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1401 Main Street
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Ms. Holly G. Pisarik
1205 Pendleton Street
Columbia, SC 29201

Dear Holly,

The ORS is currently in a heightened state of concern regarding the construction cost overruns and schedule delays for V.C. Summer (VCS) Nuclear Units 2 & 3 (the Units). Our concerns are outlined below and include SCE&G's responses:

1. **ORS Concern:** Westinghouse and Fluor continue to struggle with craft labor productivity. While a slight improvement was shown during the first three months of Fluor's tenure on site, the most recent two months have trended negatively. Furthermore, the project has not attained the improved productivity factor of 1.15 that was anticipated in the approved schedule and budget in Order No. 2015-661. Fluor's efforts to implement process changes through their Functional Area Assessments and subsequent improvement recommendations appear to be a step in the right direction; however, the assessments and the associated implementation of identified improvements are moving much too slowly. This effort needs to accelerate dramatically if the project is to meet its scheduled completion dates.

SCE&G Response: SCE&G asserts that SCE&G and Santee Cooper have initiated an effort with Westinghouse and Fluor to align the four companies on the top five project focus areas; the productivity factor will be addressed in one of these five areas, which is construction efficiency and schedule adherence. Fluor has analyzed the Shaw and CB&I Power project controls system and determined that it is necessary to convert the project to Fluor's controls system. Once completed, a more meaningful productivity factor can be monitored and used to identify issues by discipline/area and to more accurately predict resource needs. SCE&G anticipates that initiatives in the other four top focus areas—prevention and timely resolution of design issues, modules, construction resources, and procurement—will also improve the site craft productivity factor.

2. **ORS Concern:** Fluor's recruitment efforts to increase craft labor are not meeting the targets required to support construction, and the year-end goal of increasing on-site craft labor by 1,000 is in jeopardy. Fewer applicants than needed are applying, and rejection rates are higher than expected due to a number of factors including lack of qualifications, failed background checks, and no-shows. Candidates are also taking other jobs they consider more attractive. This shortage of labor also places the substantial completion dates in jeopardy.

SCE&G Response: SCE&G replies that construction resources is a top five project focus area and that Fluor has provided metrics on recruiting and attrition to a much higher level of detail and greater depth than previously provided by CB&I. SCE&G further informs ORS that Westinghouse and Fluor are in the process of pursuing a number of mitigation strategies to increase the number of craft labor personnel including, among other things, evaluating craft compensation packages (mobilization, pay rate, per diem, retention incentive, etc.) against current markets for each discipline; subcontracting to augment direct hire craft; and relocating demobilized craft at other Fluor projects to V.C. Summer.

3. ORS Concern: Although not yet reflected in the latest project progress reports, concern exists about the recent upturn in job-related injuries and incidents. In some instances, this trend appears to be the result of a declining safety attitude among the craft workers, along with uncertainty surrounding the new project management structure and the divisions of responsibility. Issues of this type need to be immediately addressed and resolved.

SCE&G Response: SCE&G asserts that, even with the recent job-related injuries, the site OSHA statistics are below industry standard for a large industrial construction project and that safety metrics of TRIR and DAFW are improved over last year. SCE&G is continuing to provide a high level of industrial safety oversight and, in response to the recent injuries, Westinghouse and Fluor are working to improve the safety awareness at the site by, among other things, involving executive leadership in Health Safety and Environmental (HSE) meetings and audits; increasing HSE field presence; and increasing field observation from field non-manual personnel utilizing the Hazard Elimination Card Program.

4. ORS Concern: The lack of availability of key commodities continues to plague the project and result in construction delays. Note that this issue is not tied to major components, as most of these are now on-site far ahead of their actual construction need date. The commodities in question are rebar, welding rod, standard structural steel, bolting, lubricants, steel plates, Nelson studs, and other standard construction commodities. These shortages are the result of Westinghouse's "just-in-time" approach to the ordering and delivery of these commodities. This approach has proved to be ineffective as the components are not available when required. On large construction projects, such commodities are routinely stocked in sufficient quantity to ensure they do not delay construction. Our consultant states that he has never worked on a nuclear project that was delayed by the lack of availability of standard rebar. At VCS, standard rebar unavailability has resulted in construction delays of critical path activities.

SCE&G Response: SCE&G states that SCE&G, Santee Cooper, Westinghouse, and Fluor all agree that procurement is a top five focus area for the project. To address availability of key commodities, Westinghouse has recently consolidated the responsibility for delivery of material and equipment into a single organization so that each commodity now has a single point of accountability for scope, schedule, and budget. This organizational transition was completed at the end of June 2016.

5. ORS Concern: Other procurement issues, primarily associated with the negotiation of subcontracts and change orders, are becoming critical. SCE&G and Westinghouse have been able to reach agreement on only a few of the issues identified in Exhibit C of the October 2015 Amendment in the intervening eight months. In addition, delays in the full authorization of several key subcontracts are putting the substantial completion dates of the project at risk.

