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December 11, 2008

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U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Duke Energy Carolinas, LLC
William States Lee III Nuclear Station - Docket Nos. 52-018 and 52-019
AP1000 Combined License Application for the
William States Lee III Nuclear Station Units 1 and 2
Response to Request for Additional Information
Ltr# WLG2008.12-14

Reference: Letter from J.M. Muir (NRC) to B.J. Dolan (Duke Energy), *Request for Additional Information Regarding the Environmental Review of the Combined License Application for William States Lee Nuclear Station Units 1 and 2*, dated August 21, 2008

This letter provides the Duke Energy response to the Nuclear Regulatory Commission's (NRC) request for the following additional information (RAI) item listed in the reference letter:

RAI 78, Terrestrial Ecology

The response to this NRC request is addressed in the enclosure which also identifies any associated changes that will be made in a future revision of the William States Lee III Nuclear Station application.

If you have any questions or need any additional information, please contact Peter S. Hastings at 980-373-7820.

Bryan J. Dolan
Vice President
Nuclear Plant Development

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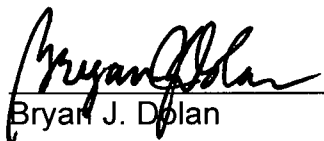
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Enclosure:

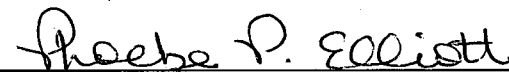
1. Response to RAI 78, Terrestrial Ecology

AFFIDAVIT OF BRYAN J. DOLAN

Bryan J. Dolan, being duly sworn, states that he is Vice President, Nuclear Plant Development, Duke Energy Carolinas, LLC, that he is authorized on the part of said Company to sign and file with the U. S. Nuclear Regulatory Commission this supplement to the combined license application for the William States Lee III Nuclear Station and that all the matter and facts set forth herein are true and correct to the best of his knowledge.


Bryan J. Dolan

Subscribed and sworn to me on December 11, 2008


Notary Public

My commission expires: June 26, 2011

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xc (wo/enclosure):

Luis Reyes, Regional Administrator, Region II
Loren Plisco, Deputy Regional Administrator, Region II
Stephanie Coffin, Branch Chief, DNRL
Gregory Hatchett, Branch Chief, DSER

xc (w/enclosure):

Linda Tello, Project Manager, DSER
Brian Hughes, Senior Project Manager, DNRL

Lee Nuclear Station Response to Request for Additional Information (RAI)

NRC Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-78

NRC RAI:

Provide the foreseen frequency of dredging, dredging footprint (ft²), dredging depth (ft) and quantity of dredged material (yds³) to be removed from the Broad River intake and discharge structures and for the intake structures of Make-up Ponds A and B. Indicate the location(s) for dredged material deposition in each case.

Duke Energy Response:

Broad River Intake Structure

Based on an analysis performed by Colorado State University in 1978, it is estimated that approximately 150 yd³ of sediment (primarily medium sands) will need to be dredged annually from the Broad River intake structure.

Broad River Discharge Structure

A discussion of sedimentation in the vicinity of the discharge and the need for dredging was provided in the response to ER RAI 11 (Letter No. WLG2008.11-16, submitted November 26, 2008).

Make Up Pond A

Based on total suspended sediment samples collected in the Broad River during 2007, an evaluation of sediment deposition rates was performed for Make Up Pond A (Pond A). Sediments entering Pond A from the proposed location of the discharge structure (denoted by the red cross-hatched area) will generally settle in the areas graphically depicted in red on Figure 1. These areas are deeper holes within the pond with Area 2 being the deepest at a maximum depth of 30 ft. (ft.) and Areas 1 and 3b ranging from 9 to 13 ft. in depth. Based on pumping rates of 78 and 104 cubic feet per second (cfs) into Pond A, it is anticipated that dredging will be necessary every 15 – 26 years. The dredging footprint at 517 ft. mean sea level (msl) is expected to be approximately 689,400 square feet (ft²) and the maximum dredging depth is expected to be 30 ft. with the average being in the range of 9 to 13 ft. The quantity of dredged material is estimated to be 407,400 cubic yards (yds³).

Note that due to the fine particle size and associated settling rates, sediment particles will not deposit inside the discharge structure itself. Therefore, it is not anticipated that the discharge structure in Pond A will need to be dredged out.

