Heisserer, Jamie

From:	Dubose, Sheila
Sent:	Thursday, June 11, 2015 11:34 AM
To:	Michel(R2), Eric; Heisserer, Jamie; Waters, Michael; Fredette, Thomas; Kozak, Thomas; Burkhart, Lawrence; McGovern, Denise; Jones, William; Yerokun, Jimi; Ernstes, Michael; Musser, Randy; Ayres, David; OBryan, Phil; Oelstrom, Chad; Heher, Patrick; Kent, Jonathan; Nazario, Tomy; Karlovich, Nicholas; Donnelly, Patrick; Chandler, Timothy; Hannah, Roger; ConE_Resource; NRO_cROP Resource; Summer_Construction_Support; Dudes, Laura
Subject:	IR 05200027/2015-009 VC Summer Nuclear Station Unit 2 - NRC Special Inspection Report
Attachments:	SUMMER SIT Final.pdf

Dated: June 10, 2015

Letter To: Ronald Jones, Vice President, New Nuclear Operations

From: Jamie Heisserer, Chief, CIB2, Division of Construction Inspection

Subject: VC Summer Nuclear Station Unit 2 – US NRC Special Inspection Report 05200027/2015009

ADAMS No. ML15161A478

View ADAMS P8 Properties ML15161A478
Open ADAMS P8 Document (IR 05200027/2015009 Virgil C. Summer Nuclear Station Unit 2 - NRC Special Inspection Report)

Sheila H. DuBose, Administrative Assistant
Deputy Regional Administrator for Construction
Office of the Regional Administrator
U. S. NRC, Region II
Atlanta, GA 30303
(404) 997-4431
(b)(6)

A. NRC-Identified and Self Revealed Findings
Cornerstone: Construction/ Installation

Green. The inspectors identified an ITAAC finding of very low safety significance (Green) and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings" for South Carolina Electric and Gas' (SCE&G) through their contractor CB&I Power, failed to prescribe or adequately implement procedures for coring into concrete. The licensee entered this issue into their corrective action program as CR-NND-15-00539.

The finding was associated with the Construction/ Installation cornerstone. The inspectors determined the performance deficiency was more than minor following the guidance in IMC 0613, "Power Rector Construction Inspection Reports," Appendix E, Example 7. The inspectors evaluated the finding using the construction significance determination process and determined the finding was of very low safety significance (Green) because the licensee was able to demonstrate with reasonable assurance that the design function of the applicable structure would not be impaired by the deficiency. The finding was determined to be an ITAAC finding because it was material to the acceptance criteria of Unit 2 ITAAC 760 (3.3.00.02a.i.a). The acceptance criteria of this ITAAC requires that a reconciliation report is completed that concludes the "as-built" construction conforms to the approved design. This finding is associated with deviations from design requirements that would not have been reconciled by the licensee as required by the ITAAC, because CB&I cored holes that impacted already installed safety related rebar and did not notify the design engineer of the impact as required by their procedures.

The inspectors screened the finding for a possible construction safety focus component (CSFC) aspect in accordance with Appendix F, "Construction Safety Focus Components and Aspects," of IMC 0613, "Power Reactor Construction Inspection Reports." This finding has a cross-cutting aspect in the area of XXXX. Specifically, the licensee XXXX

Scope:

The inspectors reviewed implemented and available procedures for the coring of holes in concrete and post installation of safety related rebar. At the time of the incident, CB&I Power had procedures in-place for the post installation of anchors in concrete, which included requirements for grouted anchors and embedments. These procedures were reviewed for applicability to the coring performed for the post installation of safety related rebar. In addition, the procedures were reviewed for requirements if adverse conditions are encountered in the field (e.g. encountering rebar).

From February 6th through 10th, CB&I Power cored holes for the installation of rebar dowels per the dispositions in Nonconformance and Disposition (N&D) reports N&D VS2-CR01-GNR-00259 and N&D VS2-CR01-GNR-00263.

b. Findings

Failure to Implement procedures for coring concrete and post installing anchors

Introduction
An ITAAC finding of very low safety significance (Green) and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and drawings,"

was identified by the inspectors for the failure by SCE&G, through their contractor CB&I Power, to adequately implement procedures for post installing safety related rebar and coring into concrete.

Description

In early February, CB&I Power was installing relocated dowels for the proposed Layer 3 of concrete inside the CVBH. The relocated dowels were being post installed by coring into the existing concrete below Layer 3 and grouting the post installed dowels in the cored holes. As stated above 10 holes were cored. To prepare for grouting, each hole was filled with water to pre-soak the hole. However, one of the holes (R1) closest to the containment vessel wall did not hold water. A subsequent boroscope examination of that hole revealed that the drill had impacted the containment vessel and the core bit cut through safety-related rebar at this location. The contractor investigated potential rebar impact from coring at the other locations and determined safety-related rebar was impacted at D2 and D7 core locations.

