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December 3, 2008

Document Control Desk 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# WLG2008.12-04

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) requests for the following additional information (RAI) items listed in the reference letter:

RAI 55, Aquatic Ecology RAI 56, Aquatic Ecology

Responses to these NRC requests are 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.

Bry#n J.(Dolan Vice President

Nuclear Plant Development

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Enclosure:

1. Responses to RAI 55, Aquatic Ecology and RAI 56, Aquatic Ecology

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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.

Myunthirlum Bryan J. Dofan
Subscribed and sworn to me on <u>December 3, 2008</u> Thoche P. Edistb
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 Thomas Bergman, Deputy Division Director, DNRL Stephanie Coffin, Branch Chief, DNRL Gregory Hatchett, Branch Chief, DSER

xc (w/enclosure):

Linda Tello, Project Manager, DSER Brian Hughes, Senior Project Manager, DNRL Enclosure No. 1

Duke Letter Dated: December 3, 2008

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

RAI Letter Dated: August 21, 2008

Reference NRC RAI Numbers: ER RAIs 55 and 56

NRC RAI:

ER RAI 55: Provide the finalized Make - Up Ponds A and B intake structure designs and

updated descriptions when they are available. Include information on any fish - friendly parts of the design, or indicate why they are not included in the final

design.

ER RAI 56: Provide the finalized cooling water intake and discharge structure design and an

updated description when it is available. Include information on traveling screens and parts of the design that make it "best available technology" for protecting

aquatic organisms.

Duke Energy Response:

Preliminary drawings of the intakes and discharge structures are attached to this response. Drawings WLG-7500-CCH-001 and WLG-7500-CCH-002 provide existing conditions, plan arrangement, plan view, and sections for the river water intake. The intake will be equipped with traveling screens, with 3/8 inch or smaller mesh, installed in the vertical position and designed for continuous operation. The screens are of the modified "Ristroph" design with Fletcher type fish-friendly buckets on each screen basket. The screens have dual pressure spray header systems with separate fish and debris troughs. The troughs are supplied with supplemental flow sufficient to move the fish and debris through the separate return troughs. The fish return trough will exit the intake on the downriver side and return the fish to the section of the Broad River. The river water traveling screens are designed to provide a through velocity that is less than 0.5 foot per second. After passing through the intake the water is conveyed by a pipe to the northwest corner of Make-Up Pond A where it is discharged into Make-Up Pond A through a surface outfall.

Drawings WLG-7510-CCH-001 through WLG-7510-CCH-003 describe the Make-Up Pond A intake structure. The structure is currently designed with removable panel screens with a 3/8 inch or smaller mesh and a through-velocity that is less than 0.5 foot per second. Duke is currently evaluating the civil, mechanical and electrical requirements for the use of traveling screens similar to the traveling screens described for the river water intake.

Drawings WLG-7520-CCH-001 through WLG-7520-CCH-004 describe the Make-Up Pond B intake structure. The structure is currently designed with a submerged inlet (see WLG-7520-CCH-002 and WLG-7520-CCH-004) approximately 50 feet below the surface and removable panel screens at the intake structure (see WLG-7520-CCH-003) with a 3/8 inch or smaller mesh and a through-velocity that is less than 0.5 foot per second. Duke is currently evaluating the civil, mechanical and electrical requirements for the use of traveling screens similar to the traveling screens described for the river water intake.

