



May 6, 2014

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Subject: V.C. Summer Units 2 and 3 Guaranteed Substantial Completion Dates

Reference: (1) Engineering, Procurement, and Construction Agreement for AP 1000 Nuclear Power Plants, Dated May 23, 2008 – V.C. Summer Units 2 and 3

(2) VSP VSG 002024, dated August 6, 2012

### Gentlemen:

On May 23, 2008, we executed the EPC Agreement with the Consortium for Units 2 and 3 at our V.C Summer nuclear facility. That was an historic day for our companies. We would like to believe that it was equally significant to you. Together, we helped kick off what we continue to hope will be a new wave of nuclear construction in this country.

The V.C. Summer facility offers the best template for future projects. Although you signed EPC agreements with two other utilities at about the same time, both of

those projects are currently embroiled in major litigation. We chose a different path. We resolved to work with you amicably, believing that building the project cooperatively, on time and on budget, would be in the best interests of all involved.

The events since May 23, 2008 have tested our resolve. In this letter, we will review certain of those events for the benefit of your current management. We believe that such a review is called for because of the many turnovers in your management since May 23, 2008. With one possible exception, no one from your two companies who attended the signing ceremony is still involved in the project. Since then, Westinghouse has had at least two Presidents, three Project Directors, and two Commercial Directors. Shaw was acquired by CB&I, and has had comparable turnover, with five Commercial Directors, two Project Directors and two Construction Managers.

Before reviewing the relevant events, we wish to share with you our view that the management turnovers have been accompanied by a change in attitude. Senior managers who began the project appeared to appreciate the significance of the task to our customers and to the nuclear community at large, and exhibited a commensurate dedication. Events indicate that this has been replaced by a different attitude, one that is less focused and seems intent on taking advantage of our cooperative nature.

We should also mention that we have noted the evident deterioration of the relationship between senior management at Westinghouse and Shaw/CB&I. Repair of that relationship will likely be necessary if you are to satisfy our concerns. As a Consortium, the two firms are jointly and severally liable to us. It does not matter to us which of you caused a specific problem. We look to both of you to remedy all the Consortium's deficiencies.

We regret that this letter is necessary and regret its length. Your poor performance has made both necessary. A complete description of our grievances would make this letter even longer. Consequently, we have chosen to focus on the events and issues concerning the structural modules, primarily CA-20 and CA-01, as well as certain design issues, and their combined effect on the expected completion date and cost of the project. We selected these examples to illustrate our dissatisfaction. They are not an exhaustive listing of your every shortcoming.

# I. THE EPC AGREEMENT ESTABLISHED THE PROJECT SHEDULE

The EPC Agreement stated the Consortium's commitment to meet following dates for Unit 2:

Activity	Unit 2
CA-20 On-Hook	November 18, 2011
CA-01 On-Hook	March 29, 2012
Guaranteed Substantial Completion	April 1, 2016

To meet these dates, it was essential that the Consortium timely complete module fabrication, delivery, and assembly. The Consortium selected Shaw Modular Solutions, LLC ("SMS"), an affiliate of the Consortium, as the module fabricator. Problems with SMS's work began almost immediately. The NRC attempted to inspect the SMS facility between January 10 and 12, 2011, but the inspection had to be "terminated early because of the current status of activities at SMS." To the NRC's apparent surprise, SMS had not yet made enough progress to make an inspection worthwhile.

By letter dated February 22, 2011, SMS advised the NRC of its expectations for module production and shipment, as follows:

SMS expects to be at a high level of production of structural modules in early June 2011. SMS expects that shipment of the first structural submodule will occur the end of June 2011. ... If schedule changes are necessary, SMS will promptly notify the NRC.

SMS did not meet these module production and shipment dates. We are unaware if it gave the NRC the promised notice of these failures.

