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MEMORANDUM

TO: Meeting Attendees
CC: None
FROM: Kyle Baucom, Ken Daly
DATE: April 14, 2009
SUBJECT: **April 6, 2009 Meeting Summary**
Plant Allen Retired Ash Basin (RAB) Ash Landfill – Phase I
Geosynthetics Pre-Construction
Belmont, North Carolina

PRINCIPAL ATTENDEES

Crowder Construction: Brad Hughey

Duke Energy: Ted Manes
Don Scruggs
Andy Tinsley

Earnhardt Grading: Dennis Foltz
Mark LeGrand
Nick Linderman

NCDENR: Larry Frost

Plastic Fusion: Albert Corbitt

S&ME, Inc.: Ken Daly
Kyle Baucom
Cedric Ruhl

This discussion item summary is intended to provide a general summary of the subject meeting and to document decisions and action items. This discussion item summary is based on the notes and memory of the authors. This is not intended to be a rigorous and complete record of the meeting.

DISCUSSION ITEM SUMMARY:

1. Level I Safety Assessment

The Phase I geosynthetics pre-construction meeting began at approximately 10:00 A.M. with a Level I safety assessment from Ted Manes. He informed meeting attendees of construction activity taking place on site.

2. Sign-In and Introduction/Designation of Responsible Personnel

Following the safety assessment, meeting attendees introduced themselves and their respective company (see attached sign-in sheet for details).

3. Environment, Health, and Safety

- 3.1 Ted Manes explained the MICCS program and made all parties aware that any workers on site should go through the MICCS program as well as site specific safety training for Allen Steam Station.
- 3.2 Ted Manes also explained that parking passes can be attained for those coming on site regularly. He explained that company vehicles are permitted throughout the site, while personal vehicles are not. Personal vehicles should be parked in designated areas.
- 3.3 Meeting attendees discussed job hazard analyses (JHAs). Ted Manes discussed that wet ash hauling from Pond 3 should begin shortly as well as dry ash hauling from the silos, which will result in cross traffic.
- 3.4 Ted Manes explained that Crowder will be doing some work around the entrance facility and at some point will need to cross the roads to put the conduits in place.
- 3.5 Ted Manes suggested weekly coordination meetings to review work activities for the week for each party.
- 3.6 Mark LeGrand explained that Earnhardt Grading will still have heavy equipment running to continue with fine grading on the compacted soil liner.
- 3.7 Albert Corbitt explained that Plastic Fusion will be running ATVs, but warned that their most significant hazard is wind getting underneath any geosynthetics.
- 3.8 Ken Daly expressed interest for S&ME on site personnel to attend any safety meetings and sign daily JHAs for Earnhardt and Plastic Fusion.

4. Schedule

- 4.1 Mark LeGrand explained that Earnhardt Grading is in the process of fine grading the compacted soil liner, and that the plan is for Plastic Fusion to deploy geosynthetics as Earnhardt Grading is finishing fine grading with a start date as early as later in the week.
- 4.2 Albert Corbitt explained that Plastic Fusion still needs to get their equipment and more people on site before they can begin deployment. He also explained that

Plastic Fusion will plan on working six days a week at 9 to 10 hours a day (weather permitting) with one crew with a target of six weeks to complete geosynthetics installation.

- 4.3 Dennis Foltz explained that Earnhardt Grading's plan was to fine grade the eastern side of the main center corridor working their way south from the northeast corner and then fine grade with a similar plan on the western side.
- 4.4 Albert Corbitt explained that Plastic Fusion can install approximately four acres of geosynthetics per day.

5. Specification and CQA Plan Overview

- 5.1 Ken Daly explained that Plastic Fusion should keep parallel documentation during geosynthetics installation with daily coordination between S&ME and Plastic Fusion on geosynthetics paperwork.
- 5.2 Ken Daly explained that field density and moisture testing and laboratory permeability testing has met specification requirements and that testing frequencies are up to date for the quantity of material in place.
- 5.3 Mark LeGrand explained that final topography for the compacted soil liner will be performed in sections as Earnhardt Grading is completing fine grading.
- 5.4 Ken Daly explained that compacted soil liner thickness will be based on the elevation difference between subgrade and compacted soil liner survey points at corresponding northing/easting locations.
- 5.5 Ken Daly summarized the expectations for the finished grade on the compacted soil liner explaining that it should be smoothly rolled with no significant ruts, cracks, or protrusions (ie. roots, rocks).
- 5.6 Ken Daly explained that there is still some missing submittal information that S&ME would discuss with Earnhardt Grading at another time.
- 5.7 Albert Corbitt explained that Plastic Fusion would perform two trial seams a day.
- 5.8 Ken Daly reviewed CQA testing protocol and CQA form details. Albert Corbitt and Ken Daly compared CQA field forms. It was agreed that the field forms were similar and each company could use their individual field forms.
- 5.9 Parties agreed that destructive testing would be performed at a frequency of 1 per 500 feet of seam length on 4.5 feet long by 12-inch wide samples. Destructive testing will be performed independently by Plastic Fusion and S&ME with one additional sample as an archive.
- 5.10 Ken Daly reviewed the expectations for panel marking, which includes a panel identification number, seaming technician initials, date/time welded, machine number, testing technician initials, date/time of test, type of test (air or vacuum), and pass/fail result.
- 5.11 Ken Daly explained that Earnhardt Grading is responsible for the as-built geomembrane record drawing, which includes: panel numbers, panel intersections, and destructive test locations.
- 5.12 Ken Daly reviewed the different geocomposites for the LDS and LCS systems, and explained that the geocomposite must be installed in the same direction as

