Monthly Project Review Meeting

September 17, 2015
Jenkinsville, SC

Please silence all cellular phones and laptop computers.
Introduction of New Team Members and Guests

Carl Churchman / Bill Wood / Ron Jones
Nuclear Safety Topic

Jason Brown
INPO Traits of a Healthy Nuclear Safety Culture

Trait: Respectful Work Environment

- **Trust and respect permeate the organization.** A high level of trust is established in the organization, fostered, in part, through timely and accurate communication. Differing professional opinions are encouraged, discussed, and resolved in a timely manner. Employees are informed of steps taken in response to their concerns.

Key Attribute: Conservative Basis

- High Level of Trust: Trust is fostered among individuals and work groups throughout the organization.

  Behavior Examples:
  - Leaders, sensitive to the negative impact of a lack of information, share important information in an open, honest, and timely manner such that trust is maintained..
Review of Overdue Action Items

Jason Brown

- Items Open and Late: 44
- Items Submitted For Closure: 44
- Items Open But Not Yet Due: 16
Introduction of High Level Focus Areas

Project Directors
Introduction of High Level Focus Areas

Project Directors

1. **Nuclear Safety Culture** *(Brian McIntyre) – UPDATED (8/19/15)*

   **CAPAL 100051386, CAR 2014-2053:** On December 9, 2014 letter NND-14-0774 was issued documenting a number of performance concerns related to CB&I's nuclear safety culture and safety conscious work environment including:

   - Increasing trends in anonymous CAR's, ECP cases, NRC allegations and CB&I workers and subcontractors coming to the client with issues. Some workers provided feedback related to lack of trust in ECP and HR
   - Performance issues related to the execution of ECP investigations
   - Oversight of subcontractors, including subcontractor use of the corrective action program
   - Lack of inclusion of subcontractors in the 2014 CB&I NSC USA Alliance survey

   Actions: Developed Leadership Improvement Plan (LIP), Guideline, and Communication plan consisting of forty actions and twelve metrics focusing on the following areas:

   - Respectful Work Environment
   - Environment for Raising Concerns
   - Leadership Values and Actions

   Weekly NSCMP Sub-committee meetings and report out monthly to the Site Project and Site Directors
   Dashboards developed to monitor metrics and status of the LIP and reported monthly at the Project Management Review
   NSC Pulse Survey – 9/21/2015

2. **Schedule** *(Terry Elam)*

   **CAR 2014-2045, CAPAL 100051387:** The Unit 2 and 3 Integrated Project Schedule will be used to execute the Project with predictable performance in a safe and controlled manner. Predecessors and successors will be properly tied to ensure engineering and procurement activities support construction and construction sequences are correct. Project Milestones will be prominently displayed and tracked to completion. Schedule challenges will have actions identified to mitigate the challenge.
3. **Engineering, Procurement and Construction Licensing Basis Compliance and Configuration Management (Patrick Young) – UPDATED (7/16/2015)**

More complex construction and early receipt of equipment requires verification that the drawings and technical documents issued to the construction work packages accurately reflect the current design and licensing basis requirements. Programs, processes and procedures are followed to develop, maintain, and execute so compliance with the licensing basis is completed in a quality and timely manner. The following processes will be rigorously monitored. For any changes, the GAP 147 process is implemented to determine if a licensing action (LAR or Departure) is required. If an engineering change or the need for a licensing change will affect the work, Holds are established to preclude the procurement or construction activities. When the engineering is completed and if imposed, the Holds are promptly removed when the licensing change is incorporated in the UFSAR. Site Design Engineering will review Construction Work Packages to specifically ensure all applicable E&DCRs known by Westinghouse are incorporated. Further improvements will be developed as a result of trending corrective actions. The current number of licensing actions which have resulted from design issues has impacted the construction schedule/sequence. Forward looking (mechanical, electrical etc.) activities intended to minimize/reduce impacts in the future are being considered/reviewed.

4. **Module Engineering and Manufacturing (Dale Garrison) – UPDATED (7/16/2015)**

**CAR 2014-2046, CAPAL 100051388**: Module supplier performance in the areas of quality and schedule, along with continued design changes, continue to pose challenges to the Project schedule. Compensatory actions include the improvement plan initiated as a result of the CAR 2014-1961 RCA and the assignment of senior level staff at selected suppliers. The Consortium will continue to manage design, fabrication, assembly and placement of structural and mechanical modules to maintain IPS milestone dates and BLRA milestone dates. Status of delivery and assembly of modules is reviewed with the Owner on a weekly basis.
Introduction of High Level Focus Areas
Project Directors

5. **Quality and performance of vendors and suppliers** *(David Jantosik) – UPDATED (7/16/15)*
   CB&I Power Procurement Source Inspection is being transferred to the control of Power Quality Assurance, the transfer will be complete by August 2015.

