Subject: FW: Gainesville Renewal Energy Center Site Certification Application (PA 09-55) - NED Ground Water Comments for Completeness Determination

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From: Kirts, Christopher
Sent: Monday, December 21, 2009 2:00 PM
To: Dalton, Jessica
Subject: FW: Gainesville Renewal Energy Center Site Certification Application (PA 09-55) - NED Ground Water Comments for Completeness Determination

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From: AlNahdy, Khalid
Sent: Monday, December 21, 2009 7:28 AM
To: Kirts, Christopher
Subject: FW: Gainesville Renewal Energy Center Site Certification Application (PA 09-55) - NED Ground Water Comments for Completeness Determination

Chris,
See Rob's groundwater comments.
Thanks
Khalid

Khalid Al-Nahdy, P.E., MBA
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From: Martin, Robert L.
Sent: Thursday, December 17, 2009 2:33 PM
To: AlNahdy, Khalid
Cc: Davis, John; Martin, Jeff
Subject: Gainesville Renewal Energy Center Site Certification Application (PA 09-55) - NED Ground Water Comments for Completeness Determination

Khalid, please forward this information onto Chris Kirts by 12/18/09. Thank you.

I have reviewed the subject facility's application for a new 116 MW electric power plant received 11/30/09, and pursuant to Rule 62-520.600, F.A.C., it was determined that additional

information is needed before the application can be considered complete. I recommend the following completeness determination questions:

1) Although a zero liquid discharge (ZLD) is proposed for all wastewater, a ground water monitoring plan for Water Facilities Program related activities is requested as an indicator system. In order to provide both pre- and post-operational monitoring, please submit a proposed ground water monitoring plan with a response to this correspondence. This plan should include background and compliance well monitoring.

2) Since there is a ZLD proposed for all wastewaters, a zone of discharge (ZOD) will not be established at this facility for Water Facilities Program related activities. Although the GRU-Deerhaven Power Plant has an existing ZOD that extends to their current property lines, it does not include any new activities.

3) Please clarify if temporary storage areas will be used for the clarifier solids, crystallizer solids \ wet salt cake \ brine concentrate, chemical metal cleaning wastes, floor drainage, or any other wastewater byproducts, prior to transportation to an offsite landfill. Approximate amounts, storage time frames, and details of storage system should be provided, also.

4) On Figure 4.2.0-3, the Detailed Facility Layout does not seem to indicate a boiler blowdown or cooling tower blowdown holding area. Please address this issue and provide details of any applicable holding tanks \ basins.

5) Please provide flow diagrams of all Industrial and Domestic wastewater streams, including all wastewater and water treatment systems, along with locations and details of all storage areas and chemical treatment systems.

6) Section 4.6 of Volume One indicates non-hazardous laboratory waste will be discharged to plant drain and partially used for dust control. Due to the nature of some laboratory waste, it is requested that this waste be routed to the ZLD system, or 100 % used for cooling tower makeup.

7) It is indicated that clay liners are proposed under the fuel storage areas. Please provide details on the clay liners (i.e.: final compaction rates, thickness, final permeability rate, source of clay, type of clay, distance to surficial aquifer from bottom of liners, existing grade, proposed grade, elevations, secondary containment system, etc.). In addition, please include preventative and corrective measures if the liners are breached by equipment, fractured, etc.

8) Please clarify if runoff swales and ponds are proposed around the fuel storage areas, and provide details on Figure 4.2.0-3, or similar figure, including details of any liners. If no runoff swales or ponds are proposed, then provide details of fuel storage area design that prohibits runoff. Use of a layer of compacted wood chips above the clay liner would not provide a sufficient barrier.

9) Due to naturally occurring organic acids that may leach from the wood material in the fuel storage areas, there is concern with the effects of potentially acidic leachate on the clay

liners. Please address this issue, and provide data to support the long-term integrity of clay liners.

10) Please provide source for results in Table 4.3.4-1, Typical Constituent Analysis of Wood Fuel.

11) According to the analysis of the wood fuel, nitrate and sulfate may be constituents of concern. Additional constituents may include total dissolved solids, total phosphate, pH, and specific conductivity. A list of parameters and frequency of monitoring should be included with the proposed ground water monitoring plan.

Rob Martin, P.G.
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