

Lopas, Sarah

From: Lopas, Sarah
Sent: Friday, July 30, 2010 10:41 AM
To: 'Wylie, Robert R'
Cc: MacLellan, Jay; 'Chamness, Michele A'
Subject: Pond C Audit Info Needs
Attachments: Pond C Audit Info Needs.pdf

Robert,

I just sent this but for whatever reason it's not showing up in my outbox... Interesting. Apologies if you get it 2x.

Anyway – take a look and after you've digested it a bit – let me know if you have questions. We can either try to use our regular Wed call to resolve issues – if the PNNL SMEs are available – otherwise we can arrange for other calls (probably on Monday or Tuesday so you have enough time to prepare).

Thanks!
-Sarah

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**Information Needs
 William States Lee III Nuclear Station, Units 1 and 2
 Combined License Application Environmental Review
 Pond C Site Audit
 August 9-11, 2010**

Info needs #	Information Needs
Alternatives (Alt)	
Alt-1	In the response to RAI 124, Duke provided model inputs used to derive reservoir volumes which relate directly to reservoir sizes, depending on site-specific topography. However, more detail is needed regarding the model input parameters and underlying assumptions in order to fully understand the connection between model inputs and reservoir sizes. Provide an expert who can discuss the how the volume of water and additional storage capacity (i.e., zone of fish refuge) was calculated at the proposed site and each alternative site. The use of maps, diagrams, and equations is encouraged. Provide an expert who can discuss: 1) The Keowee site Memorandum of Agreement with Duke, the U.S. Army Corps of Engineers (USACE), and the Southeastern Power Administration (SEPA); 2) Potential water usage by a new nuclear power station at the Keowee alternative site; and 3) How that water usage could potentially impact the current drawdown limit of 5.4 ft (794.6 ft mean sea level).
Alt-2	Duke's response to RAI 125 provided reconnaissance level information for several resource areas. Please provide an expert who can elaborate and further explain how this information was collected.
Alt-3	Acknowledging that responses to RAIs 127 and 128 are still in progress, provide a knowledgeable expert who can discuss the expected content of the responses and the current status of the investigation.
Alt-4	Duke's response to RAI 129 provided information on future projects within each alternative site region. Provide a knowledgeable expert who can further discuss these projects and Duke's process for indentifying them.

Cultural Resources (CR)	
CR-1	<p>Duke’s response to RAI 141 provided information on development of a cultural resource management plan and agreement between USACE, the South Carolina State Historic Preservation Office (SHPO), and Duke Energy. Please provide a knowledgeable expert to discuss the status and content of this plan and effort, including the following questions:</p> <ul style="list-style-type: none"> • Has USACE agreed to be signatory to this agreement and plan? • Will the plan include corporate procedures for inadvertent discoveries? • Will the plan include a commitment to conduct cultural surveys for future Areas of Potential Effect (APEs)? • Will the plan include a commitment to continue consultation with Tribes that have expressed interest in activities associated with the combined license application? • Will the plan address historic cemeteries (i.e. maintenance of existing fences, general approach for relocation if it is necessary, continued public access) and isolated burial sites (38CK172)? • When is the anticipated completion date for the plan?
CR-2	<p>Duke’s supplemental response to RAI 119 dated July 31, 2009 (ADAMS Accession No. ML092170642) provided a copy of the 2009 Cultural Resources Survey of the Lee Nuclear Station Utilities Project. Four historic cemeteries are identified within the boundaries of the Lee Site (Moss, Stroup, McKown, and unnamed). Neither the McKown Cemetery nor the unnamed cemetery within the direct and indirect areas of potential effect for Pond C and associated developments appear on the map of cultural resources and project APEs provided by Duke Energy in the response to RAI 140. The water pipeline associated with Pond C, also shown on the map included as a response to RAI 140, appears to be located very close to the McKown Cemetery.</p> <p>Duke’s response to RAI 134 indicates that planning activities related to relocation of the Service Family Cemetery, located within the direct effects APE for Pond C, will not occur until 2012. Additional detail is needed to assess this effort.</p> <p>Please provide a knowledgeable expert to discuss historic cemeteries within the Lee Nuclear Station and Makeup Pond C (Stroup, Moss, McKown, Unnamed, Service).</p> <ul style="list-style-type: none"> • Are all of these sites fenced? • Will Duke maintain these fences? • Please confirm the location of the proposed water pipeline for Makeup Pond C in relation to the McKown Cemetery and describe how impacts to this resource will be avoided. <p>How will possible unmarked graves be identified during relocation of the Service Family Cemetery? Will the relocation be conducted by qualified archaeologists? Will a qualified historian be involved to identify descendents and/or relatives? Will the relocation effort be conducted if no relatives are identified? Where will the graves be relocated?</p>