   **CAR 2014-2228 (RCA), CAR 2014-1961(RCA), CAR 2014-2540 (RCA)** were written to improve CB&I Power and supplier quality programs associated with modules and commodities. For modules a Module Executive Committee has been formed to periodically review supplier performance and CAR 2014-1961 actions.


7. **Site Storage** – Removed; Based on satisfied closure of activities *(7/16/15)*
8. **Plant Reference Simulator (PRS) and associated ISV/HFE testing impacts on operator license training required for plant startup** *(Paul Mothena) – UPDATED (8/19/15)*

**CAPAL 100051412:** ISV/HFE testing was completed March 12, 2015 and data is being processed for report generation. HED evaluations against the training program will be required to support a successful Commission Approved Simulator submittal and Plant Reference Simulator inspection and approval. Region II has conducted the February 2015 inspection based on simulator test and design information and onsite simulator testing results and NRO has initiated inspections of the ISV at Westinghouse. NRC NRO is preparing Safety Evaluation Report that requires input from the site simulators inspections, simulator discrepancies (from SCANA, SNC and WEC) and ISV inspections at Westinghouse. NRO has ruled that a Commission Approved Simulator is the only path forward without ISV reports and issues resolved. HED Resolution Report is integral to the ITAAC and will be incorporated into the project schedule along with any I&C changes required. The current agreed upon targets are twofold; 1) complete and implement all fixes to support CAS by December 2015 and 2) complete, resolve all issues, and implement all fixes required to close ISV ITAAC by June 2017.

9. **Commercial Issue Resolution** – Removed; Commercial issues are addressed in the separate Commercial Meeting *(7/16/15)*
Introduction of High Level Focus Areas
Project Directors

10. Project Management Initiatives (Carl Churchman/ Ken Hollenbach) – UPDATED (6/18/15)
CAR 2014-2053: The project is fully utilizing the integrated project schedule (IPS) to perform both long term and short term planning. A well-defined process exists for schedule management and change control, which is overseen by the project directors.

The Consortium is establishing a new Project Management Organization;
- Integrated Consortium Leadership with representation from Engineering, Procurement, Construction, and Licensing
- Focused on Plan of the Day activities, as well as near-term look aheads and long-range planning
- Co-located in new operations execution center
- Decision-making to achieve alignment and support project needs and best interest
Introduction of High Level Focus Areas
Project Directors

11. **Cyber Security** (Brad Stokes) – UPDATED (9/17/15)

In 2009, the NRC issued 10 CFR 73.54 "Protection of digital computer and communication systems and networks" followed by Regulatory Guide (RG) 5.71, "Cyber Security Programs for Nuclear Facilities", dated January 2010. The AP1000 Certified design does not meet these requirements and in order for SCE&G to obtain a License it was necessary for SCE&G to implement the latest NRC and industry cyber security requirements. The rule requires licensees to provide high assurance that digital computer and communication systems and networks are adequately protected against cyber attacks. For over two years, the Project has been unable to negotiate an agreement for the Consortium to complete the work necessary to meet the current Licensing basis. Absent agreement, SCE&G is taking action to accomplish the necessary work to meet these requirements. These requirements have to be completed for the Project to load fuel and start-up the plant. SCE&G will need cooperation from the Consortium to complete the tasks necessary to support the Project’s success. Request for proposals for cyber efforts have been issued to third party suppliers by SNC/SCE&G and selections will be made by October 2015. Currently SCE&G is developing a scope of work for Consortium support including a Project Manager, work to complete vendor surveys, Interface with AP1000 Vendors, CDA resolution Plan and Document development, and creation of a high level network diagram. Dan Harris and Don Durkosh are currently representing the consortium. Action is still required by the Consortium (Hyde/Churchman) to release deliverables from Phase 1 and time and material efforts.
12. **Switchyard Capacitor Failures (VC Summer No. 2) (Brian Hobbs) – UPDATED (9/17/15)**

