9/12/07 was distributed at the 9/13/07 meeting (drawing and CD). The revised grading plan reflects additional location changes at the Stormwater Retention Pond southwest corner and inlet structure #1. A note was also added re abandonment of the existing inlet structure and pipe at this location.
- Ardaman will provide design figures for grading, woven geotextile installation, soil capping and grassing to grade out the NGS-S south slope access ramp to reduce erosion-related maintenance needs.

Acceptances

- From 9/14/07 to 9/19/07, ditch invert and top-of-12-inch-pipe accepted for SCP seepage collection drain installation, from E 481926 (north dike) to point 30 to N 1197874 (west dike).
- On 9/18/07, liner installation, the western half of the SCP-N from sta 34+00 west and sta 19+00 north to the liner anchor trench.
- On 9/19/07, subgrade accepted for liner installation, the SCP Sludge Storage Area.

9.0 COMMENTS by PROGRAM MANAGER

- A proposal for gravel erosion protection, yet to be installed along the inboard slope of the access road at the toe of the OGS-S slope cover, was last discussed by conference call on 2/13/07 between FDEP, CDM and Ardaman. [Ardaman forwarded a sketch to CDM showing a potential cross section revision that may be considered to reduce the required gravel quantity via email on 2/23/07.] It has been agreed that the existing access ramps will be left in place until this work is done. Last discussion with FDEP and Ardaman was on 8/24/07.
- Change order No. 20 is in progress; CDM received a draft from FDEP on 8/6/07. The draft includes quantity adjustments for liner work and soil cover for crest road closures. Last discussion with FDEP and Ardaman was on 8/24/07 - FDEP responded by email on 8/29/07. CDM is waiting on additional input from Compass.
- CDM received an updated cost proposal from Compass for closure of the First 50 percent - Plant Watershed Area, which was forwarded to FDEP on 6/12/07. Last discussion with FDEP and Ardaman was on 8/24/07 - FDEP responded by email on 8/29/07. CDM is waiting on additional input from Compass.
- A proposal is in progress for slurry wall and related work for the Buckeye Road Groundwater Collection System (drawings dated 8/8/07, revision P1).
- A proposal is in progress for closure of the Second 50 percent - Plant Watershed Area, based on quantities provided by Ardaman. CDM is waiting on input from Compass.

10.0 COMMENTS by FDEP

FDEP was not present at the meeting.

11.0 COMMENTS by HRK

HRK was not represented at the meeting.