The NRC returned to inspect the SMS site between November 14 and 18, 2011. That inspection led to a "Notice of Nonconformance," dated January 6, 2012, based on deficiencies in SMS's quality assurance program. The Notice of Nonconformance stated:

During this inspection, the NRC inspection team found that the implementation of your quality assurance program failed to meet certain NRC requirements which were contractually imposed on you by your customers or NRC licensees. Specifically, the NRC inspection team determined that SMS was not fully implementing its quality assurance program in the areas of training, design control, procurement document control, control of special processes, control of measuring and test equipment, control of nonconforming items, and corrective actions consistent with regulatory and contractual requirements, and applicable implementing procedures.

# II. THE AUGUST 6, 2012 AGREEMENT CHANGED THE GUARANTEED SUBSTANTIAL COMPLETION DATES

By July 7, 2012, only 21 of 72 CA-20 sub-modules had been delivered to the site. Despite the poor progress, you assured us that you had resolved the module production problems. This led to the Agreement of August 6, 2012.

The 2012 Agreement recites that it resolved several pending change order requests. An additional motivation for us was to enable you to put the past module issues behind you and have a fresh start. Section IV.A of that agreement established the following revised guaranteed substantial completion dates:

Activity	Unit 2	Unit 3
Guaranteed Substantial Completion	March 15, 2017	May 15, 2018

After execution of the 2012 Agreement, you had no one to blame but yourselves for future module delays. Section IV.D of the 2012 Agreement made clear that future module delays would be your sole responsibility. It stated in pertinent part:

Except as otherwise provided for in Article 9 of the EPC Agreement or Section XII.D of this Agreement, Contractor will not submit further Change Orders for any impacts to Project Schedule or Contract Price associated with Structural Module schedule delays and agrees that such further schedule delays will be the responsibility of Contractor.

Although the parties released certain claims against each other in the 2012 Agreement, Section XII.D of the agreement stated that our release did not apply to any claims "that may arise hereunder from Contractor's failure to deliver the Structural Modules referenced in Section III.C of this Agreement, so as to achieve" the revised Guaranteed Substantial Completion Dates.

The 2012 Agreement imposed on the Consortium certain additional scheduling obligations to enable us to monitor module progress. Section IV.D of that agreement stated:

In order to measure impacts to the Project Schedule associated with Structural Module delivery, Contractor agrees to provide a detailed Structural Module delivery and assembly baseline schedule within 30 calendar days of the execution of this Agreement and to report actual progress against this schedule on at least a monthly basis.

The Consortium prepared the new baseline schedule for module delivery and assembly, as called for in this Agreement, but it has not provided the monthly progress reports.

In sum, the Consortium decided to engage SMS, an affiliated entity, as the module fabrication subcontractor. SMS proved to be neither equipped nor qualified to produce the modules. Nevertheless, in July 2012, we worked with you amicably by allowing you additional time that was made necessary, at least in part, by SMS's poor performance. In exchange, you agreed that you would not be entitled to any additional time extensions due to future module delays.

### III. MODULE DELAYS CONTINUED AFTER THE 2012 AGREEMENT

Despite the Consortium's assurances, module production did not improve after the 2012 Agreement. The Consortium issued a module delivery and assembly baseline schedule, dated August 10, 2012, as called for in the 2012 Agreement. That schedule contained a series of milestone dates, including the following on-hook dates for CA-20 and CA-01:

Activity	Unit 2 Milestone Date	
CA-20 On-Hook	January 19, 2013	
CA-01 On-Hook	May 28, 2013	

The Consortium has not met these on-hook dates or any other milestone dates in that schedule.

### A. Module Status In September 2012

As of September 27, 2012, at least thirty of the milestone dates had already come and gone without completion of the associated milestone event. By that time, only 31 of the 72 sub-modules for CA-20 had been delivered to the site. As a result of the module production and delivery delays, we wrote to you on September 27, 2012. That letter stated:

Due to the current status of the structural modules, the Owner remains concerned that the late fabrication, delivery, and installation of structural modules will impact the Consortium's ability to meet the critical path schedule date of January 28, 2013<sup>1</sup> (CA20 on-hook date), and eventually to meet the revised Unit 2 Guaranteed Substantial Completion Date (GSCD) and possibly the Unit 3 GSCD. The Owner requests the

<sup>&</sup>lt;sup>1</sup> This date was incorrect. The letter should have referenced a January 19, 2013 CA-20 on-hook date.