Since the failures of 2 capacitors in August 2014, CB&I has been working with its subcontractor (UC Synergetic –formally Pike Energy), their equipment suppliers (ABB and Maxwell), and SCE&G to determine the root cause. Physical inspections of previously installed capacitors concluded through the process of cause elimination that the failures were likely initiated by high frequency transients. However, there is no evidence that in-situ conditions subjected the capacitors to transients beyond their capabilities. Additional computer analysis has revealed no surges of significance are generated during switching and ground faults. Surge endurance testing concluded that the 15nF capacitors are significantly better at withstanding repetitive surges than the 30nF capacitors. However, there is not agreement that the failure mechanism seen in this testing is the same as what is causing the failure of the VCS capacitors. Additional high voltage laboratory testing is being planned to verify the capacitor’s energization endurance capabilities beginning September 21, 2015. Forty-eight (48) 15nF capacitors have been ordered for installation after Unit 1 outage (early 2016) as an interim solution, contingent upon confirmatory endurance test results.
Introduction of High Level Focus Areas
Project Directors

13. **Engineering Completion** (Pat Young / Brian Hobbs) – UPDATED (7/16/15)
The definition of engineering completion is having all analysis inputs complete and all open items closed required to support the final delivery of IFC documents prior to the procurement or construction need. The domestic 4/30 engineering completion effort significantly reduced design debt as necessary to minimize potential impacts to procurement and construction activities. Engineering completion activities that were planned exclusions from the 4/30 effort are currently underway. Engineering discoveries believed to require changes outside the approved engineering completion schedule will be thoroughly vetted and scrutinized utilizing the stage gate or equivalent process to establish plant impact and/or implementation necessity. The management rigor applied to completion of the remaining engineering activities is equivalent to that of the 4/30 effort ensuring appropriate focus. Either the same or equivalent tools (i.e., dashboards, work down curves, etc.) that were used in the 4/30 effort are employed for use to monitor final engineering completion activities. A weekly status review is conducted and problem areas are elevated as necessary with minimal delays. Key project personnel participation is the expectation in order to both provide leadership as well as provide status to project stakeholders.
14. **Periodic Updates on NRC Inspections/Audits (David Hunt) – UPDATED (8/19/15)**

The NRC conducted an inspection of the Quality Assurance program at Westinghouse Headquarters in January 2015. Three nonconformances were identified (CAPAL DI 100237332, 100077746, and 100077431). Response letter sent to NRC on May 20, 2015, outlining corrective steps that have been taken, corrective steps that will be taken to avoid noncompliance, and the associated dates when corrective action will be complete. The NRC responded with a Request for Additional Information (RAI) in June 2015 and WEC answered July 16, 2015. NRC has reviewed WEC reply to the RAI and found it to be responsive to the Notice of Nonconformance in the Inspection Report.
Industrial Safety Performance

Bill Wood
Industrial Safety Performance

Bill Wood

**VC Summer Project Monthly OSHA Recordables and TRIR**

(Total Recordable Incident Rate)

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<tr>
<th>Month</th>
<th>TRIR Rate</th>
<th>Total Incidents</th>
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<tr>
<td>Oct-14</td>
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<tr>
<td>Apr-15</td>
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<tr>
<td>Aug-15</td>
<td>0.83</td>
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</tr>
</tbody>
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**REASONS FOR CURRENT PERFORMANCE:**

During the month of August, (1) Restricted Work Duty Injury (RWDI) Recordable: A CB&I employee was working in the battery rooms upper level and walked across the metal decking to get his tap measure. He turned around to walk back and tripped over a scaffold rack, fell to the deck, and experienced discomfort to his leg. The employee was placed on work restrictions constituting classification as a Restricted Work Duty Injury (RWDI) Recordable.

**ACTIONS TO IMPROVE PERFORMANCE:**

Assist supervision in identifying common error precursors and activities based upon past experiences through trending and reporting. Continue to develop targeted communications based on I CARE and Leading Indicator observations and weekly incident trends.

**ADDITIONAL COMMENTS:**

VC Summer Project TARGET is the ongoing objective to accomplish zero OSHA Recordables.

TRIR Grading Scale: ≤ 0.46 = GREEN, 0.47 - 0.99 = YELLOW, > 1.00 = RED

Total Recordable Incident Rate (TRIR)=Cum. No. of Recordables (12 mo)*200,000/Cum. No. of Project Hours (12 mo).
Industrial Safety Performance
Bill Wood

V.C. Summer Units 2 & 3
YTD Injury Rates

TRIR

DAFW

0.00 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00

0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00


0.00 0.00 0.00 0.00 0.00 0.00 0.00

TRIR TRIR Rate Goal (0.46) DAFW DAFW Rate Goal (0.05)
**Industrial Safety Performance – Near Miss Reporting**

**Bill Wood**

**CURRENT PERFORMANCE:**
The number of near misses reported in August increased by 38%.
The number of Injuries reported in August decreased by 13%.

