Southern Nuclear Operating Company

Vogtle Early Site Permit Application

Part 4

Site Redress Plan

Revision 5

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Acronyms and Abbreviations

COL	Combined License
CFR	Code of Federal Regulations
ESP	Early Site Permit
GPC	Georgia Power Company
NRC	[U.S.] Nuclear Regulatory Commission
SNC	Southern Nuclear Company
SSC	Systems, structures, and components
VEGP	Vogtle Electric Generating Plant

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PART 4: SITE REDRESS PLAN

1.1 Introduction

An Early Site Permit (ESP) allows the holder to perform certain activities defined in 10 CFR 50.10(e)(1) prior to receiving a combined operating license (COL) (i.e., permission to initiate construction). However, in order to perform these activities, the ESP application must include a plan for site redress that provides for restoration if the project is cancelled, or the ESP expires before it is referenced in a COL application.

Part 4 of the Southern Nuclear Operating Company (SNC) ESP application describes safety-related activities that may occur after the U.S. Nuclear Regulatory Commission (NRC) issues an ESP to SNC for the Vogtle Electric Generating Plant (VEGP) site, but before NRC issues a COL. These LWA activities are subject to regulation 10 CFR 50.10(d) (effective November 8, 2007). In accordance with this regulation and 10 CFR 52.17(c), Part 4 also describes the SNC plan for redress of LWA activities should SNC terminate construction of VEGP Units 3 and 4. This site Redress Plan has been developed to provide reasonable assurance that redress carried out under the plan would achieve an environmentally stable and aesthetically acceptable site.

1.2 Site Description

The site selected for two new nuclear units, designated VEGP Units 3 and 4, is the existing 3,169-acre VEGP site in Burke County, in east-central Georgia, on the Savannah River. The site is approximately 100 miles northwest of Savannah, Georgia, and 26 miles southeast of Augusta, Georgia, directly across the river from the U.S. Department of Energy's Savannah River Site (Barnwell County, South Carolina). Southern Nuclear Company (SNC) proposes to construct VEGP Units 3 and 4 adjacent to, and west of, existing VEGP Units 1 and 2.

1.3 Plant Ownership

Currently the land selected for new VEGP Units 3 and 4 is jointly owned (i.e., co-owned) by Georgia Power Company (Georgia Power or GPC), Oglethorpe Power Corporation, Municipal Electric Authority of Georgia and the City of Dalton, an incorporated municipality in the State of Georgia acting by and through its Board of Water, Light and Sinking Fund Commissioners. SNC is the exclusive operating licensee of the existing VEGP nuclear units, and has been authorized by GPC, acting as agent for the co-owners, to apply for an ESP for the VEGP site. SNC has no ownership interest in the existing or proposed units at VEGP.

GPC and SNC are subsidiaries of Southern Company, Inc., and SNC is the licensed operator for all Southern Company nuclear generating facilities. SNC's business purpose is management and operation of nuclear generating facilities owned or co-owned by Southern Company subsidiaries. ESP Application, Part 1, Chapter 3 provides additional information about Southern Company, GPC, VEGP co-owners and SNC.

Prior to any site preparation activities, the co-owners would grant sufficient rights to SNC for SNC to perform the activities described in this plan.

1.4 Limited Work Authorization Activities

LWA activities that SNC might undertake would be those allowed by 10 CFR 50.10(d)(1) and include the following, any of which may be for a structure, system, or component for which a construction permit or combined license is otherwise required:

- Driving of piles
- Subsurface preparation
- Placement of backfill, concrete, or permanent retaining walls within an excavation
- Installation of a foundation, including placement of concrete

The SNC LWA request is for the full extent of activities allowed by regulation and the site redress plan encompasses all such activities. Examples of VEGP LWA activities that SNC has identified include the following:

- Engineered backfill
- Retaining walls (mechanically stabilized earth walls)
- Lean concrete backfill
- Mudmats
- Waterproof membrane
- Formwork for the nuclear island base slab

Prior to initiating LWA activities, SNC would excavate for facility structures as part of planned preconstruction activities. LWA activities would take place within the area of excavation and would result in construction of structures located approximately 90 feet below grade. The structures would be composed primarily of materials that are inert (e.g., soil, rock, gravel, concrete) or relatively inert (e.g., waterproof membrane). Degradable materials intended for temporary use, such as some concrete formwork, would be removed prior to backfill.

1.5 Site Redress Plan

1.5.1 Site Redress Plan Objective and Considerations

The purpose of site redress is to reverse, mitigate, or stabilize environmental impacts incurred during LWA activities. The objective of this site redress plan is to ensure that, in the event the VEGP Units 3 and 4 site is not fully developed to provide new nuclear power generation, it would be returned to an unattended, environmentally stable and aesthetically acceptable condition.

