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UNITED STATES NUCLEAR REGULATORY COMMISSION
Protecting People and the Environment

Vogtle ESP Mandatory Hearing

March 23-25, 2009

NRC Staff Presentation Topic #5

LWA and Site Redress Plan

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Presenter:
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Background:

- PNNL team leader for Vogtle ESP EIS
- Ph.D. in Botany, Washington State University
- 25 years professional experience
- 15 years experience with NRC environmental reviews (Terrestrial resources for ~ 17 reviews, Team Lead for 7 reviews)

LWA Request

- Original ESP application included request for "LWA-1" activities (now "preconstruction").
- List of requested LWA activities changed between the DEIS and the FEIS.
- Southern added "LWA-2" activities to its request in August 2007 (App. Rev. 2-S1).
- Preconstruction activities dropped from LWA request in November 2007 (App. Rev. 3).

LWA Activities Initially Requested Under 10 CFR 50.10(d)

- Engineered backfill
- Retaining walls (mechanically stabilized earth walls)
- Lean concrete backfill
- Mudmats
- Waterproof membrane
- Framework for the nuclear island base slab
- Reinforcing steel and embedments for the nuclear island base slab

Installation of Rebar

- Subsequent to issuance of the FEIS, Southern withdrew its request to install rebar as part of its LWA activities.
- This change had no impact on the conclusions in the environmental review.

LWA Prerequisites

"Prerequisite" in this case means activities that SNC would perform prior to initiation of either LWA or preconstruction actions. Items listed in the FEIS include:

- Document existing site conditions within the VEGP site by way of photographs, surveys, listings of existing facilities and structures, or other documentation to serve as the baseline for redressing the site.
- Coordination of agreements between the site's co-owners and Southern. This agreement would allow Southern to carry out LWA activities.
- Move, demolish, or transfer ownership of existing VEGP site buildings and structures within the VEGP site in a manner consistent with its operating license and the applicable regulations governing that license.

LWA Prerequisites – Cont.

- Obtain the necessary permits to perform preconstruction activities, such as local building permits, NPDES permit, Clean Water Act 404 permit, Stormwater Permit, etc.
- Obtain the necessary permits to perform LWA activities, such as local building permits, and any permits required under the Clean Water Act, if additional permits are needed.

Once these prerequisites were completed, Southern could proceed with NRC-approved LWA activities.

Preconstruction Activities

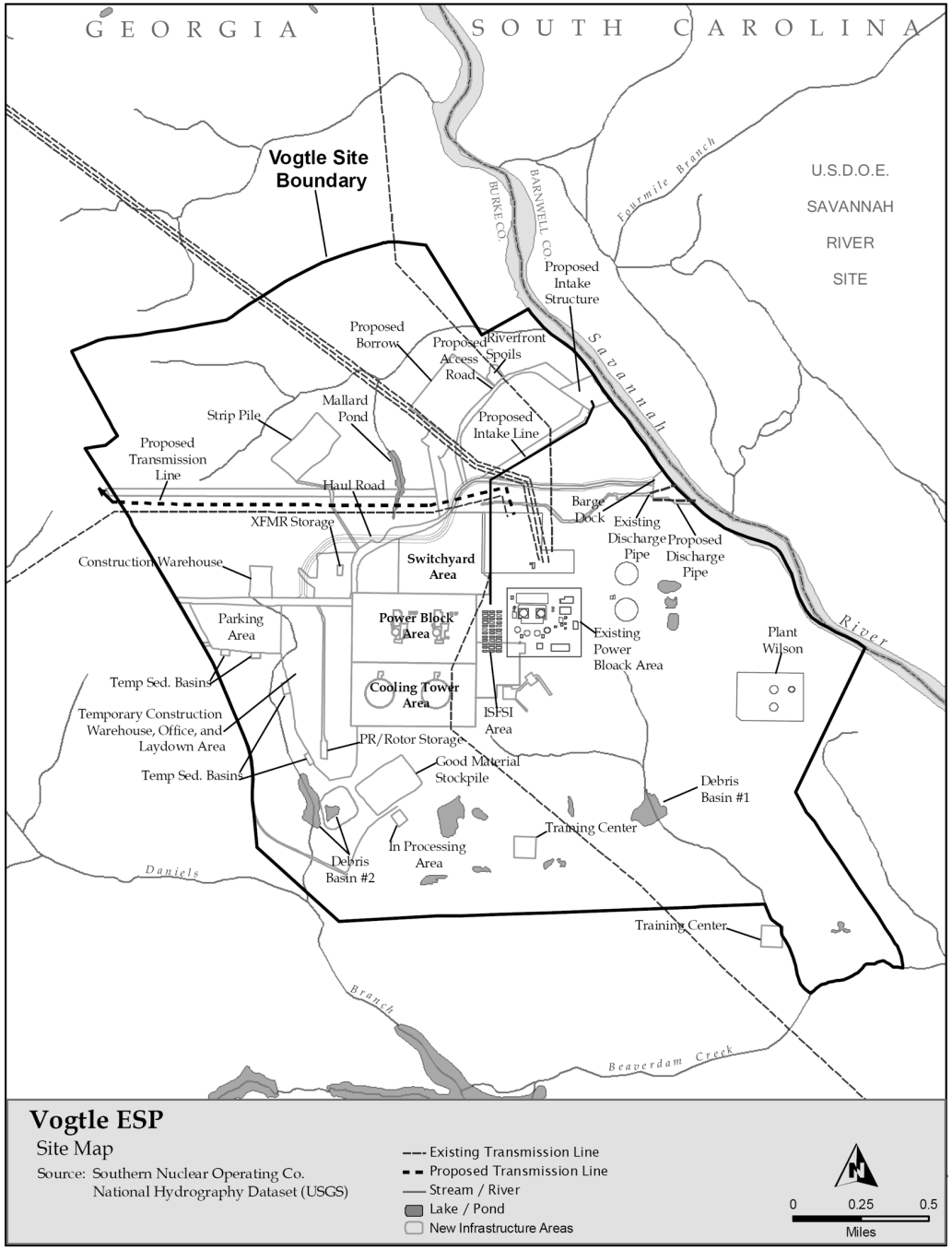
- Pursuant to October 2007 final LWA rule, preconstruction activities may be performed without any authorization from NRC.
- Some preconstruction activities would have to occur prior to performing the actions requested for the LWA.
- Activities directly supporting the LWA would be a subset of the overall preconstruction activities.