SCE&G Response: SCE&G replies that, as issues are identified during the project, evaluations are conducted and the parties first attempt collaborative resolution through technical reviews and discussions. The ten issues identified in Exhibit C of the October 2015 Amendment follow this

standard process. It was never anticipated that this process would be concluded and these issues would be resolved in eight months. As of June 2016, a change order is pending for two of the ten issues, and SCE&G does not anticipate that the remaining eight issues will have an impact on the project's substantial completion dates. It is possible, but not certain, that a change order will be required for some of the remaining eight issues. Regarding the overall change-order process, SCE&G sent a letter in June 2016 to Westinghouse reiterating previous concerns and requesting that they review their process so that the overall change-order process could be improved.

6. ORS Concern: Consistently meeting the construction schedule continues to be a significant issue for the project. This area must improve if any credibility is to be assigned to the current substantial completion dates and associated mitigation strategies that must be implemented in order to bring the plant to completion.

SCE&G Response: SCE&G asserts that construction efficiency and schedule adherence, including consistently meeting productivity factor, is a top five focus area for the project. SCE&G implemented a Project Management Organization (PMO) this year specifically to provide increased oversight of the project schedule by working with the Westinghouse PMO, which has resulted in the Westinghouse PMO adding key monitoring and reporting of the site milestones and covering schedule mitigation activities on a daily basis. Initiatives in other focus areas should improve the site's ability to meet the schedule.

7. ORS Concern: Module fabrication and delivery continue to drive the critical paths for the project; however, the focus is gradually shifting from structural modules to mechanical modules and structural steel modules in the Nuclear Island. In addition, the transition areas at the Shield Building to Auxiliary Building roof and the air inlet/tension ring areas of the upper Shield Building are becoming increasingly important. Contracts need to be finalized, and fabrication releases need to be expeditiously forthcoming in order to avoid schedule impacts. As it is, because these contracts have taken so long to be finalized, these items will be on a very tight schedule with little margin.

SCE&G Response: SCE&G asserts that modules, including fabrication and delivery, is a top five focus area for the project. In addition, SCE&G asserts that it maintains its on-site presence at key module vendors, has recently increased oversight efforts, and is working daily with Westinghouse personnel to align priorities, reporting, and mitigations. According to SCE&G, Westinghouse has given suppliers advance authorization to fabricate the Shield Building roof steel and Air Inlet/Tension Ring panels. Westinghouse is also reporting weekly to SCE&G on contract finalization for upcoming scopes of work and has increased authority levels for more than 30 engineers to resolve issues to improve supplier response times. Finally, Westinghouse has moved the responsibility for structural steel procurement from the commodity delivery organization to the module organization to aid this procurement.

8. ORS Concern: Concerns about the schedule also extend to the installation of components such as piping erection, cable raceway installation and cable pulling, instrumentation and tubing installation, HVAC equipment and ductwork installation, and wiring and termination. Historically, these areas have been the most difficult to complete when constructing nuclear power plants; however, very little of this effort has been completed on the Units. The modular construction methodology may prove beneficial in this regard, but that remains to be seen. The tendency toward slow installation exhibited thus far is especially concerning in light of the project's inability to meet the construction schedule to date. Sustained installation rates will need to be demonstrated before the ORS has confidence in the project's ability to complete these areas in a timely manner.

SCE&G Response: SCE&G replies that it is currently performing an assessment of installation of components on the CA03 module to identify efficiency gaps and will communicate improvement opportunities to Westinghouse and Fluor.

9. ORS Concern: Design changes continue to adversely affect fabrication and construction schedules. The number of design changes appears to be high considering the design completion status that the ORS understood in the early stages of the project. The factors driving these changes need to be further investigated, and additional management controls need to be established with the goal of reducing the frequency of design changes to only those that are absolutely required.

SCE&G Response: SCE&G states that prevention and timely resolution of design issues is a top five focus area for the project. Westinghouse and Fluor are undertaking advanced planning initiatives to maximize early identification and resolution of potential issues; increasing accountability to build as designed where practical and ensure alignment between construction and engineering; and focusing engineering resources on critical areas. The use of field engineering resources and “clash” software by Westinghouse and Fluor is beginning to pay dividends. A recent example is a set of four work packages where 111 issues were identified and corrected prior to work commencing, and only four issues were identified after work commenced. In addition, SCE&G is working with Southern Nuclear and the NRC to add a new license condition to allow construction work to proceed at risk where a License Amendment Request (LAR) is needed.

10. ORS Concern: Operational readiness is also emerging as a concern. It is not clear at this point whether the required number of operations staff will be ready to perform the required testing and start-up support activities. The operational readiness schedule has not yet been incorporated into the integrated project schedule, so the true impact is not yet known. In addition, questions remain regarding the availability of the final Plant Reference Simulator in time to support operator training and procedure completion. Testing and operations procedure completion in time to support fuel load and commercial operation is also a concern.

