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ND-11-0008

U.S. Nuclear Regulatory Commission
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Southern Nuclear Operating Company
Vogtle Electric Generating Plant Units 3 and 4 Combined License Application
Revision to Final Safety Analysis Report Sections 2.5 and 3.7

Ladies and Gentlemen:

By letter dated March 28, 2008, Southern Nuclear Operating Company (SNC) submitted an application for combined licenses (COLs) for proposed Vogtle Electric Generating Plant (VEGP) Units 3 and 4 to the U.S. Nuclear Regulatory Commission (NRC) for two Westinghouse AP1000 reactor plants, in accordance with 10 CFR Part 52. As the current Reference COL applicant, SNC is supplementing the Reference COL application (R-COLA) by providing a change to Chapters 2 and 3 of the Final Safety Analysis Report (FSAR) to address comments from a teleconference with the NRC staff on December 15, 2010. The FSAR Chapters 2 and 3 changes are provided in the enclosure to this letter and will be incorporated into the VEGP Units 3 and 4 COL Application in a future revision.

Related to these changes, SNC has conducted a New and Significant review for the heavy lift derrick (HLD) counterweight and ring foundation and concluded there are no additional environmental impacts beyond those previously discussed in the Early Site Permit (ESP) Final Environmental Impact Statement (EIS).

If you have any questions regarding this letter, please contact Mr. Wes Sparkman at (205) 992-5061 or Ms. Amy Aughtman at (205) 992-5805.

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NKO

Mr. B. L. Ivey states he is a Vice President of Southern Nuclear Operating Company, is authorized to execute this oath on behalf of Southern Nuclear Operating Company and to the best of his knowledge and belief, the facts set forth in this letter are true.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY



B. L. Ivey

Sworn to and subscribed before me this 12th day of January, 2011

Notary Public: Nancy Louise Henderson

My commission expires: March 23, 2014



BLI/SBT

Enclosure:
VEGP Units 3 and 4 COL Application Revision to FSAR Chapters 2 and 3 Regarding
Heavy Lift Derrick Foundation

cc: Southern Nuclear Operating Company

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Mr. J. T. Gasser, Executive Vice President, Nuclear Operations (w/o enclosure)
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Mr. T. E. Tynan, Vice President - Vogtle (w/o enclosure)
Mr. M. K. Smith, Technical Support Director (w/o enclosure)
Mr. D. M. Lloyd, Vogtle 3 & 4 Project Support Director (w/o enclosure)
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Mr. M. J. Ajluni, Nuclear Licensing Manager
Mr. T. C. Moorer, Manager, Environmental Affairs, Chemistry and Rad. Services
Mr. J. D. Williams, Vogtle 3 & 4 Site Support Manager
Mr. J. T. Davis, Vogtle 3 & 4 Site Licensing Supervisor
Mr. W. A. Sparkman, COL Project Engineer
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Southern Nuclear Operating Company

ND-11-0008

Enclosure

VEGP Units 3 and 4 COL Application

Revision to FSAR Chapters 2 and 3

Regarding Heavy Lift Derrick Foundation

NuStart Qb Tracking No. 4248

NRC RAI / OI Number: n/a

SNC intends to utilize a heavy lift derrick (HLD) during construction activities, of which the counterweight and ring foundation will be abandoned in place. The installation of this counterweight and ring foundation is planned to occur prior to COL issuance as a preconstruction activity. This activity was discussed with the NRC staff in a teleconference on December 15, 2010. In order to complete the staff's review of this activity, additional information was requested to be included in the FSAR that describes the configuration of the HLD counterweight and ring foundation that will be abandoned in place after construction and an evaluation of any impacts to the seismic analysis.

SNC Response

SNC proposes the changes identified below in the associated VEGP COL Application revisions in response to this request. FSAR Subsection 2.5.4 will be revised to include a new Subsection 2.5.4.13 and Figure 2.5-203 to describe the HLD counterweight and ring foundation to be abandoned in place. FSAR Subsection 3.7.1.1.1 will be revised to conclude that the presence of the HLD counterweight and ring foundation will have no effect on the VEGP site-specific 3D SASSI SSI analyses and describe the technical justification for abandoning in place the HLD counterweight and ring foundation. These changes will be included in a future COLA revision.

Reference to the Vogtle Early Site Permit Application (ESPA) Site Safety Analysis Report (SSAR) is understood to mean Revision 5, as submitted by Southern Nuclear Operating Company (SNC) on December 23, 2008, and as approved by the NRC in the Vogtle Early Site Permit and Limited Work Authorization (ESP-004), dated August 26, 2009 (ADAMS Accession Numbers ML092290130 and ML092290157) including the following three Amendments as identified below:

- Amendment 1 to Early Site Permit No. ESP-004, dated May 21, 2010 (ADAMS Accession Number ML101400509)
- Amendment 2 to Early Site Permit No. ESP-004, dated June 25, 2010 (ADAMS Accession Number ML101760370)
- Amendment 3 to Early Site Permit No. ESP-004, dated July 9, 2010 (ADAMS Accession Number ML101870522)

This response is PLANT-SPECIFIC.