Preconstruction Activities

- Site clearing
- Site grading
- Installation of drainage, erosion, and sediment control structures
- Excavation for foundation
- Concrete mixing plant
- Utilities, lighting systems, fencing
- Roads, parking areas, laydown, and borrow areas
- Railroad spurs
- Warehouse and shop facilities
- Construction support facilities

Additional Preconstruction Activities

- Barge slip modifications
- Heavy haul road
- Intake and discharge structures and pipelines
- Cooling towers
- Electrical switchyard
- Transmission lines
- Fire detection and protection equipment



Vogtle ESP

Site Map

Source: Southern Nuclear Operating Co.
National Hydrography Dataset (USGS)

1485 m
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Preconstruction Impacts

- Construction and preconstruction impacts were considered cumulatively in the FEIS; impacts of preconstruction specifically associated with the LWA were not separated from other preconstruction activities.
- For many resource areas, the environmental impact of actual construction (compared to preconstruction) is minimal (e.g. land use, air quality, water use and quality, ecology, endangered species, historic and cultural resources).
- For other resource areas, environmental impacts occur during both construction and preconstruction (socioeconomics, environmental justice, transportation, non-radiological health).

Environmental Impact Conclusions

- The staff concluded that the environmental impacts of the LWA activities would be bounded by the overall construction impacts.
- For the VEGP site, the cumulative construction impacts are SMALL except for historic and cultural resources, and several socio-economic sub-areas, which are MODERATE.
- The LWA portion of those MODERATE impacts would likely be relatively small and of short duration.

Site Redress Plan

- Objective is to ensure that the site is returned to an environmentally stable and aesthetically acceptable condition if the Unit 3 and 4 site is not fully developed for nuclear power generation
- Redresses impacts of LWA activities only
- Redress activities will reflect applicable land-use and zoning requirements

Redress Activities

- Preferred procedure: remove degradable material, leave inert materials in place, backfill hole, regrade to conform to the surrounding landscape, then revegetate.
- If a permit to close as a landfill is not obtained, the inert materials also will be removed for disposal elsewhere.
- If an acceptable alternative use is found for the LWA structures, the redress activities would not be necessary.

Redress Impact Mitigation

- The environmental impacts of performing the site redress actions are similar to preconstruction and LWA construction impacts.
- Redress plan describes measures and controls that would be implemented during site redress to mitigate:
    - Noise
    - Traffic
    - Erosion and sedimentation
    - Air quality
    - Potential pollution sources
- These measures and controls are similar to those proposed to be implemented during construction.

Staff Analysis

- The LWA activities requested by Southern are all allowed under 10 CFR 50.10(d).
- The proposed redress activities would redress the LWA impacts and would achieve an environmentally stable and aesthetically acceptable LWA site.
- Implementation of the site redress plan would not have adverse environmental impacts.

Summary and Conclusions

- Southern has requested an LWA to perform allowed construction activities prior to receipt of a COL.
- Staff based its construction impact conclusions on the cumulative impact of preconstruction, LWA actions, and full construction.
- LWA environmental impacts, by themselves, are relatively minor and are bounded by the cumulative preconstruction/construction impacts.
- Redress of LWA impacts fairly simple, and proposed actions would adequately redress the LWA impacts.

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