The VC Summer Unit 2 project has procedures in place for installing reinforcing steel and post installing rebar or anchors by coring and grouting. These procedures include corporate level procedures NCSP 3-33-1, Installation of Drilled-In Concrete Anchors and NCSP 3-42-1, Reinforcing Steel installation. And site instruction CSI 3-40-0, Installation of Post Installed Anchors. Both corporate level procedures and site instructions are required to be followed.

NCSP 3-33-1 Section 4.0 and CSI 3-40-0 Section 4.0 both define a grouted anchor as "an anchor in which, a non-shrink cementitious or adhesive grout fills the annular space around the anchor and provides bonding to the anchor rod and wall of the drilled hole." Section 6.2.3 of CSI 3-40-0 states, in part, "for anchors that are installed with non-shrink cementitious grout or adhesive systems, a core drill may be used to drill the hole."

NCSP 3-33-1, Attachment 7.1- Drilled –In Concrete Anchor Installation Attributes is the list of the construction quality completion (CQC) checklist that provides the attributes that need to be verified by field engineer and superintendent. Attribute W90 states, in part, "Rebar has not been cut unless approved (list approval documents in remarks)." In addition, NCSP 3-33-1, Section 6.2.2.e states, in part, "Discipline Construction Superintendent and responsible Field Engineer shall verify … that reinforcing steel has not been cut." CSI 3-40-0 Section 6.2.1 states, in part, "post installed anchors shall not be drilled into structural rebar or embedded plates unless approved by the Engineer." NCSP 3-42-1 Section 6.8b states, in part, "any item, condition or material which deviates from drawings, specifications or other engineering requirements and cannot be resolved within the scope of such requirements, or otherwise requires an Engineering disposition, shall be reported In accordance with, NCSP 2-8, "Nonconformance Reporting and Control"."

The contractor had failed to adequately implement procedures for post installing safety related rebar and coring into concrete. Specifically, the post-installation of grouting rebar dowels and coring was performed per the "Repair" dispositions in N&D VS2-CR01-GNR-00259 and N&D VS2-CR01-GNR-00263. These dispositions provided no approvals for cutting safety related rebar. The field engineer used the N&D's as the procedures and instructions for the repair but failed to incorporate or review CB&I procedures NCSP 3-33-1, CSI 3-40-0, and NCSP 3-42-1. The Field Engineer did not understand that these procedures applied to post installed rebar and coring activities. Safety related rebar was contacted and cut at three core locations (R1, D2, and D7). Coring was not stopped by the Field Engineer or Construction Superintendent when rebar was contacted. In addition, the Field Engineer did not contact the Engineer for approval or report the nonconformance. Prior to grout placement, neither the Field Engineer nor

Construction Superintendent verified that rebar was not cut. Core locations D2 and D7 were grouted. As a result ITAAC 3.3.00.02a.i.a was materially impacted because these two locations contained unanalyzed structural deviations from the original design that would not have been reconciled.

Analysis.
The inspectors determined that the licensee failed to adequately implement procedures as required by 10 CFR Part 50, Appendix B, Criterion V, was a performance deficiency. The performance deficiency was more than minor following the guidance in IMC 0613, "Power Rector Construction Inspection Reports," Appendix E, Example 7. Specifically, the procedures didn't adequately implement the requirements for coring into concrete and impacting safety related rebar leaving the cutting of rebar unacceptable or indeterminate.

The finding was determined to be an ITAAC finding because it was material to the acceptance criteria of Unit 2 ITAAC 760 (3.3.00.02a.i.a). The acceptance criteria of this ITAAC requires that a reconciliation report, concluding the "as-built" construction conforms to the approved design, is completed for the areas associated with the ITAAC. This finding is associated with deviations from design requirements that would not have been reconciled by the licensee as required by the ITAAC.

The inspectors concluded this finding was associated with the Construction/ Installation Cornerstone. The inspectors evaluated the finding using the construction SDP in accordance with IMC 2519, "Construction Significance Determination Process," Appendix A, "AP 1000 Construction Significance Determination Process" and determined that finding was of very low safety significance (Green) because the SSC would have been able to meet its design function and was assigned to Row 1 of the risk importance table.

This finding has a cross-cutting aspect in the area of XXXX because the licensee did not XXXX. Specifically, XXXX.

Enforcement.

