

ARDAMAN & ASSOCIATES, INC. PROGRESS MEETING REPORT FOR PINEY POINT GYPSUM STACK SYSTEM CLOSURE		File No.: 06-110A	Page 1 of 5
		Meeting Date: <u>9/13/07</u>	
		Report No: <u>130</u>	Report Date: <u>9/19/07</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
ATTENDEES: Ardaman: Nadim Fuleihan, Rob Werner, John Cameron, Tony Deatherage FDEP: John Coates, Sam Zamani CDM: Dean Carter, Mick Edgar, Mike Cruz, Jack Partin, Jean Wilson, George Curry Comanco: Paul Moore Compass: Jeremy Giles, Tim Morrow HRK: Ivan Nance			

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

Next Meeting is Scheduled for Thursday, September 20, 2007
Construction/Engineering Meeting at 9:00 am

1.0 REVIEW MINUTES OF PREVIOUS MEETING

- 8.0 Technical Items - Miscellaneous - CDM advised last meeting that drainage paths had been cleared under the 24" NGS-N outlet along the NGS-N west road.

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.
- Continued hauling soil from the Gulfstream II borrow area; estimated yardage report was not available.
- Continued placing, grading and compacting soil cover on liner in the Phase II (NGS) stormwater ditches.
- Continued placing soil cover on liner in the SCP-N west compartment.
- Continue sod installation in the Phase II (NGS) stormwater ditch.
- 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

- Continued liner deployment and detail work in the SCP-N west compartment. Liner deployed as of 9/11/07: 287,188 sf 40-mil textured ; 1,693,778 sf 40-mil smooth; 2,838 sf 60-mil textured; 4,674 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 - 13 personnel.

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CDM

- Continued grading and compacting the SCP-N, and hauling/pushing excess material to the stockpile area; started finish grading the Sludge Storage Area.
- Continued installation of the SCP-N seepage collection drain system; completed relief drain installation at toe of excess material Stockpile Area.
- Continued grading Basin 2. Started hauling clean soil to stockpile area west of Basin 1.
- Started grading SCP-S south stormwater ditch.
- Continued removal of gypsum sediment from the Phase II lined stormwater ditch.
- Started exterior slope maintenance on gypsum stack. See 10.0 Comments by FDEP for more..
- Equipment: 3 Terex dump trucks, 2 John Deere dump trucks, 2 loaders, 4 D6 dozers, 6 excavators, 2 compactors, 1 water truck - 31 personnel. Demobilized 4 Terex dump trucks, 1 motor grader and 1 D4 dozer 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.

Comanco

- Continue liner deployment and detail work in the SCP-N, pending subgrade acceptance.
- Start liner on the Sludge Storage Area, pending subgrade acceptance.
- Continue miscellaneous repairs (for Compass and CDM) to isolated instances of liner damage.
- Order materials for OGS/NGS crest roads, upon receipt of change order.

CDM

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

5.0 SURVEY NOTES

- CDM/Edgemon continued as-built surveys for liner subgrade in the SCP-N.
- As-built survey of OGS-S crest roads were provided by CDM to Ardaman by email on 8/16/07. Ardaman responded with comments on 8/20/07. CDM provided additional survey data on 9/13/07.
- 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 was updated and distributed by email on 9/11/07on 9/11/07.
- CDM indicated that there are essentially no logic changes since last update, and that schedule changes reflect primarily work progress since last update.

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- Good progress continued with subgrade and liner by CDM and Comanco in the SCP, and with the seepage collection drain north of the SCP-N. Compass continued soil cover as available, and continued sod installation in the Phase II ditches. See 10.0 Comments by FDEP for more.
- It was requested that activities be added to the schedule for the Plant Watershed Reduction, the Buckeye Road Groundwater Collection System, and the NGS crest road closures.
- Weekend work schedule: CDM and Compass on Saturday; CDM will advise re Sunday.