**GOAL:**
Goal: 2:1 Ratio of Near Miss Events to Injury Incidents per month. Near Miss Grading Scale: 2:1 = GREEN, ≥ 1:1 = YELLOW, < 1:1 = RED

**ACTIONS TO IMPROVE PERFORMANCE:**
Continue to encourage a low threshold for near miss reporting, and ensure through investigations are conducted. Continue to communicate lessons learned to the organization through Weekly Supervisor Safety Meetings, Area All Hands meetings and targeted tailgate meetings.

**ADDITIONAL COMMENTS:**

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Month End August 2015

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19:

WEC_SCORS_000023
Industrial Safety Performance – I CARE
Bill Wood

Overall Percentage Participating Monthly

I CARE “All Hands” meetings held throughout the site in August
Actions?
Consortium Quality Assurance

Program Brief

David Hunt / David Jantosik
SITE HEALTH REPORT – Key Issues

What is a Key Issue?
- Key Issues have been identified by Consortium Quality as the most impactful issues faced by the site, based on the results of QA Surveillances and Audits

What are the expectations of a Key Issue?
- Key Issues have the potential to be raised to a PRM High Level Focus Area
- The expectation is that Line Management have ownership of the issues and provide increased monitoring of plans and progress

What is a Monitoring Issue?
- Monitoring issues have been identified by Consortium Quality as emerging issues that deserve increased attention, but are not currently as impactful as Key Issues
SITE HEALTH REPORT – Key Issues

Preventative Maintenance (Owner – Jay Sawicki)

A. Timeliness (backlog)
   I. Currently evaluating equipment delivered from 7/14 to 8/15, to ensure requirements have been met. Estimated completion date 11/1/15

B. EPCR/EPHC Quality (PM Check cards)
   I. CAR 2015-1699 (2B, Step 9: Action Plan Implementation) – EPHC and EPCR could not be located for 4 components in the PM program
   II. CAR 2015-1700 (2B, Step 9: Action Plan Implementation) – Field completed EPCR lack adequate detail in regard to work performed

C. Identification of Nonconformance’s & CAQs
   I. CAR 2015-1702 (2B, Step 9: Action Plan Implementation) – PM activity results do not meet acceptance criteria and were not documented on EPCR, CAR or N&D
   II. CAR 2015-1703 (3, Closed) – Humidity exceeded manufacturer’s recommendation in storage tent, was not identified or documented
SITE HEALTH REPORT – Key Issues

Product Quality

A. Modules, Embeds, Spools (Owner – Eric Wilson, Josh Skudlarick)
   I. Modules
   II. Embeds
      a) Cives CGD issues, CAR 2015-2745 (see MSOW)
      b) N690 NDE issues, CAR 2015-3384 (2A) MSOW/N&Ds development in process
   III. Spools
      a) Currently in Phase 3 of Return to Work Plan
      b) Scheduled to begin shipping 9/21/15

B. CGD Package acceptance
   I. Cives embeds have been placed on a “Quality Control Managerial Hold” until the
      applicable packages have been reviewed / approved by the CGD team
   II. Through coordination with Construction and FE, project priorities list has been
      established to direct the CGD Team’s reviews
   III. Extent of Condition has been addressed, see MSOW
   IV. To date, no hardware issues have been identified at VCS/Vogtle
   V. CAR 2015-3434 written to document and provide tracking of associated documentation
      related to MSOW
SITE HEALTH REPORT – Key Issues

Product Quality (Cont'd...)

C. Preventative Maintenance (lack of program at suppliers, specifically CBI Laurens)
   I. CAR 2015-1240 (2B, Step 9) – PM program controls for Customer Furnished Material and Purchaser furnished material
   II. CAR 2015-1955 (2B, Step 9) – Lack of a PM program at CBI Lake Charles
   III. CAR 2015-1954 (2B, Step 9) – Lack of a PM program at CBI Laurens
SITE HEALTH REPORT – Key Issues

Corrective Action Program Implementation (Owner - Bill Wood / Jim Comer)

A. Evaluation and Analysis
   1. CAR 2015-0894 (3, Step 9) - CAP Leadership, Oversight and Ownership

B. Corrective Actions
   1. CAR 2015-1175 (2A, Step 9) - Implementation of Corrective Action Program with regards to the welding program, to resolve a recurring documentation issue, has been ineffective
SITE HEALTH REPORT – Monitoring Issues