Make Up Pond B

Based on an average pumping rate of 78 cfs, approximately 64% of the sediment pumped into Pond A from the Broad River intake structure will settle out in Pond A. During refill operations, the pumping rate will be 104 cfs and only 47% of the sediment pumped into Pond A will settle out due to the higher flow rate. The remainder will either pass through the process water systems at Lee Nuclear Station, or will be pumped up to Make Up Pond B (Pond B) during refill operations. Refill operations will occur to

replenish water levels in Pond B either due to evaporation or usage during low flow periods where water cannot be withdrawn directly from the Broad River. Sedimentation rates are highly dependent on how often refill operations are necessary. Based on historical flow records for the Broad River basin, refill operations for Pond B will occur 8 days per year on average. At this rate, dredging will need to occur every 68 years.

Sediments entering Pond B from the proposed location of the discharge structure will generally settle in the area graphically depicted in red on Figure 2. The dredging footprint at 520 ft. msl is expected to be 222,400 ft² and the maximum dredging depth is expected to be 8 ft with average depth of 4 ft. The quantity of dredged material is estimated to be 38,600 yds³.

Note that due to the fine particle size and associated settling rates, sediment particles will not deposit inside the discharge structure itself. Therefore, it is not anticipated that the discharge structure in Pond B will need to be dredged out.

Disposal of Dredged Material

All dredged material will be either re-used as a beneficial material or disposed of at an approved off-site landfill.

Associated Revision to the Lee Nuclear Station Combined License Application:

None

Associated Attachments:

Attachment 78-1: Figure 1 Make Up Pond A Dredging Footprint

Attachment 78-2: Figure 2 Make Up Pond B Dredging Footprint

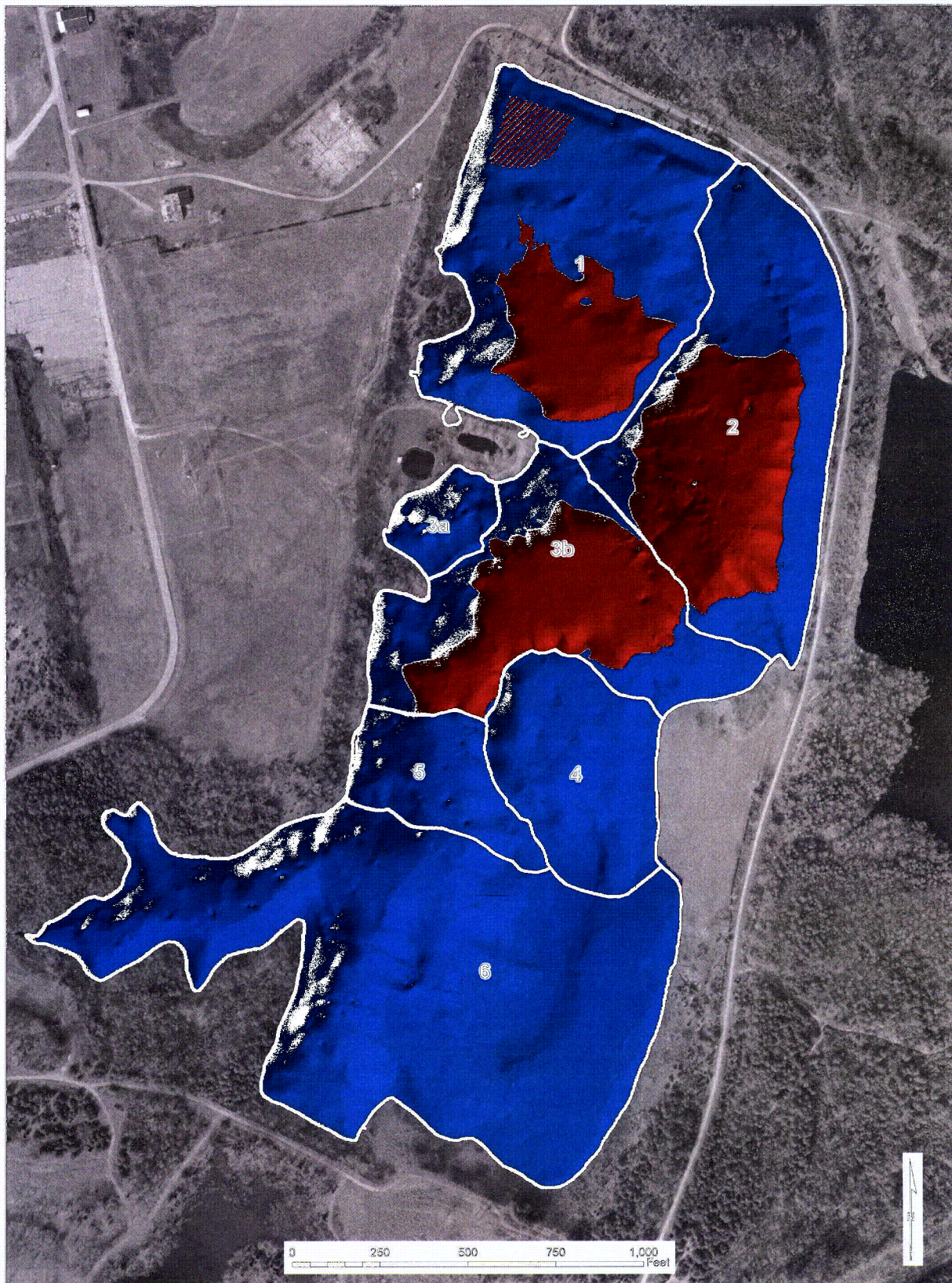


Figure 1 Make Up Pond A Dredging Footprint

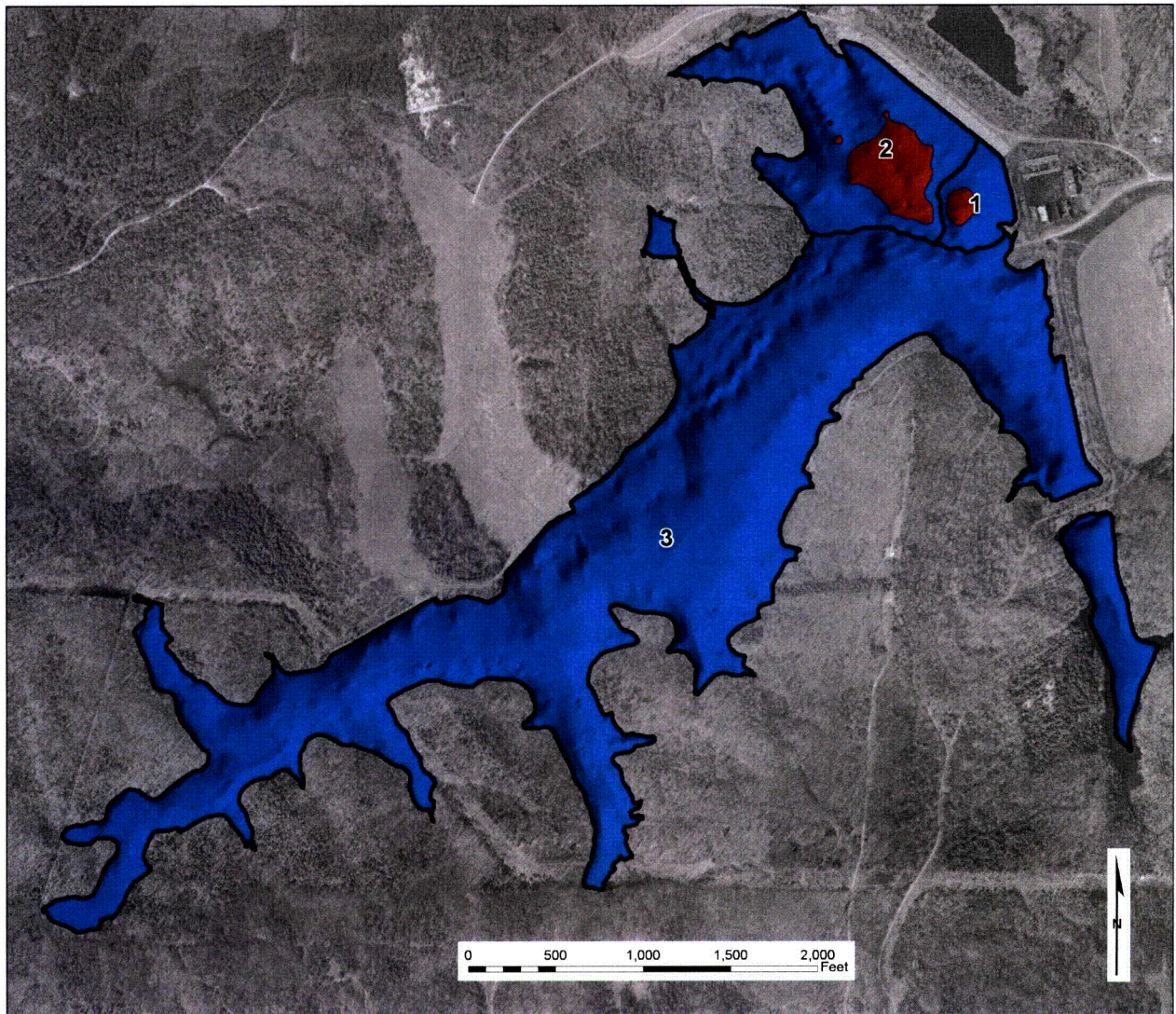


Figure 2 Make Up Pond B Dredging Footprint