Associated VEGP COL Application Revisions:

1. COLA Part 2, FSAR Chapter 2, Subsection 2.5.4.13 will be added (with an LMA of VEGP SUP 2.5-1) to read:

Add the following after Subsection 2.5.4.10.3 of COLA Part 2, FSAR:

2.5.4.13 Heavy Lift Derrick Counterweight and Ring Foundation

The ring foundation for the heavy lift derrick (HLD) and counterweight are abandoned in place below grade following construction of Units 3 and 4. The HLD rails are removed from the ring foundation after construction of Units 3 and 4. The (HLD) counterweight and ring foundation are shown on Figure 2.5-203.

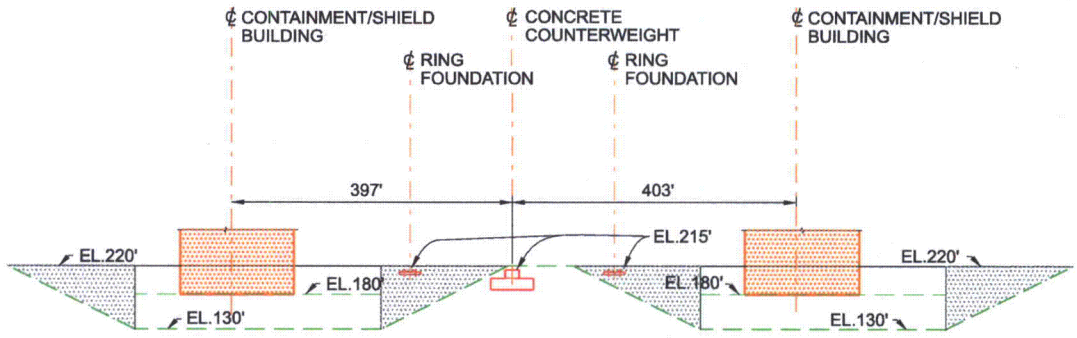
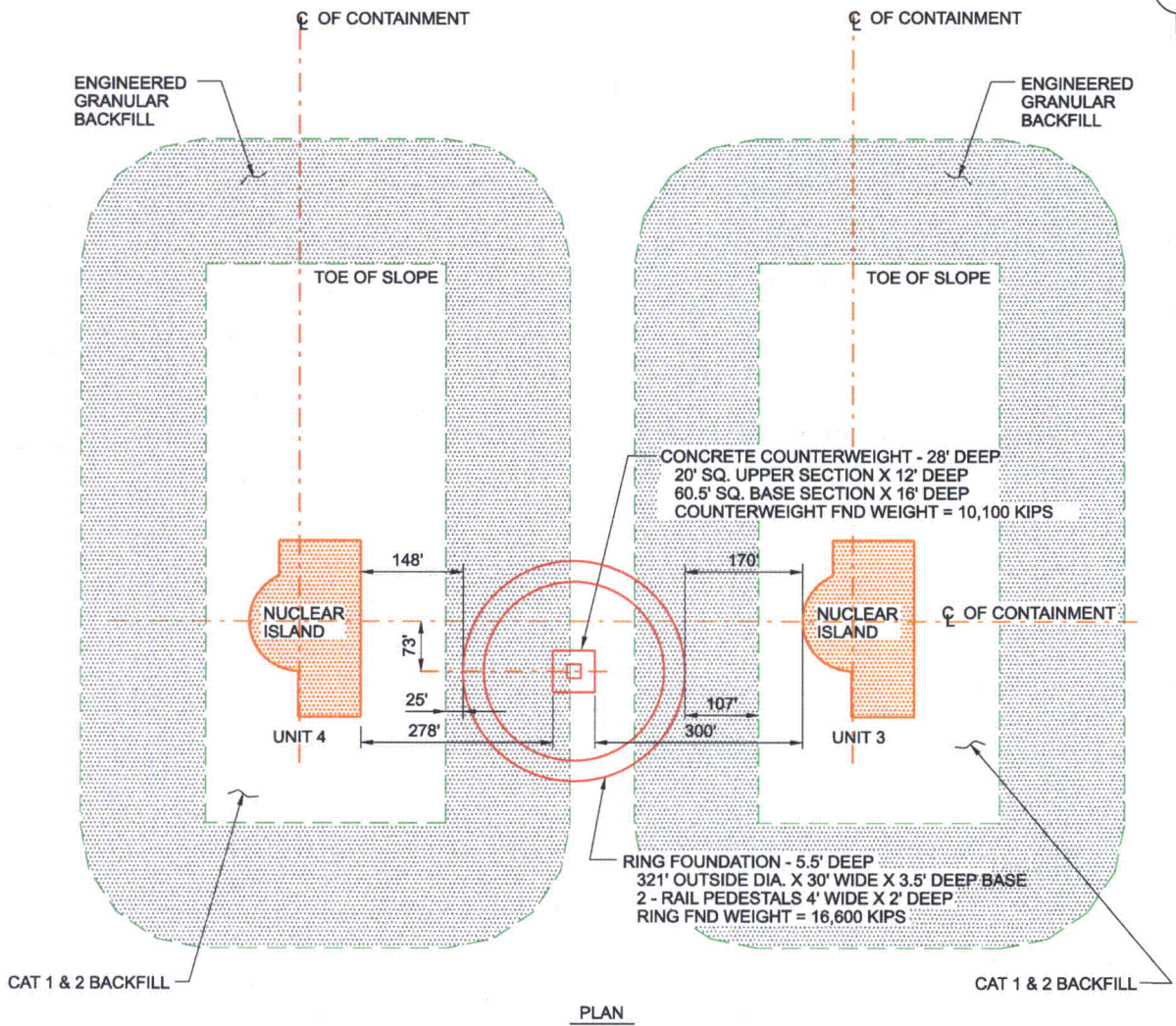
The top of the HLD counterweight and ring foundation concrete is located at approximately elevation 215 ft MSL, which is five feet below the nominal site grade of 220 ft MSL. The HLD counterweight and ring foundation are not visible following the installation of the roads, drainage provisions, and ground surface cover.