Duke Letter Dated: December 3, 2008

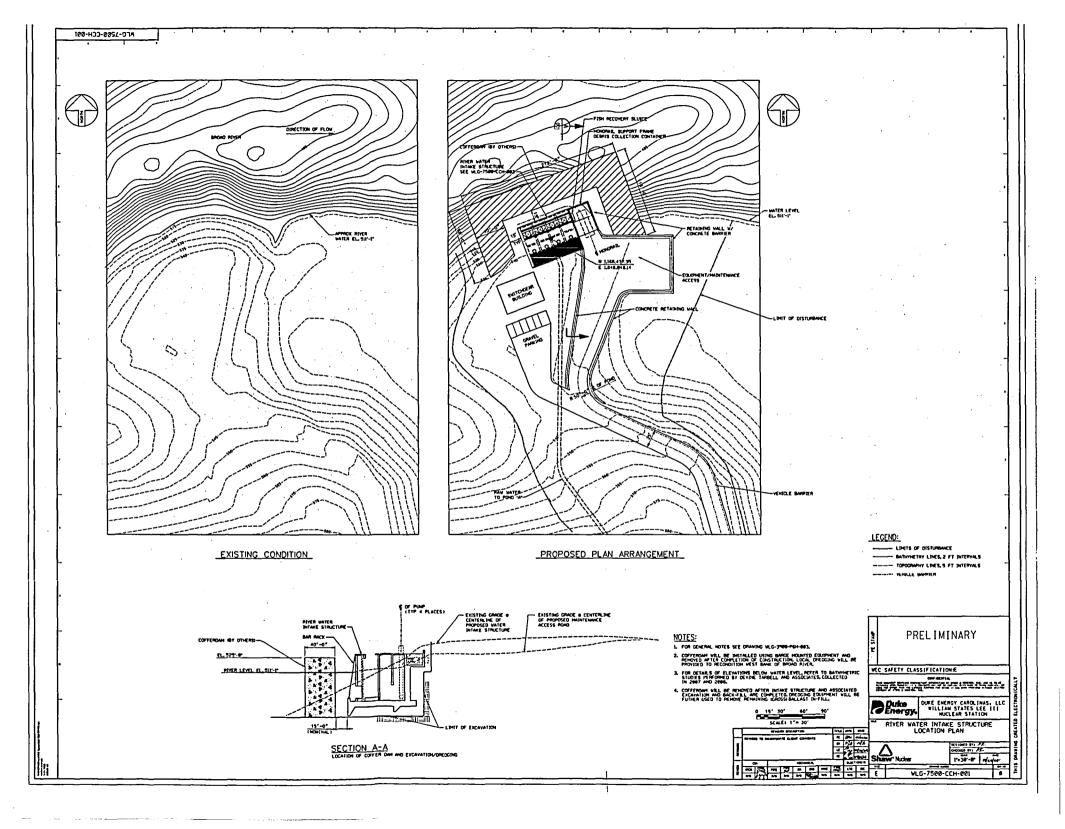
Drawings WLG-3900-P6H-001 through WLG-3900-P6H-003 describe the wastewater discharge structure and its mountings on the Ninety-Nine Islands Dam. The discharge water will be transmitted through a 36-inch diameter high density polyethylene (HDPE) pipe anchored to the Ninety-Nine Islands Dam approximately five feet below the full pond elevation to the diffuser. The design of the diffuser is not defined at this time (e.g., the diffuser drawing detail in WLG-3900-P6H-002 does not depict the final arrangement of holes in the diffuser). The final design is expected to be similar to that shown in ER Figure 5.3-4.

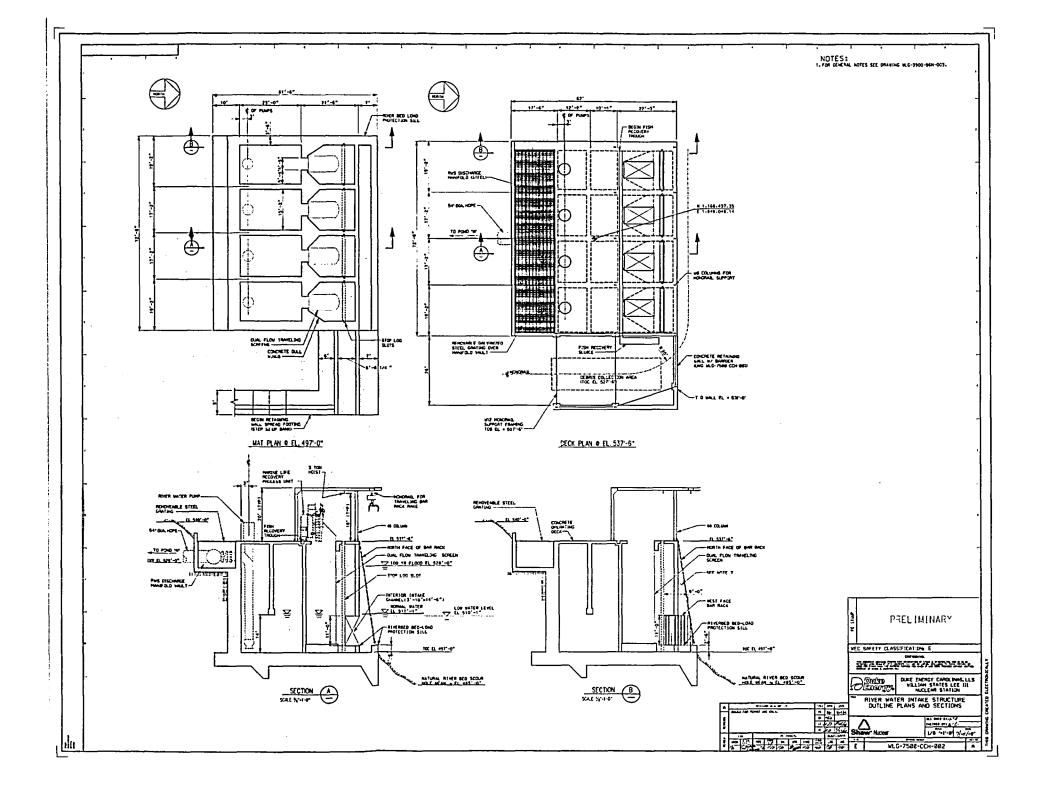
Associated Revisions to the Lee Nuclear Station Combined License Application:

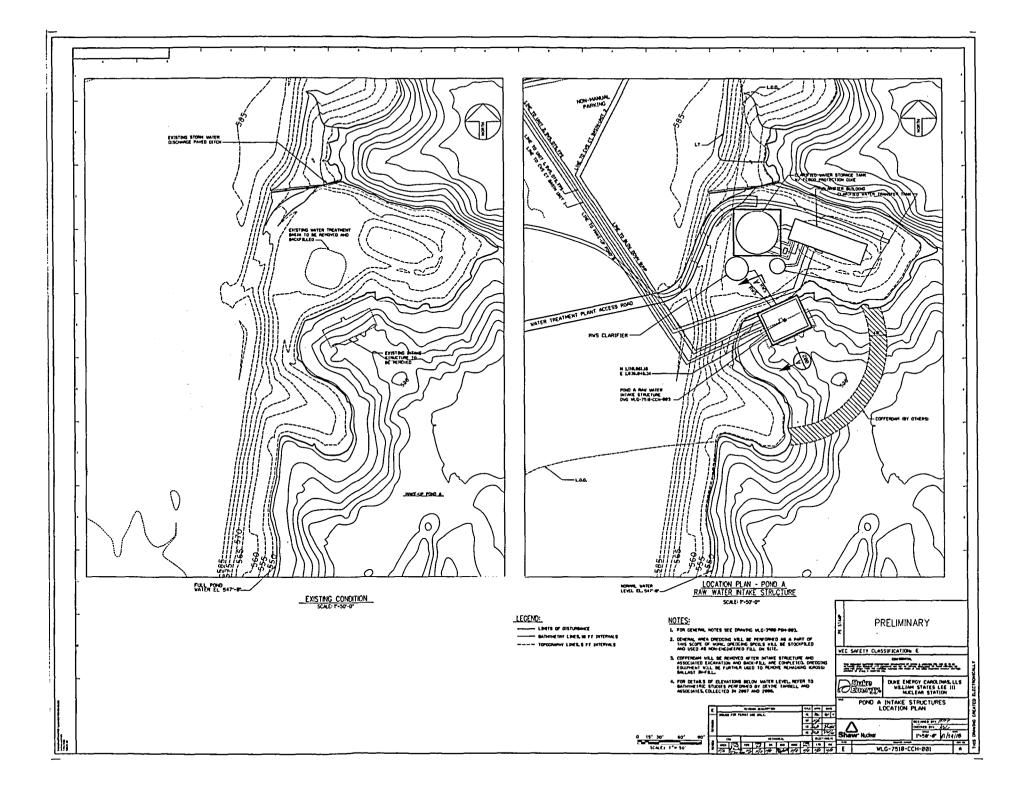
None

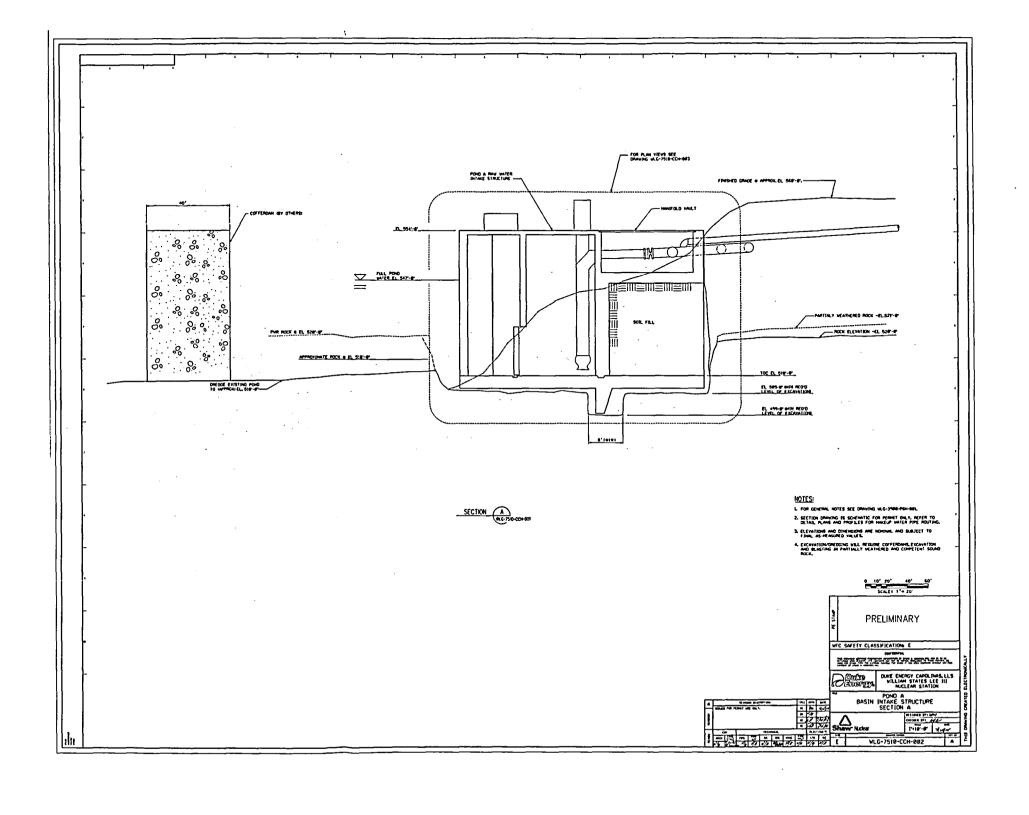
Associated Attachments:

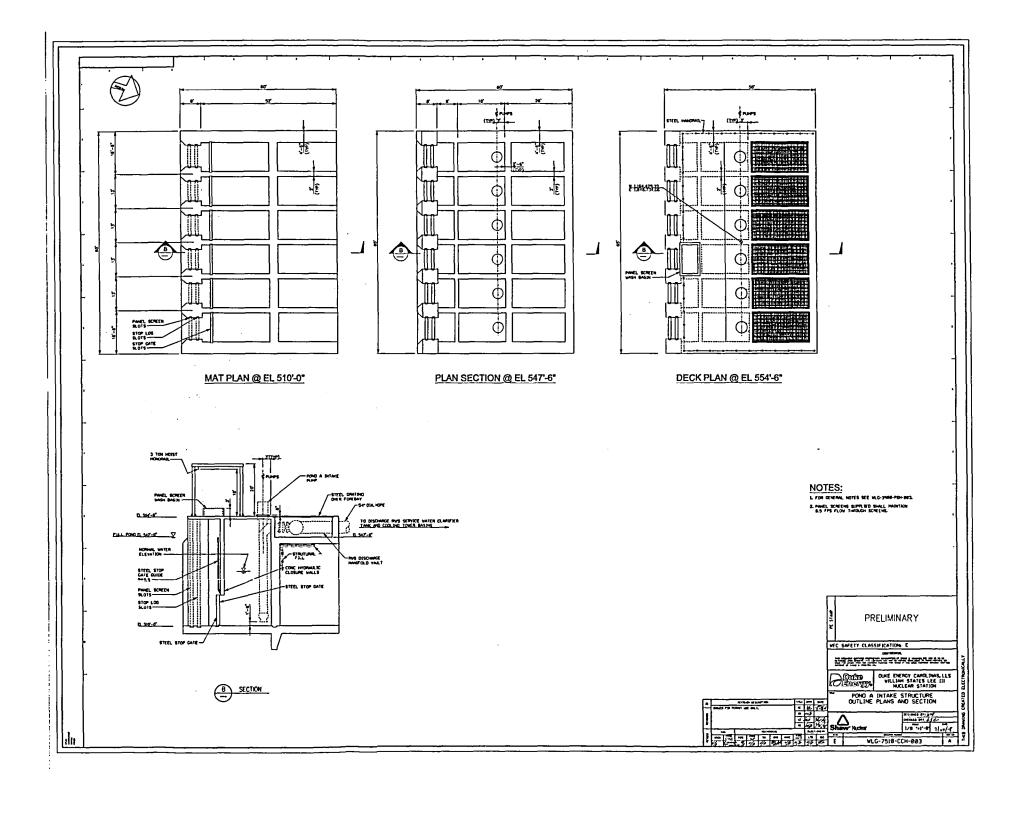
Attachment 55/56-1	WLG-7500-CCH-001, River Water Intake Structure Location Plan
Attachment 55/56-2	WLG-7500-CCH-002, River Water Intake Structure Outline Plans and Sections
Attachment 55/56-3	WLG-7510-CCH-001, Pond A Intake Structure Location Plan
Attachment 55/56-4	WLG-7510-CCH-002, Pond A Basin Intake Structure Section A
Attachment 55/56-5	WLG-7510-CCH-003, Pond A Intake Structure Outline Plans and Section
Attachment 55/56-6	WLG-7520-CCH-001, Pond B Intake Structure Location Plan
Attachment 55/56-7	WLG-7520-CCH-002, Pond B Intake Structure Section
Attachment 55/56-8	WLG-7520-CCH-003, Pond B Intake Structure Outline Plans and Sections
Attachment 55/56-9	WLG-7520-CCH-004, Pond B Intake Drop Inlet Plans and Sections
Attachment 55/56-10	WLG-3900-P6H-001, WWS Discharge General Area Plan
Attachment 55/56-11	WLG-3900-P6H-002, Discharge Pipe Support Details
Attachment 55/56-12	WLG-3900-P6H-003, General Notes Raw Water System and Waste Water System