CR-3	Duke's response to RAI 138 indicates that impacts to the possible burial site (38CK172) will be avoided because the new transmission line will span the site. Duke's response to RAI 140 indicates that the entire corridor for the transmission lines will be cleared by heavy machinery and the planners do not know the exact location of each power pole excavation. Please provide a knowledgeable expert to discuss plans for avoiding impacts to the possible burial site (38CK172) located in the direct effects APE for Transmission Line Route O.
CR-4	<p>Duke's response to RAI 47 provided very limited information on historic and cultural resources identified at the three alternative sites (Keowee, Perkins, Middleton Shoals). Additional reconnaissance level information is needed to adequately assess potential impacts. Please provide a knowledgeable expert to discuss historic and cultural resources within the three alternative sites, including:</p> <ul style="list-style-type: none"> • Complete records/file searches at South Carolina and North Carolina SHPO offices to identify any previously recorded archaeological and architectural resources and cultural resource projects that have been conducted at all three of the alternative sites. • Provide any background or reference material used to develop the environmental report information for Perkins and information related to the "Indian Circle" identified there. Were records and site files at the South Carolina SHPO consulted to determine the nature and location of this resource?
CR-5	Please provide a knowledgeable expert to conduct a tour of historic cemeteries within the Lee Nuclear Station and Makeup Pond C, the 99 Islands Dam, and Hydro Plant.
Terrestrial Ecology (TE)	
TE-1	In it's response to RAI 166, Duke indicates that where possible it would conduct project construction activities outside the migratory bird nesting season. Provide someone knowledgeable in construction and inundation impacts to terrestrial and wetland resources to discuss the timing of such activities and alternatives if the nesting season cannot be avoided.
TE-2	Duke's responses to RAIs 166 and 184 indicate that to date it has not developed any plans to mitigate impacts to resources under the jurisdiction of the South Carolina Department of Natural Resources (SCDNR) or USACE. SCDNR submitted a letter to NRC on July 27, 2010, which addresses the subject of mitigation of terrestrial biological resources in the Pond C area. SCDNR plans to have a representative at the site audit. Provide someone knowledgeable in project impacts to terrestrial and wetland resources to discuss potential mitigation options with SCDNR and NRC.
TE-3	Duke's response to RAI 175 indicates that to date it has not developed any plans to monitor impacts to resources. Provide a knowledgeable expert to discuss potential monitoring as part of the discussion requested in information need TE-2 on mitigation of terrestrial biological resources.

TE-4	In it's response to RAI 179, Duke indicates that the Rare, Threatened, and Endangered Species portion of the transmission line survey report dealt with herpetofauna and birds. However, the transmission line survey report provides no information on methods, surveys, or results for such taxa. Provide such information so that it may be included in the EIS.
TE-5	In it's response to RAI 183, Duke provided a concurrence letter from U.S. Fish and Wildlife Service regarding potential impacts in the Pond C area, along the railroad corridor, and along the transmission line corridors, but not on the Lee site. Provide a copy of such a letter for the Lee site if one exists.
TE-6	During the tour of the Pond C study area, please tour some of the areas of ecological significance, e.g., areas identified for noteworthy plant community and species occurrences (including the Georgia aster) in <i>A Botanical Inventory of Make-up Pond C Study Area; Cherokee County, South Carolina</i> .
Aquatic Ecology (AQ)	
AQ-1	Duke's response to RAI 143 provided justification for breaching all farm ponds in the vicinity of Make-Up Pond C. Breaching the dams will affect the environment in different ways depending on the method employed. Provide an expert who can discuss the process for breaching the farm pond dams.
AQ-2	Duke's response to RAI 146 did not provide information on potential mitigation plans because permits have not yet been issued. An indication of how preliminary talks with the permitting agencies are being conducted would be helpful. Provide an expert who can discuss Duke's interaction with permitting agencies such as SCDNR and USACE in ecological and hydrological subject areas. Ideally this expert would be involved in discussing mitigation issues with the agencies, as well.
AQ-3	<p>Duke's response to RAI 148 indicates the Make-Up Pond A intake system will utilize a dual flow-type traveling screen. Provide an expert who can discuss the function and location of the Make-Up Pond A dual flow-type traveling screen, fish return equipment, and spray wash system. Use of visual aids (maps, diagrams) is encouraged. If calculations were used to estimate through-screen velocities, please provide that documentation (this information need is related to information need SW-5, below).</p> <p>Duke indicates the Make-Up Ponds B and C intakes will utilize passive wedge wire cylindrical drums but did not describe the screen slot size. Provide an expert who can discuss the function and location of Make-Up Pond B and C passive wedge wire cylindrical drum intake screening system. Use of visual aids (maps, diagrams) is encouraged. Please provide clarification of the wedge wire screen slot sizes. If calculations were used to estimate through-screen velocities, please provide that documentation. (This is also related to SW-5, below).</p>