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 to reverse the direction of liner placement in the SCP Sludge Storage Area. Ardaman requested that the panel placement drawing be revised accordingly and submitted for the record.

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 - 252 passing, none failing, none pending.
- In-place soil cover density tests
Phase II stormwater ditches soil cover - 39 passing, none failing, none pending.
- Liner conformance testing
A summary of 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 dated 8/29/07 was distributed at the 8/30/07 meeting for 80-mil textured; 27 of 30 rolls have been tested and conditionally approved. Table 3 revision 9 dated 8/29/07 was also distributed at the 8/30/07 meeting for 60-mil textured; 58 of 115 rolls have been tested and conditionally approved.
- Regarding liner roll #125791-07, Comanco confirmed that it was not and is not on site.
- Liner destructive tests (DT's)
SCP Phase II pond - 195 marked, 148 passing, none failing, none 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 0.06" from 9/5/07 through 9/11/07.
- 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.

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- It was noted that germination on the NGS-N slope has improved, however, 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 during the 7/12/07 site tour). CDM/Compass indicated that 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 meeting, and reiterated at the 9/13/07 meeting, 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.
- Regarding seepage from the Gulfstream II recharge ditch system which was recently observed to result in surface ponding on the Piney Point property in the vicinity of MW-10A, Compass advised that recharge ditch water levels are not specifically addressed in the permit, but had been advised by their consultants to keep the water level as high as practical. Compass agreed that water levels will be controlled to prevent future seepage breakouts.
- 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 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.

Acceptances

- On 9/11/07, liner accepted for soil cover, SCP-N west half, in the east-west direction from the west dike toe to station 34+00 and in the north-south direction from station 19+ 00 to the north dike toe.
- On 9/11/07, soil cover accepted for grassing, Phase II east stormwater ditch from station 150+00 to 141+00, and from station 135+00 to 126+00, except the road crest is too low from station 135+00 to 126+00.
- On 9/10/07, ditch invert and top-of-6-inch-pipe accepted for SCP relief drain system at the toe of the Excess Material stockpile area.
- On 9/11/07 subgrade accepted for liner installation, SCP-N north dike and 50' of pond bottom from station 35+00 to 39+00; also from station 39+00 to 40+00, including structure #5.
- On 9/12/07, ditch invert and top-of-12-inch-pipe accepted for SCP seepage collection drain installation, from station 29+00 to E481931.

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 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.

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10.0 COMMENTS by FDEP

- CDM requested permission at the 8/2/07 meeting to grade out the NGS-S south slope access ramp to reduce erosion-related maintenance needs. Based on discussions with FDEP and HRK, the berms along the sides of the ramp can be graded-out and the area can be grassed. Ardaman will provide design figures for grading, soil capping and grassing that will likely include woven geotextile for erosion control.
- CDM was reminded to submit a proposal for slurry wall and related work as indicated on preliminary drawings sets for the Buckeye Road Groundwater Collection System, dated 8/8/07, revision P1.
- CDM was requested to submit a proposal for closure of the Second 50 percent - Plant Watershed Area, based on quantities provided by Ardaman.
- FDEP acknowledged excellent work progress by CDM/Compass/Comanco since last visit. However, it was noted that the overall objective is watershed reduction, and this cannot be accomplished until grass cover is successfully established on all gypsum slope area, including repair areas as described in 8.0 Technical Items - Miscellaneous.
- FDEP also 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 permits to include wetland #3 (estimated fill quantity of 100,000 to 150,000 cy). Compass indicated that discussions are in progress with SWFWMD and Manatee County (last meeting was on 9/7/07) - estimated duration to obtain the permit modifications is 2 -3 months.
- Regarding grass maintenance by CDM, FDEP and Ardaman recommended that grass areas be mowed on a more regular schedule, to prevent weed establishment and to allow the specified Bermuda grass cover to establish.

11.0 COMMENTS by HRK

- No comments.