Consortium continue to provide structural module status updates during the weekly project review meetings and other status updates as previously agreed. Also, beginning no later than October 10, 2012, provide bi-weekly written status updates on the fabrication, delivery, and installation of the structural modules, including information on any structural module issues. Finally, the Owner requests the Consortium review with the Owner the Consortium's documented contingency plans concerning the structural modules prior to October 19, 2012. These contingency plans should include, at a minimum, actions to be taken by the Consortium to meet currently scheduled structural modules CA01-CA05 and CA20 on-hook dates and installation dates to support the Project schedule.

The Consortium did not comply with any of these requests.

As of September 2012, you had still not resolved your NRC issues. The NRC performed an unannounced inspection on September 10-14, 2012, which led to another "Notice of Nonconformance" arising out of deficiencies in SMS's quality assurance program. The NRC documented this in its letter of October 24, 2012, which stated:

During the inspection, the inspectors found that the implementation of your QA program did not to meet [sic] certain NRC requirements imposed on you by your customers or NRC licensees. Specifically, SMS failed to promptly correct conditions adverse to quality and significant questions adverse to quality, failed to effectively implement a corrective action regarding documentation of late entries in a quality records procedure, failed to preclude recurrence of significant conditions adverse to quality related to identification and control of items, and failed to perform adequate corrective actions associated with a nonconformance identified during a previous NRC inspection.

Shortly after this, the NRC advised CB&I of a "chilled work environment" at the Lake Charles facility, which was causing employees to believe that they "are not free to raise safety concerns using all available avenues" and that "individuals have been retaliated against for raising safety concerns."

# B. Module Status In March 2013

By March 6, 2013, only 40 of the 72 sub-modules for CA-20 had been received. At our request, a meeting to discuss module production was held among executive officers in Columbia on April 9, 2013. Westinghouse did not attend the meeting, but CB&I was there and it promised that the Consortium would deliver four modules in the

second quarter of 2013, 40 modules in the third quarter, and 39 modules in the fourth quarter. It also informed us of a significant delay in the on-hook dates, as follows:

Activity	Delayed Unit 2 Date	
CA-20 On-Hook	October 31, 2013	
CA-01 On-Hook	September 4, 2014	

The Consortium missed the revised CA-20 on-hook date of October 31, 2013 and, as of today, has yet to reach this milestone. The Consortium is also not on schedule to meet the revised CA-01 on-hook date of September 4, 2014.

### C. Module Status In May 2013

By May 25, 2013, the Consortium had delivered only 41 of the 72 CA-20 sub-modules. And it had delivered only one of these in the preceding eleven weeks.

# D. The Consortium Reported Schedule Delays in June 2013

On June 5, 2013, SCE&G publicly disclosed your statement to us that you would not be able to meet the required completion dates in the 2012 Agreement. We reported your estimate that completion of unit 2 would occur in either the fourth quarter of 2017 or the first quarter of 2018 and your estimate that completion of unit 3 would be "similarly delayed." Due to these delays, we also reported that SCE&G's 55% cost of the project could increase by \$200 million. We noted that these schedule changes and cost increases resulted from "delays in the schedule for fabrication and delivery of submodules for the new units."

### E. Module Status in July 2013

We saw no improvement over the next several months. By July 18, 2013, the Consortium had delivered only 44 of the 72 CA-20 sub-modules. This means that it had delivered only three modules in the preceding 11 weeks.