Site redress activities will be implemented commensurate with the degree of site modification resulting from LWA activities. Redress activities will reflect applicable land use and/or zoning requirements of local, state and federal agencies, and possible future use scenarios. In scoping the redress activities, SNC will consider certain variables including, but not limited to:

- future ownership of the site
- potential environmental contamination that either pre-dates, or is a result of, site preparation activities
- potential liabilities associated with any facility or structure remaining following completion of the redress activities

In planning for site redress, two general categories of options would be considered:

- Topographic approaches that accomplish the objective and preserve the potential of the site for future industrial use
- Completion or addition of site development features that enhance the value of the site for potential future industrial use.

Decisions by SNC, the co-owners, and state or local land use authorities and industrial development authorities on potential future uses would inform specific redress activities. Redress activities, if necessary, would begin when the ESP expired or when new reactor plant construction plans are formally abandoned, whichever occurs first. Redress activities would include actions to terminate or transfer local and state permits, and designate structures or improvements that would remain and those that must be removed. A detailed scope and schedule will be prepared prior to initiating redress activities. Redress activities will comply with applicable environmental requirements and necessary permits will be obtained prior to beginning redress activities. If, prior to the commencement of redress activities, acceptable uses consistent with the current state of the site's development were identified, SNC would tailor the site redress plan as much as possible to support the alternative uses. In the event that ownership of structures developed for VEGP Units 3 and 4 were transferred to the existing VEGP Units 1 and 2, the new structures would be included in the existing units decommissioning plan.

Between expiration of the ESP or the decision to abandon plant construction, and commencement of site redress activities, water quality, air quality, stormwater runoff, solid waste,

and the protection of any critical ecological elements will be maintained in compliance with approved permits and regulatory requirements.

1.5.2 Description of Site Redress

SNC LWA activities would take place within the area of preconstruction excavation, approximately 90 feet below grade. SNC's preferred method of redress for these LWA structures would be burial in place. Georgia regulation 391-3-4-.2 provides for permits for solid waste disposal. Regulation 391-3-4-.06 provides for a permit by rule for disposal of inert waste, defined to include earth and earth-like products, concrete, cured asphalt, rock and bricks. SNC believes that it would make better economic, environmental, and safety sense to bury the structures in place rather than demolishing them and removing debris for disposal elsewhere. Removal would simply use up available landfill space elsewhere.

Prior to initiating site redress activities, SNC would discuss with the Georgia Department of Natural Resources (GDNR) the acceptability of burial of the LWA structures in place as a landfill under Georgia solid waste management rules. SNC might need to obtain a variance to cover material that does not fit the State definition of "inert," such as steel and waterproof membrane. However, SNC believes that a variance would be reasonable given that the material would not be likely to produce leachate of environmental concern.

Site redress would ensure that no significant amounts of degradable materials, such as temporary construction formwork, would remain below grade but would be removed and disposed of properly at a permitted landfill. If backfilling had already occurred, buried structures (e.g., foundations and utilities) would be evaluated and exhumed if required. Structures approaching grade level would be demolished as necessary to allow a minimum of two feet of final cover.

If the GDNR did not approve in-place disposal, SNC would demolish and remove LWA structures in accordance with Georgia requirements. Any area that became contaminated as a result of LWA activities or LWA redress activities would be remediated in compliance with Georgia law and regulations. Backfill placement would be in accordance with good engineering practices using material from the original excavation to the extent still available.

Final site redress would include regrading the area to conform to the surrounding land surface and to mitigate erosion from stormwater runoff. The disturbed area would be revegetated to ensure stabilization and an aesthetically-pleasing landscape. SNC would provide all required notifications to the GDNR. If GDNR had approved closure as a landfill, SNC would ensure that appropriate deed notices were filed.

1.5.3 Controls to Mitigate Impacts During Redress Activities

Methods used to ensure environmental protection and regulatory compliance during site redress would include best management practices for noise control, traffic control, sediment and erosion control, air quality control, control of potential pollutant sources, stockpile management, and spill prevention, control and response.

1.5.3.1 Noise Control

During redress activities, ambient noise levels would be similar to those during site preparation activities. Noise would be controlled to maintain compliance with all federal regulations. Neither Georgia nor Burke County has noise ordinances. Procedures and a hearing conservation program would be developed for redress activities.

The heavy equipment needed for demolition, clearing, excavating, grading, trash disposal, and land filling operations would be the major source of noise pollution. Standard noise dampening devices on equipment, together with the location of the primary work site below grade, are expected to be sufficient to keep off-site noise levels at acceptable levels or lower. In addition, major redress activities would be constrained to weekdays and other activities would be limited on weekends.