the slope direction for both geocomposite layers (ie. diagonal instead of north-south or east-west directions).

- 5.13 Ken Daly reviewed seaming and ballast loading of the sacrificial geomembrane. It was explained that seaming should follow manufacturer recommendations. Albert Corbitt suggested constructing an anchor trench for the sacrificial geomembrane to help prevent wind uplift.
- 5.14 Ken Daly explained that all geosynthetics documentation must be complete before protective cover can be placed. He also explained that this must be monitored during placement of protective cover to ensure no significant wrinkles of underlying geosynthetics.
- 5.15 Ken Daly explained that all geosynthetics have met manufacturer's quality control and conformance tests results and frequencies.
- 5.16 Ken Daly reviewed drawing details to confirm that geosynthetic installation details were understood.
- 5.17 Ken Daly explained that the leachate detection system sump consists of two hydraulically isolated sumps. Albert Corbitt explained that this could be done by extrusion welding the primary geomembrane to the secondary geomembrane.
- 5.18 Ken Daly explained that prior to placing waste in the cells, the sacrificial geomembrane (over leachate collection corridor, laterals, and sump) should be removed or pulled back to allow contact between the waste and the geotextile (wrapping the drainage aggregate).

6. Roundtable

- 6.1 Albert Corbitt raised the question of whether or not they can back roll geomembrane over the geosynthetic clay liner (GCL) with a rubber tire loader. Ken Daly expressed that this can be done if they can demonstrate that this can be done without rutting the GCL. S&ME will observe GCL condition during deployment to confirm.
- 6.2 Albert Corbitt also raised the question of whether or not they can heat bond adjacent geocomposite panels instead of sewing the adjacent panels. He explained that this would be done by heating the geocomposite with a torch, and it would lay much flatter with this approach. Ken Daly expressed that he is fine with this heat bond on the leak detection system (LDS), and this can also be done on the leachate collection system (LCS) if they can demonstrate that the heat bond does not burn the geocomposite creating holes and subsequent soil infiltration.
- 6.3 Albert Corbitt explained that Plastic Fusion will also be installing the LDS and LCS pipes.
- 6.4 Albert Corbitt explained that Plastic Fusion construction equipment will consist of ATVs and a four-wheeler. Ted Manes explained that the four-wheeler must remain on in the Cell 1 work area since it has no roll bar or seat belts.
- 6.5 Parties discussed storm water management in the Cell 1 sump area during construction. Brad Hughey explained that the pumps will not be working until

the middle of May. Storm water management suggestions including notching the existing berm and covering with geomembrane through this area and down the slope to prevent erosion or installing a down drain.

The meeting adjourned by consensus at approximately 12:30 P.M. Following the meeting, several meeting attendees performed a site walk in the area of Cell 1 compacted soil liner construction.

DRAFT

**PLANT ALLEN RAB ASH LANDFILL – CELL 1 GEOSYNTHETICS
CONSTRUCTION**

PRE-CONSTRUCTION MEETING

SIGN-IN SHEET FOR 4/6/09

Name (Print)	Signature	Company
Kyle Baucom	kbaucom@smeinc.com	S&ME
Ken Daly	kdaly@smeinc.com	S&ME
Cedric Ruhl	cruhl@smeinc.com	S&ME
Mark LeGrand	mark@earnhardtgrading.com	Earnhardt Grading
Larry Frost	larry.frost@ncmail.net	NCDENR
Nick Linderman	nick@earnhardtgrading.com	Earnhardt Grading
Dennis Foltz		Earnhardt Grading
Don Scruggs	dlscruggs@duke-energy.com	Duke Energy
Albert Corbitt		Plastic Fusion
Ted Manes	tamanes@duke-energy.com	Duke Energy
Andy Tinsley	aftinsley@duke-energy.com	Duke Energy