On August 7, we sent you another letter expressing our concerns about delays. On September 17, you advised us that, unless we objected, you would move the work of completing some CA-20 sub-modules from Lake Charles to the site. Your proposal was to move the uncompleted sub-modules into a temporary, onsite quarantine area to complete document processing and make minor repairs. We responded that we would not interfere with your decisions about how best to perform the work.

# F. The Consortium Reported Further Schedule Delays In September 2013

On September 18, 2013, the executives of all involved companies met in Columbia. That meeting resulted in a September 25 letter from you, which included a schedule showing the following activities and dates:

Activity	Unit 2 Target Date	Unit 2 Late Date
CA-20 On-Hook	January 24, 2014	January 27, 2014
CA-01 On-Hook	July 18, 2014	September 18, 2014
Substantial Completion	December 15, 2017	December 15, 2017

Your letter also stated that:

The Unit 2 CA01 sub-module delivery schedule is being reviewed to incorporate the latest information and will be transmitted to you by October 2, 2013. We have scheduled a management meeting on October 3, 2013, to review these deliverables with your team.

The promised October 2 letter and schedule showed that all CA-20 sub-modules would be delivered by November 4, and CA-01 sub-module shipments would extend between November 3, 2013 and July 18, 2014. The letter and schedule also introduced, for the first time, a CA-20 "minimum configuration" concept that we believe has the potential to further impede your ability to achieve timely project completion. This concept conflicts with the 2012 Agreement, and associated August 10, 2012 baseline schedule, which call for a complete (equipment loaded) CA-20 module to be set on its foundation by January 19, 2013.

Your October 2, 2013 letter went on to state:

The Consortium is taking additional management measures to add certainty to this schedule. Resources have been added to engineering to reduce the backlog of E&DCRs and N&Ds and improve the turnaround time to disposition these items. Personnel from Lake Charles have been located at the V.C. Summer site to perform final inspections and document closeout. Resources have been added to the modules team to repair or rework any conditions identified on the sub-modules and prepare them for assembly. A daily Lake Charles Plan of the Day process has been implemented to drive schedule, elevate issues and resolve problems. Weekly CBI senior management review and monitoring of Lake Charles progress against the plan has been established. Milestone Managers are

> being added to the site team to drive schedule and accountability for module assembly and placement. We believe that actions such as these will improve performance.

> Although this letter does not amend the EPC Agreement or modify our commercial positions, we commit our support to the Project in achieving the schedules provided herein. We will maintain frequent and transparent communications with your staff to ensure that any significant change in schedule is raised and understood. We encourage SCANA to monitor our schedules and provide immediate feedback if they are not meeting your expectations.

Of the CA-20 sub-modules remaining to be delivered as of this date, seven were earmarked for delivery to the onsite quarantine area for completion of document processing and minor repairs. Those sub-modules were not ready to be incorporated into the construction.

Weekly module update calls began on October 14. By December, however, the level of participation by Consortium management had begun to wane. "Frequent and transparent" communications did not materialize, and we have not received "immediate feedback" when we have raised schedule issues.

In our letter of October 21, 2013, we stated:

You have represented that this schedule embodies the Consortium's realistic expectations concerning performance of Unit 2 work and its commitment to achieve Unit 2 substantial completion date by December 15, 2017.

We appreciate the Consortium's efforts in preparing these schedules and the Consortium's commitment to allocate additional resources and to perform as to achieve Unit 2 substantial completion by December 15, 2017. We must remind you, however, that the Consortium remains contractually committed to the dates for substantial completion stated in the July 11, 2012 Letter Agreement. As you correctly noted, the schedules in no way amend the Agreement. In the Letter Agreement, the parties agreed to a Unit 2 Guaranteed Substantial Completion Date of March 15, 2017, and a Unit 3 Guaranteed Substantial Completion Date of May 15, 2018.

# G. Design Deficiencies Came To Light During September 2013 On-Site Assembly

On September 3, 2013, Westinghouse informed us that it had identified problems with the design of CA-04. The Consortium had planned to set that module on the Nuclear Island in September 2013, but it delayed that work because of the need to modify the concrete foundation. The foundation placement was then put on hold during the foundation redesign and associated procurement.