SCE&G Response: SCE&G replies that an Integrated Operational Readiness Schedule (IORS) has been well developed and contains over 32,000 operational activities in support of the plant. The Integrated Project Schedule (IPS) is imported from Westinghouse monthly or as necessary into the IORS. This process ensures consistency and alignment with the construction and Initial Test Program (ITP). In addition, a milestone management process with metrics has been established to monitor the readiness of the operating organization’s ability to support the Units. Oversight of these activities is provided in a monthly management meeting that discusses milestones and metrics necessary for the transition from construction through plant startup and into plant operations. Ongoing initiatives are in place that continually refine the IORS and IPS schedules.

In addition, SCE&G asserts that training schedules have been developed to support training and qualification of operators needed for systems testing and turnover. Gap training is anticipated based on design differences between the simulator and the actual plant at time of start-up support activities; training needs associated with the design differences are manageable in the operator continuing training programs. SCE&G further asserts that operations procedure development will utilize Westinghouse simulation facilities to validate newly developed operational procedures. Station simulation facilities will be utilized to support initial licensed operator training and continuing training for operations instructors and licensed operators. Gap training needs will be determined and implemented through operator continuing training. The NRC Commission Approved Simulator (CAS), recently approved for Vogtle, will fully support initial and continuing training needs until the NRC makes the required findings under 10 CFR 103(g). Discussions are ongoing between VCS and NRC regarding the regulatory path to a Plant Reference Simulator.

In light of these concerns, ORS offers the following observations:

ORS Observations: The addition of Fluor as a subcontracted construction manager is a good step; however, Westinghouse still retains all control as the sole contractor. Consequently, Westinghouse controls the project budget, the majority of the project procurement, and makes decisions about which methodology to use when problems arise.

- A. ORS Recommendation: The process changes identified through Fluor's Functional Area Assessments need to be accelerated. If properly implemented, these changes should result in improved productivity by the workforce. In addition, the impact of these changes should be quickly assessed and any further improvements must be implemented expeditiously. The first priority should be the implementation of the "Min/Max" approach to purchasing commodities so that construction delays are not caused by the lack of construction commodities which are readily purchased.

SCE&G Response: SCE&G has scheduled a review of the Functional Area Assessment reports and actions with ORS on July 27, 2016.

- B. ORS Recommendation: The design change process also needs further management review and control. Changes should be assessed as to absolute need and impact on construction, and changes not meeting these requirements should not be implemented. SCE&G should be a part of this assessment process.

SCE&G Response: SCE&G has informed ORS that it has discussed these issues with Westinghouse on a regular basis.

- C. ORS Recommendation: SCE&G and Westinghouse also need to come to an agreement on the milestone payment schedule soon. All necessary management and executive focus required to accomplish this goal must be utilized.

SCE&G Response: SCE&G has informed ORS that it is continuing discussions with Westinghouse, but that if an agreement is not reached, SCE&G can file a claim with the Dispute Resolution Board (DRB), a mechanism created in the October 2015 Amendment to resolve matters such as this one without affecting the progress of the project. Issues presented to the DRB are to be resolved within 60 days.

- D. ORS Observation: Any approach to this project that totally excludes Westinghouse is unlikely to be successful for the project. Westinghouse has key design responsibilities for all safety-related and almost all other key systems and components. In addition, they are the primary designers for the physical plant itself, including the structural and mechanical modules. Westinghouse must be a part of the project if there is to be any hope of successfully completing it. In some areas, a more experienced architect/engineer might provide needed assistance which could be pursued in conjunction with Westinghouse. However, no successful scenario exists that totally excludes Westinghouse's participation.

SCE&G Response: SCE&G has informed ORS that it recognizes the need to keep Westinghouse fully engaged in the project. In the October 2015 Amendment, SCE&G negotiated new terms that SCE&G believes provides for the active involvement and attention of Westinghouse throughout the project.

ORS Observations: In the case of Unit 2, ORS believes that, while the date in the filing of August 31, 2019 is unlikely to be met, it is possible that Unit 2 may still be able to qualify for the Federal Production Tax Credits (FPTC) that expire on December 31, 2020. However, completing Unit 2 in time to receive the FPTC will require improvements to the current construction methodology.

For Unit 3, based on ORS' observations to date, the ORS has a much lower confidence level that this Unit can be completed to meet the current FPTC deadline of December 31, 2020. In addition, Fluor has not completed its schedule assessment and has not prepared a resource loaded integrated project schedule. Only after Fluor completes the assessment will the ability, or lack thereof, to achieve the FPTC deadline become clearer.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. Dukes Scott', with a stylized, flowing script.

C. Dukes Scott