The HLD counterweight and ring foundation are below the surface drainage system provisions and do not affect the runoff for the local PMP flood event discussed in Subsection 2.4.2.3. The HLD counterweight and ring foundation are located above the design ground water elevation of 165 ft MSL, and do not impact the hydrological analyses described in ESPA SSAR Subsections 2.4.12 and 2.4.13.

The safety-related portion of the excavations is filled with Category 1 backfill to the NI basemat and with Category 2 backfill to grade. The side slopes are filled with engineered granular backfill (EGB), which is non-safety related and does not affect the static or seismic performance of the safety-related structures.

As shown on Figure 2.5-203, the HLD counterweight and ring foundation does not extend into the safety-related backfill of either Unit 3 or Unit 4. The ring foundation does extend into the EGB backfill of the excavations for both Unit 3 and Unit 4. The counterweight overall depth is approximately 28 ft. and is below the EGB backfill of the excavation for Unit 4. Subsection 3.7.1.1.1 provides the results of the evaluation which confirms that the presence of the HLD counterweight and ring foundation has no effect on the site specific seismic analyses.

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2. COLA Part 2, FSAR Chapter 2, Section 2.5, will be revised (with an LMA of VEGP SUP 2.5-1) to include new Figure 2.5-203 as follows:
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HEAVY LIFT DERRICK FOUNDATION SECTION

NOTE:
 ALL DIMENSIONS, WEIGHTS, AND
 DISTANCES ARE APPROXIMATE

FIGURE 2.5-203 HEAVY LIFT DERRICK FOUNDATION LOCATION

3. COLA Part 2, FSAR Chapter 3, will be revised to add as third and fourth paragraph under Subsection 3.7.1.1.1 (with an LMA of VEGP SUP 2.5-1) to read:
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As discussed in Subsection 2.5.4.13, the heavy lift derrick (HLD) counterweight and ring foundation were abandoned in place after construction. The HLD counterweight is outside the defined excavation of Unit 3 and Unit 4 and therefore does not need to be evaluated. Portions of the HLD ring foundation extend over the Unit 3 and Unit 4 excavation slopes within the engineered granular backfill (EGB); but outside the Category 1 and 2 backfill. The presence of the HLD ring foundation has no effect on the VEGP site-specific 3D SASSI SSI analyses of the Nuclear Island (NI) presented in Appendix 3GG based on the following information.

The VEGP site-specific 3D SASSI SSI of the NI is consistent with the accepted DCD 3D SASSI NI modeling approach of not including structure-to-structure interaction of the adjacent structures such as the Annex Building and the Turbine Building; and therefore the more distant abandoned HLD ring foundation has even less structure-to-structure effects on the NI seismic response. Additionally only a portion of the abandoned HLD ring foundation is within a limited area of the non-safety EGB over the slopes of the excavation. It has been demonstrated in the ESP as amended that a large variation of the EGB properties does not significantly affect the site-specific seismic analyses; therefore, it is concluded the abandoned portion of the HLD ring foundation in the EGB has no significant effect on the site-specific seismic analyses.