## H. Module Status in December 2013

By December 4, 2013, all 72 CA-20 sub-modules had finally been delivered to the site, although 30 of them required documentation processing and repairs at the on-site quarantine area. The modification effort continued well into 2014.

On January 8, 2014, Westinghouse informed us that six Engineering and Design Coordination Reports (E&DCR) had to be completed before placement of CA-20. It also advised us that another sixteen E&DCRs would need to be completed after placement of CA-20, but before placement of wall concrete.

As of February 2014, none of the 47 CA-01 sub-modules had been delivered, although 20 should have been delivered by then, according to the October 2, 2013 schedule.

### I. Module Status In March 2014

The Consortium has been providing our construction team with daily email updates relating to CA-20, but the updates continue to illustrate performance shortcomings. The March 11, 2014 email update reflected an on-hook date of March 31. The email updates of March 12 and 13 reflected the same date, but stated that such date was "in jeopardy" and pending management review. The March 14, 15, 17 and 18 email updates all reflected a date of April 7 for this activity. Those from March 20, 21, 22, 23, 25, 26 and 27 all stated that the April 7 date was "under review." Beginning on March 28, the email updates stated that the on-hook date had slipped again to May 10. In short, the projected on-hook date for CA-20 continues to slip and, by the end of March, we were farther away from completion of that activity than the Consortium had stated we were at the beginning of March.

The Consortium's progress with CA-01 has also been poor. Westinghouse has informed us that it is reviewing its design for that module and future changes could delay its placement. Due to these design issues, documentation approving placement of CA-01 is not expected until August 31, 2014.

## IV. DESIGN ISSUES HAVE CONTRIBUTED TO THE PROJECT DELAY

#### A. <u>iFC Design Delays</u>

Other design issues, in addition to those identified above, have also delayed the project and are expected to contribute to future delays. Foremost among these is the delayed completion of Issued For Construction (IFC) drawings. The IFC percentage complete is the Consortium's primary metric for evaluating the status of design. That information shows that the Consortium has failed to meet expectations for design finalization and has misjudged its own performance.

The Consortium's early reports of design progress were optimistic. For example, in the March 17, 2011 Monthly Project Review minutes, the Consortium reported that it had delivered 90.49% of the scheduled IFC documents. As a result, the Consortium stated, "Design finalization is coming to an end and transitioning to support the Certified for Construction (CFC) design."

The May 19, 2011 Monthly Project Review minutes continued to reflect satisfactory progress. They reported Westinghouse's statement that design finalization was considered to be complete by the Department of Energy (DOE) and according to WEC's definition. The minutes also reported Westinghouse's estimate that the design was 95% complete. In addition, they reported Westinghouse's statement that the remaining engineering had been defined in a resource-loaded schedule, which it would use to monitor progress to completion.

The October 20, 2011 Monthly Project Review minutes reported Westinghouse's statement that site-specific engineering was winding down and that design finalization should be complete in the summer of 2012.

The Consortium began reporting design delays in May 2012, when you advised us that you would not meet the October 11, 2012 schedule for many of the IFC packages. On December 31, 2013, the Consortium reported to us that the IFC design documents were now only 94% complete. The Consortium continued this trend of revising design progress downward. On March 31, 2014, Westinghouse reported that the IFC documents were only 88% complete.

#### B. Design Issues Impact Nuclear Island Civil/Structural Work

Westinghouse's many design changes have also adversely impacted the Nuclear Island (NI) civil/structural work. One example concerns the A2 I wall in the Auxiliary

Building, which is a fairly simple reinforced concrete wall. Two of the construction packages are VS2-1210-COW-003 (rebar/embeds for I wall areas 4 and 5) and VS2-1210-CCW-001 (concrete for I wall areas 4 and 5). There were 109 unique E&DCRs between the two work packages. Ninety-two (92) of the E&DCRs were WEC initiated. This wall placement was delayed several weeks due to the design clarifications and changes.