1.5.3.2 Traffic Control

The highway access to VEGP would experience increased traffic during redress activities, similar to traffic increases during site preparation activities. SNC has assumed that redress activities would involve 250 workers or less. Based on the analysis of construction impacts, River Road has the capacity for an additional 1,200 cars per hour. Workers would access the site via the construction access road.

Traffic control on and off site would adhere to the applicable local, state, and federal requirements.

1.5.3.3 Erosion and Sediment Controls

SNC anticipates that most of the area of LWA activities would be cleared, paved, or graveled during site preparation activities. The runoff from the footprint would be controlled by a stormwater management system. During redress activities, disturbances to the existing ground surface could potentially increase the runoff sediment load. However, the location of LWA activities within the excavation area will minimize the risk of runoff offsite. Measures would be taken consistent with the Georgia Erosion and Sediment Control Act and implementing regulations to avoid concentrated flows with a high potential to transport sediment. Visual regulations to avoid concentrated flows with a high potential to transport sediment. Visual inspections of erosion controls would monitor the effectiveness of the controls and aid in determining if other mitigation measures are necessary. Where necessary, special erosion

control measures would be implemented to further minimize impacts to the Savannah River, onsite streams or ponds, and existing units' operations. Site redress activities would include the use of appropriate stabilization methods to mitigate the long-term erosion of sediment into the river and would be in compliance with an approved Erosion and Sedimentation Control Plan, which is required by the Georgia Department of Natural Resources and the federal Clean Water Act.

Sediment and erosion control would conform to the following best management practices:

- If periodic inspections or other information indicate that a control measure is ineffective, the control measure would be modified or replaced as necessary.
- In the event that sediment escapes the site during redress activities, off-site accumulations of sediment would be removed to minimize off-site impacts, to the extent practical.
- Sediment would be removed from sediment traps or sedimentation ponds as needed.
- Good housekeeping practices would be implemented to prevent litter, demolition debris, and chemicals from becoming pollutant sources for stormwater discharges.
- Erosion and sediment runoff would be controlled through the use of accepted structural and stabilization practices.
- Where practical, disturbed soil areas would be reseeded with maintenance seed (if activities are temporary) or permanent seed mix (for permanent or final cover) as soon as possible after redress activities are completed.
- Where practical, excelsior blankets would be mulched or installed, and slopes greater than 3H:1V would be reseeded. Mulch would be applied as soon as possible after seeding to reduce runoff and promote vegetation.
- Sidehill slopes would be furrow-contoured as practical. Otherwise, the final grading would be performed in a manner that would result in tracks and depressions contoured across the slope instead of down.
- The time that bare soil is exposed before being stabilized would be minimized.
- The disturbance to existing vegetation would be minimized.
- No solid materials, including demolition materials, would be discharged to waters of the United States, unless authorized under an approved permit.

1.5.3.4 Air Quality Controls

Dust, smoke, and engine exhaust are sources of air pollution. During redress activities, controls would be imposed to mitigate air emissions from such sources. The most traveled roads would be paved or sprinkled periodically if not paved, to reduce dust. Bare areas would be seeded to provide ground cover. Air pollution control regulations related to open burning or the operation of fuel-burning equipment would be followed. Permits and operating certificates would be secured

where required. Fuel-burning equipment would be maintained in good mechanical order to reduce excessive emissions. Water sprinkling of laydown, storage, and parking areas, unpaved roads, and other areas of the site would suppress dust.

1.5.3.5 Potential Pollutant Sources (Effluents, Wastes, Spills, and Material Handling)

During redress activities, there would be many possible pollutant sources. Best management practices would be followed to ensure protection of soils, groundwater and surface water from accidental spills or releases of pollutants.

1.5.4 Potential Contamination

Any spills during site preparation or redress activities would be remediated in compliance with the requirements of this plan. The area would be returned to its baseline state post-redress.

1.5.5 Potential Liabilities

If ownership of the site is transferred, neither SNC nor the co-owners would have further liability with regard to site redress.

1.6 Financial Responsibility

It is the financial responsibility of the co-owners to provide the funding to redress the new plant footprint on the VEGP site in the event that site preparation activities are performed and new plant construction plans are abandoned, or if the site permit expires before it is referenced in an application for a construction permit or a COL.

1.7 NRC Notification Upon Completion

SNC would notify the NRC upon completion of activities addressed by this Site Redress Plan. The site would be made available for inspection and any documentation that the NRC may require would be provided to confirm the satisfactory completion of the redress activities.