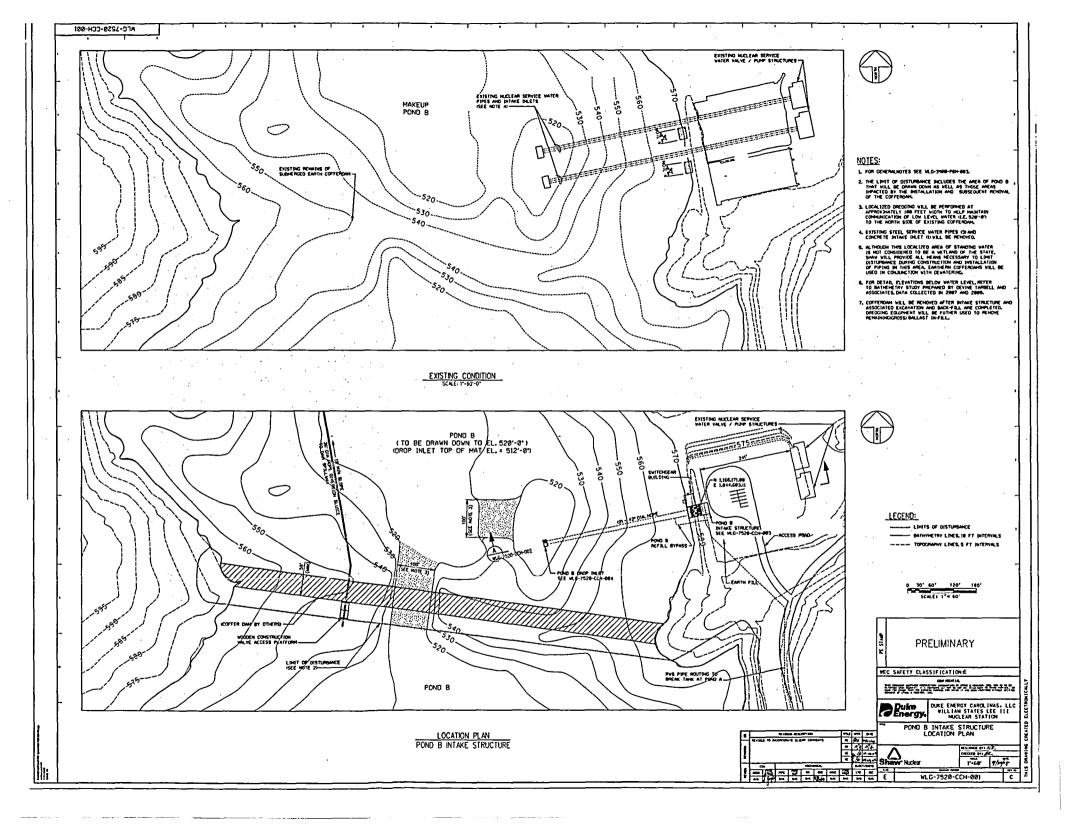


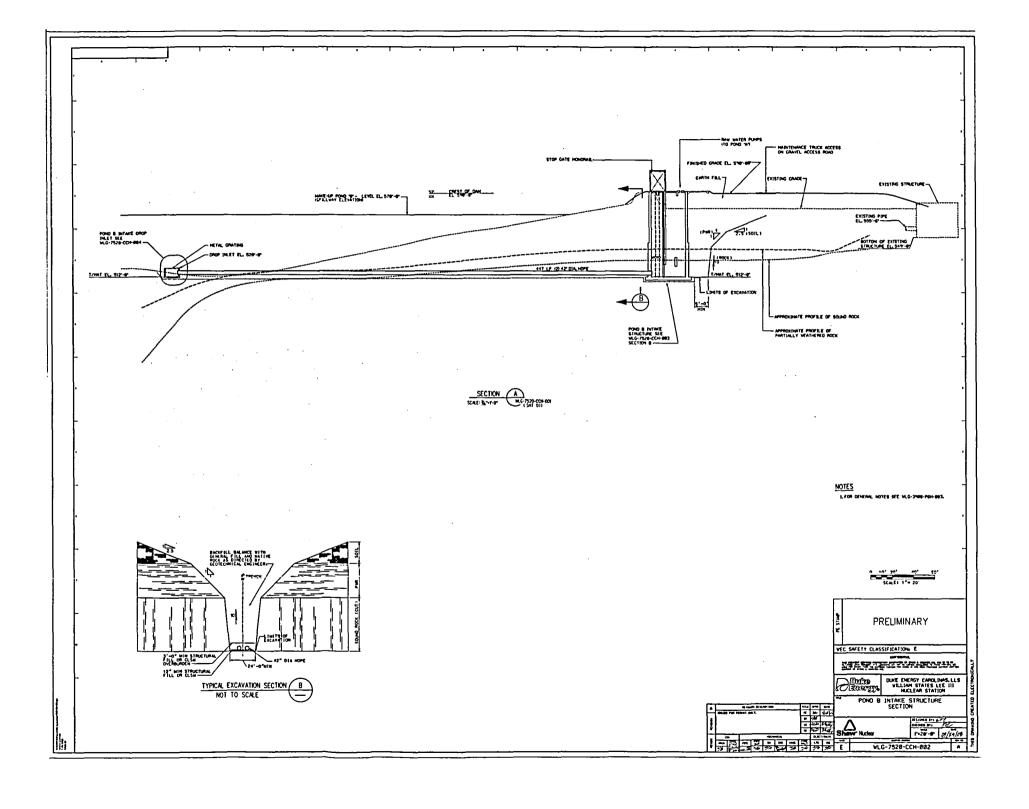


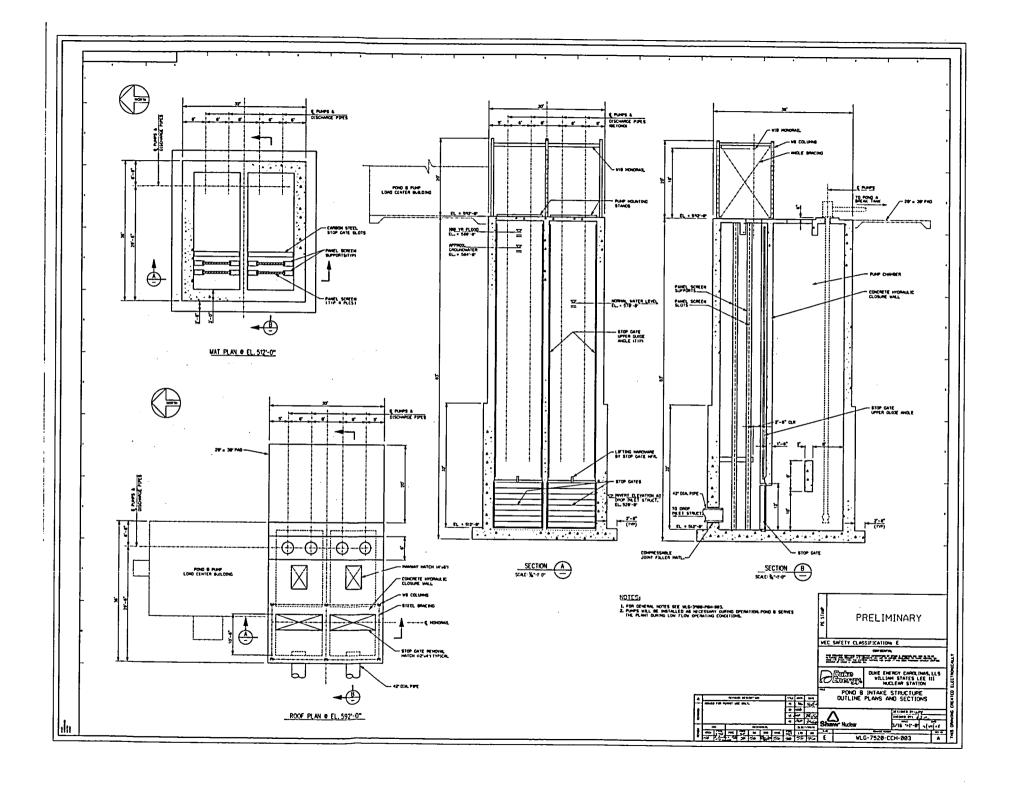


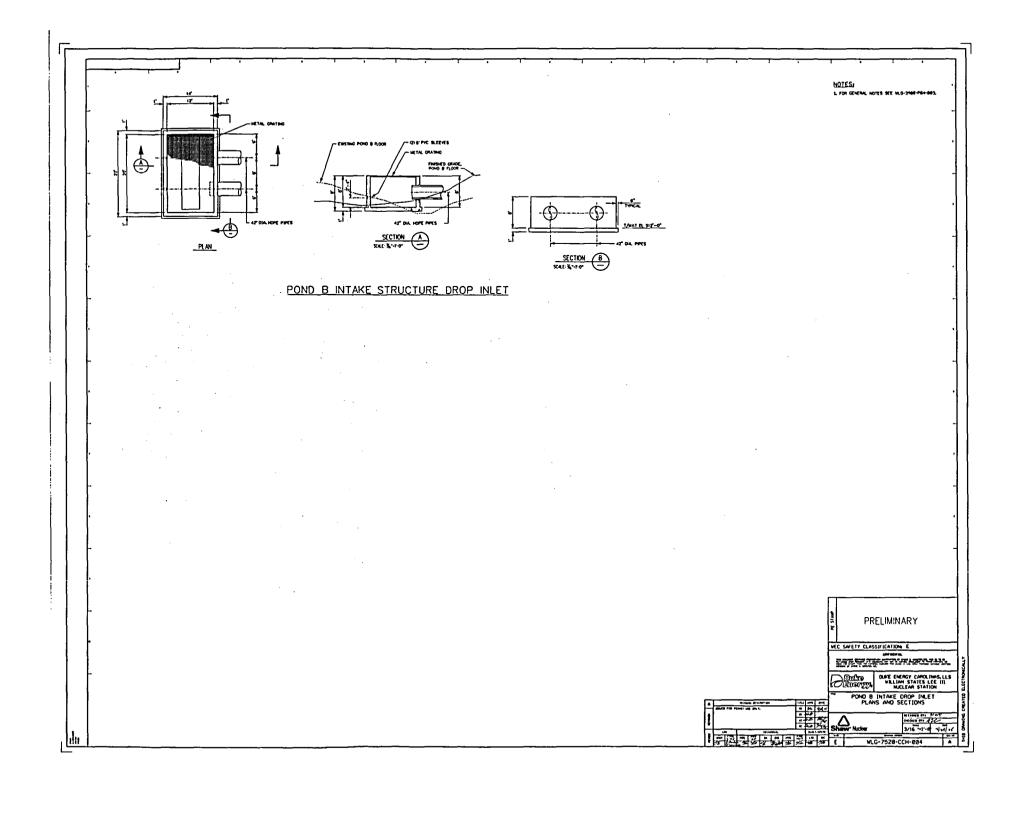


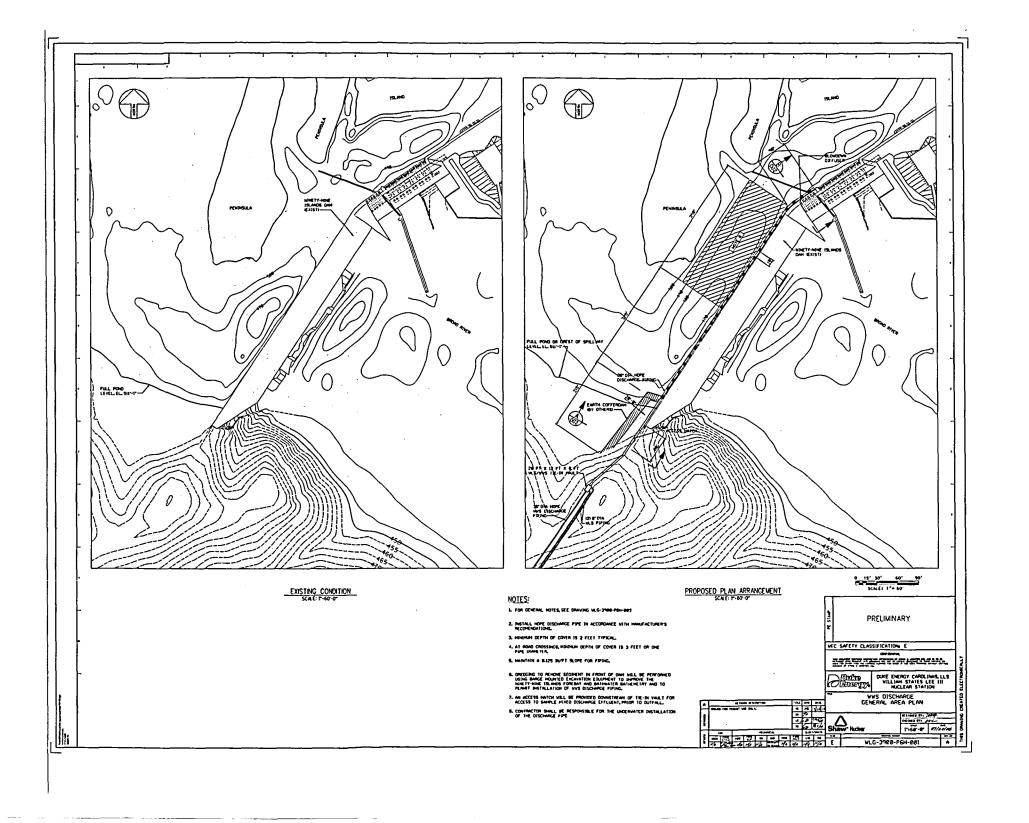


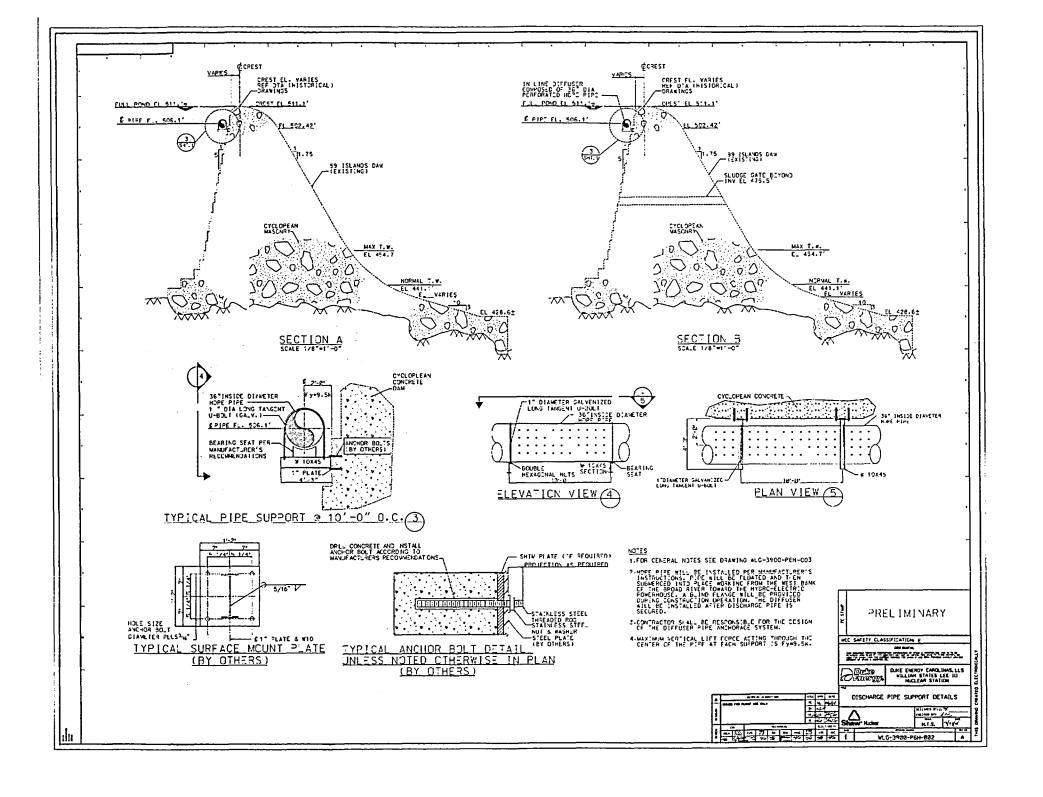












- INTAKE WATER STRUCTURES ARE DESIGNED IN ACCORDANCE WITH REFERENCE SPECIFICATION WLG-RWS-M1-001.