# C. Design Issues Are Requiring Multiple License Amendment Requests

The lack of WEC design maturity is evident in the high numbers of License Amendment Requests (LARs) and Departures to the Final Safety Analysis Report (FSAR) being submitted. As noted in the April 17, 2014 project status review meeting, 90 LARs have been identified; the NRC has approved 11 LARs; and 15 LARs are under NRC review. The following are three examples of these LARs and their importance:

- LAR 13-01/WEC LAR 54 (base mat shear reinforcement design spacing requirements) adversely impacted the schedule for Unit 2 nuclear island base mat concrete placement.
- LAR 13-02/WEC LAR 55 (base mat shear reinforcement design details revising the licensing basis from ACI 349 to ACI 318) also adversely impacted the schedule for Unit 2 nuclear island base mat concrete placement.
- LAR 14-01/WEC LAR 60 (Auxiliary Building structural details)
  has adversely impacted the schedules for construction of
  Auxiliary Building walls and floors and construction of structural
  module CA 20.

Furthermore, we anticipate that LAR 13-33/WEC LAR 53 (condensate return in the Containment Building) will impact construction progress. The same is true of LAR 14-07/WEC LAR 78 (CA04 tolerances); LAR 14-05/WEC LAR 72 – CA05; LAR 13-13/WEC LAR 02a (Turbine Building structural layout, which has been approved for Plant Vogtle); and LAR 13-14/WEC LAR 08 (Battery Room changes). We also anticipate that an LAR will be needed for coating thermal conductivity methods, which will impact Containment Vessel ring 1.

In addition to the LARs, the Consortium has also had a large number of Departures. The April 17, 2014 project status report states that 595 Departures have

been identified. Of these 237 are in process and 358 are in the queue. These Departures do not require NRC review but have the potential for impacting the project schedule due to Westinghouse's design changes.

### V. OUR FRUSTRATION CONTINUES TO MOUNT

As a result of these events, our frustration continues to mount. You have made promise after promise, but fulfilled few of them.

We are aware that the Consortium is in the process of preparing yet another rebaseline of the project schedule. We are entitled to a re-baseline schedule that reflects all mitigation measures reasonably possible to ensure completion of Units 2 and 3 on or near the currently projected completion dates. Please note that this statement of our rights is not an acceleration order. The currently projected completion dates are already past the dates to which the parties agreed in the 2012 Agreement. The delays since then have been solely the Consortium's fault. Thus, you are contractually obligated to take the steps necessary to mitigate the delays at your own expense.

Your unexcused delays will cause our project costs to increase greatly. We intend to hold you strictly to all provisions of the EPC Agreement and expect you to reimburse us for all our additional costs.

We have prepared a preliminary estimate of the added costs associated with your most recent completion projections, that is, completion of unit 2 in either the fourth quarter of 2017 or the first quarter of 2018 and a similar delay to completion of unit 3. Based on such delays, we estimate that we will incur about \$150 million in additional site costs, and will be entitled to about \$100 million in liquidated damages. If you fail to meet your most recent completion projections, these amounts will be even higher. We are in the process of investigating other additional costs that we are incurring due to the unexcused delays or associated changes to your work plan. We will advise you of their categories and amounts once we have completed our investigation.

Any future delays to those projections will require further adjustments to the payment schedules.

### VI. CONCLUSION

It is imperative that the Consortium demonstrate a renewed commitment to this project. To help achieve that, we wish to discuss these performance deficiencies and associated delays with you, as well as the measures that you intend to take to mitigate the delays. We also wish to explore with you the extent to which the Consortium's unexcused project delays constitute breaches of material provisions of the EPC Agreement.

Respectfully,

Lonnie N. Carter

President & CEO Santee Cooper

Kevin B. Marsh

President & CEO SCANA