From: Kirts, Christopher
Sent: Tuesday, February 16, 2010 11:23 AM
To: Dalton, Jessica
Cc: Martin, Robert L.; AlNahdy, Khalid
Subject: FW: Gainesville Renewal Energy Center Site Certification Application (PA 09-55) - Ground Water Comments on Incompleteness Response

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From: AlNahdy, Khalid
Sent: Tuesday, February 16, 2010 10:47 AM
To: Kirts, Christopher
Subject: Fw: Gainesville Renewal Energy Center Site Certification Application (PA 09-55) - Ground Water Comments on Incompleteness Response

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From: Martin, Robert L.
To: AlNahdy, Khalid
Cc: Davis, John; Martin, Jeff
Sent: Tue Feb 16 09:58:36 2010
Subject: RE: Gainesville Renewal Energy Center Site Certification Application (PA 09-55) - Ground Water Comments on Incompleteness Response

Khalid, please forward this information onto Chris Kirts. Thank you.

I have reviewed the subject facility's incompleteness response, received 2/10/10. The Ground Water Section responses were sufficient, and no further information is needed. As agreed, no ground water monitoring will be required at the facility, and no Water Facility's ground water monitoring conditions will be needed in the final Site Certification. Thank you.

Rob Martin, P.G.
Professional Geologist
FL Department of Environmental Protection - Northeast District
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7825 Baymeadows Way, Suite B200
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Email: Robert.L.Martin@dep.state.fl.us
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Working Hours: 7:00am - 3:30pm M-F
http://www.floridadep.org/northeast/

From: Martin, Robert L.
Sent: Wednesday, January 13, 2010 10:17 AM
To: 'Jack Doolittle'

Cc: AlNahdy, Khalid; Davis, John; Martin, Jeff; Halpin, Mike; Dalton, Jessica; Kirts, Christopher
Subject: RE: Gainesville Renewable Energy Center Site Certification Application (PA 09-55) - Ground Water Monitoring Determination Items

Jack, it was a pleasure meeting with you last Monday. Although it was discussed in the meeting, please verify that all non-hazardous laboratory waste will not be discharged to the plant drains, or partially used for dust control, as referenced in Section 4.6 of Volume One. 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. As referenced in item 6 of my original RAI questionnaire for the completeness determination review of the facility's application.

We will agree that ground water monitoring will not be required at the proposed power plant, based on the currently proposed plan. Therefore, no additional information will be necessary for my original RAI questionnaire, with the exception to item 6 above. Your official responses to my original RAI questionnaire should state that DEP agreed a response to these items is not required, and include a summary statement stating DEP agreed that ground water monitoring will not be required at this facility. Any changes to the wastewater design that may include ground water discharges must be evaluated by our office for potential ground water monitoring requirements. If you have any questions, please feel free to let me know. Thank you.

Rob Martin, P.G.

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From: Jack Doolittle [mailto:jdoolittle@ectinc.com]
Sent: Tuesday, January 12, 2010 2:55 PM
To: Martin, Robert L.
Subject: Gainesviile Renewable Energy Center

Rob,

Thanks for spending time with me yesterday to discuss your comments on the GREC SCA. As we discussed, the best example of a biomass power plant in Florida that is relatively similar to the GREC is the New Hope Okeelanta power plant in Palm Beach County. The plant was certified by DEP in May 2005. The Okeelanta plant was required to have groundwater monitoring only because it has 4 wastewater holding/percolation

ponds. As required in the conditions of certification, the monitoring wells are located in the vicinity of the ponds, not at the actual power plant and biomass fuel storage facilities. GREC will not have any wastewater ponds since it will be a zero liquid wastewater discharge facility. Also, all chemical and waste storage facilities will be indoor or designed with appropriate spill prevention/containment. Therefore, we do not feel that groundwater monitoring should be required for GREC. The following is the link to the conditions of certification for the Okeelanta plant on the DEP Siting Coordination website

http://www.dep.state.fl.us/siting/files/certification/pa04_46_2005.pdf

Have you had a chance to discuss this issue with John Davis yet? Let me know if you you need anything further on this to reach a decision.

Thanks again for your assistance.

Jack

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jdoolittle@ectinc.com

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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