- BASEMAP, CONTOUR DATA AND BATHYMETRY SUPPLIED BY DEVINE TARBELL AND ASSOCIATES, COLLECTED IN 2007 AND 2008.
- 3. REFER TO SITE PLAN DRAWING WLG-7500-X2H-001 FOR LOCATION OF INTAKE AND DISCHARGE STRUCTURES.
- 4. REFER TO MECHANICAL DRAWING WLG-G1-P6-001 FOR PIPING LAYOUT PLANS.
- 5. ALL ELEVATIONS AND DIMENSIONS SHOWN ON THE DRAWINGS ARE NOMINAL AND SUBJECT TO CHANGE DURING FINAL DESIGN.
- 6. CONCRETE WORK SHALL CONFORM TO PROJECT SPECIFICATIONS AND BUILDING CODE REQUIREMNTS FOR REINFORCED CONCRETE (ACI-318-05) AND THE SOUTH CAROLINA BUILDING CODE AND SPECIFICATIONS FOR STRUCTURAL CONCRETE.
- 7. SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 4,000PSI AT 28 DAYS.
- 8. REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60000PSI CONFORMING TO ASTM A615 GRADE 60.
- 9. ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:

W SHAPES: ASTM A572 GRADE 50 OR ASTM A992

PLATES: ASTM A36

- 10. ALL PLATES SHALL BE 1 INCH THICK UNLESS OTHERWISE NOTED.
- 11. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1.
- 12. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL TEMPORARY STRUCTURES