AQ-4	Duke’s response to RAI 152 indicates they have not yet received any environmental permits. Provide an expert who can discuss the current status of any environmental permit applications submitted (or to be submitted) by Duke. If applications have been submitted, please provide copies for review.
Hydrology (SW)	
SW-1	Duke’s response to RAI 123 provides information on the results of the water balance model but does not provide information on the development details on the water balance model. Please provide a knowledgeable expert who can discuss the aspects of the model including, for example, pond stage-volume and stage-area relationships, constraints on water exchange volumes between ponds, and between ponds and the Broad River.
SW-2	Duke’s response to RAI 124 provides an estimate of the future water demands but does not provide information on how this estimate was developed and the sensitivity of the model result to this future demand. Please provide a knowledgeable expert who can discuss the basis for this estimate.
SW-3	Duke’s response to RAI 130 provides information on the plans to curtail withdrawal from the Broad River during periods of drought, but does not provide information on curtailment in a quantitative manner (i.e., does “curtail” mean no withdrawal or withdrawal reduction?). Please provide a knowledgeable expert who can discuss this quantitatively.
SW-4	Duke’s response to RAI 130 provides information on the plans to curtail withdrawal from the Broad River during periods of drought but does not provide information on the resumption of withdrawal from the river and the possibly increased withdrawal when refilling the pond(s). Please provide a knowledgeable expert who can discuss this quantitatively.
SW-5	Duke’s response to RAI 148 provides information on the plant intakes and outfalls from the ponds and Broad River but does not provide information on the expected flows through the pipes connecting the ponds when refilling the ponds. Please provide a knowledgeable expert who can discuss this quantitatively.
SW-6	Duke’s response to RAI 176 provides the rationale for modified drawdown of site ponds and the use of the water budget model but does not provide a description of the details of the model. Please provide a knowledgeable expert who can discuss this topic.
SW-7	Duke’s responses to several RAIs provides a description of how Pond C would be utilized in drought periods, but they do not refer to the development of a drought contingency plan, nor specifically mention compliance with South Carolina’s Water Withdrawal Act 2010. Please provide a knowledgeable expert who can discuss plans for addressing these issues. This discussion may be of interest to ecology and cultural resource staff as well.

Land Use (LU)	
LU-1	Duke’s response to RAI 195 provides information on the acquisition of property for Pond C. Please provide a knowledgeable expert who can discuss the acquisition of the remainder of land needed for Pond C.
Socioeconomics/Environmental Justice (SE)	
SE-1	Duke’s response to RAI 200 provides information on Pond C construction workers. Please provide a knowledgeable expert who can clarify whether Pond C construction workers are in addition to, or a subset of, the Lee Nuclear Station construction workforce.
SE-2	Duke’s response to RAI 201 provides information on SR 329 realignment but not on new access roads. Please provide a knowledgeable expert who can discuss the realignment of SR 329, new Pond C access roads, and construction deliveries for Pond C.
SE-3	Duke’s response to RAI 203 provides information on recreation and subsistence-based activities within the Pond C area, but does not discuss methods used to determine whether subsistence activities were occurring. Please provide a knowledgeable expert who can discuss recreation and subsistence activities.
SE-4	Please provide a knowledgeable expert to discuss the breakdown in information need SE-1 of construction and preconstruction activities with regard to socioeconomics and environmental justice.
Fuel Cycle (HP)	
HP-1	In Revision 1 of the Environmental Report, Section 5.7.5 Radioactive Effluents, the second sentence of the first full paragraph on page 5.7-5 states “The organ-specific dose weighting factors from 10 CFR 20 are applied to the bone and lung doses to estimate the 100-year dose commitment from Rn-222 to the whole body.” Have someone available to discuss the statement on total dose in relation to the dose values in Table 5.7-3, which appear to be taken directly from NUREG-1437 Table 6.2.