Monitoring Issues

A. ASME Program Implementation (Owner – Jack Carr)

B. Corrective Maintenance
   I. Validating program (CB&I QA Surveillance in progress)

C. Configuration Management (Adam Scheider, Mike Engel)
   I. E&DCRs post-fab, post-delivery, incorporation into drawings
   II. Flow down design and design changes to supplier/vendors

D. Material Control (inside the fence) (Owner – JJ Hughes)
   I. CAR 2015-2306 (3, Step 9) – Material ID and traceability lost for leak chase components
   II. CAR 2015-2629 (2B, Step 9) – Material Identification and Control

E. Material Storage (identification and Segregation of Materials) (Owner – Eric Wilson / JJ Hughes)
   I. CAR 2015-1947 (2B, Step 9) – Pipe spools being stored improperly
   II. CAR 2015-2075 (2B, Step 6) – Pipe spool with non-ASME in-line valves are being stored improperly
   III. CAR 2015-2455 (2B, Step 10) – Electrical Storage Area Deficiencies
Stop Work Orders & Management Suspensions of Work

Stop Work Orders (SWO) & Management Suspension of Work (MSOW)

A. 2 SWO concerning welded couplers
   I. LAR 110 (15-09) issued by NRC on Sept. 1, 2015
      a) Closed associated SWOs (132177-300-304-002-0004 and -0005)
   II. LAR 111 (15-08) – Submitted to the NRC on Aug. 24, 2015, with requested approval
date of Oct. 21, 2015
   III. CAR 2015-1729 (3) – Closed 5/20/14
   IV. CAR 2015-1730 (2A) – In Step 9: Action Plan Completion (2 Actions, Due 10/23/15)

B. 1 SWO concerning Material Storage / PM
   I. CAR 2013-1744 (1) – Closed 2/11/15

C. 1 MSOW concerning safety related embed plates
   I. CAR 2015-2745 (2A) – Cives Commercial Grade Dedication Plans and Procedures not
reviewed and approved by CB&I
   II. MSOW written from the Extent of Condition from CAR 2015-2745 as a conservative
measure to prevent installation of SSCs which have not been verified as compliant with
the CGD requirements
Corrective Action Program Improvements

Jim Comer
Leadership Improvement Plan Update

Respectful Work Environment
• Retaliation recognition training for ECP/HR/ERB – Completed

Environment For Raising Concerns
• All actions complete

Leadership Values and Actions
• ECP outlier group assessments and develop plans to close performance gaps – Completed
• Develop and execute effectiveness measures for Forman General Forman Two Minute Rule training – 11/30/15
• Execute Leadership Assessment – 12/18/15

Conduct Nuclear Safety Culture Pulse Survey
• Pre-job Briefing Completed
• Survey provided for CB&I, WEC, and Subcontractors
• Survey scheduled for week of 9/21/15
Actions?
Test Program Status

Tim Messersmith, Consortium
Startup & Testing Director (Acting)
Per SCE&G Management

- PRM Test Program Status Reporting will begin in October 2015

- Future PRM reporting will include Consortium test team progress and Consortium / Owner collaboration
Status of Unit 3 Modules

Dale Garrison, Modules Director
Review of Project Milestone Schedule
Terry Elam / Lisa Cazalet

VCS U2 Overview Schedule - Month-End August 2015

**The schedule details for the shield building east side concrete are currently being analyzed and the complexity of this work sequence may have impacts to the critical path.**

**The current schedule dates for the critical path have been intentionally excluded from this report until that review is complete.**

**The Consortium is exploring potential mitigation strategies and will meet with the Owner on or prior to 9/30/15 to discuss the mitigation and IPS status.**

NOTE: The COD used in this report has not been accepted by the Owners as of this report date. The June 2019 Substantial Completion Date assumes NNI panel delivery acceleration.

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Month End August 2015

CONFIDENTIAL
Priority 1: Nuclear Island Shield Building
Unit 2 Nuclear Island Shield Building

Milestone Summary

Critical Path for shield building work goes through several concrete placements surrounding the containment vessel bottom head and increasing elevation levels to support Shield Building Construction.

- Prioritized Activities:
  a) Layer F1/G placements (rebar, formwork, embeds, and concrete)
  b) CA20 North wall completion
  c) CBIS Shield Panel installation with associated work
  d) Balance of Shield Building reinforced concrete placements and associated work to Elev. 149’