10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings" requires, in part, that "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions. Procedures, or drawings"

Contrary to the above, during coring and grouting in early February for the construction of Layer 3 concrete construction inside the CVBH, the licensee, through their contractor CB&I Power, failed to adequately implement procedures for post installing safety related rebar and coring into concrete. Specifically, coring was not stopped by the Field Engineer or Construction Superintendent when rebar was contacted at locations R1, D2, and D7. In addition, the Field Engineer did not contact the Engineer for approval or report the nonconformance. Prior to grout placement, neither the Field Engineer nor Construction Superintendent verified that rebar was not cut. As a result, core locations D2 and D7 were grouted with an unapproved, unanalyzed and unreconciled structural defect.

Because this violation was of very low safety significance (Green) and it was entered into the licensee's corrective action program as CR 15-0539, this violation is being treated as a non-cited violation (NCV 05200027/2015009-02), Unit 2 Containment Internal Structures Coring, consistent with Section 2.3 of the NRC Enforcement Policy and EGM 11-006.

1. Development of Independent Extent of Condition

a. Scope and Observations

The inspectors reviewed Non-Conformances and Dispositions (N&D) for the coring of holes in concrete and post-installation of safety-related rebar that had been issued prior to this incident at both VC Summer Unit 2 and 3. These N&D's were reviewed to determine the extent that coring and post installing safety rebar was utilized and for similarity to the coring performed for the 10 cores described above.

Based on our inspection the only coring to post-install safety related rebar has occurred at the Unit 2 site. The following table summarizes the N&D's for post installing safety related rebar, the number and depth of the cores, and the approximate location of the coring.

Change Document (N&D)	Number of Holes Drilled	Depth of Holes	Approximate location in NI
VS2-CR01-GNR-000062	2	31" min.	Col. Line 4 dowels into basemat (el. 66'-6")
VS2-CR01-GNR-000156	21	25" min.	Inside CV, Layer 2 dowels into Layer 1A
VS2-CR01-GNR-000252	3	25" min.	Inside CV, Layer 3 dowels into Layer 2
VS2-CR01-GNR-000259 VS2-CR01-GNR-000263	10 (R1-R3,D1-D7)	25" min.	Inside CV, Layer 3 dowels into Layer 2. Safety related rebar and CVBH impacted.

VS2-CR01-GNR-000062 contained information on the location of safety related rebar, to be avoided, near the surface of the basemat and the depth of hole would not reach rebar located near the bottom of the basemat. VS2-CR01-GNR-000156 provides specific instructions to prevent damage rebar. Also, E&DCR VS2-CR01-GEF-000090 was created from this N&D to address the coring. The same instructions were provided in the E&DCR. Specific Instructions Sheets (SIS) were created by the Field Engineer. The SIS identified the core locations and provided instructions. In addition, a CQC was included and completed in accordance with NCSP 3-33, as required and discussed in the previous report section. Comparing the locations of the cores to the construction plans, the inspectors determined that containment vessel or horizontal rebar was not impacted at these locations.

VS2-CR01-GNR-000252 did not contain specific instructions to prevent rebar damage. No SIS or CQC was created by the FE for the coring of the holes. However, comparing the locations of the cores to the construction plans, the inspectors determined that containment vessel or horizontal safety related rebar was not impacted at these locations.

VS2-CR01-GNR-000259 and VS2-CR01-GNR-000263 did not contain specific instructions to prevent rebar damage. No SIS or CQC was created by the FE for the coring of the holes. However, comparing the location of the core (D1) from VS2-CR01-GNR-000259 to the construction plans, the inspectors determined that containment vessel or horizontal safety related rebar was not impacted at the D1 core location.

b. Conclusion

Based on a review of the N&D's for post installing rebar and coring, the location of the cores, and the construction plans it appears the extent of coring activities impacting safety related rebar or the containment vessel were isolated to the cores drilled per VS2-CR01-GNR-000263.

No findings of significance were identified.

2. Engineering Disposition Evaluations

a. Scope and Observations

The inspectors reviewed Non-Conformances and Dispositions (N&D) for the safety related structural rebar impacted by the coring associated with N&D VS2-CR01-GNR-000263. These N&D's were reviewed for conformance with the licensing basis, applicable codes, and to ensure compliance with the requirements of 10 CFR Part 50 Appendix B.

To disposition the potential non-conformances WEC and CB&I reviewed as-built data, construction plans, concrete cores and performed additional exploratory investigations. The exploratory investigations included excavating the area around core hole R1 using hyrdro-demolition and removing grout and grouted dowels at select locations using coring methods. Using the above methods, the contractor determined safety-related rebar was impacted at R1, D2 and D7 core locations.

The following N&Ds were generated to disposition the impacted safety related rebar.

Hole No.	N&D for structural rebar impact
R1	VS2-1110-GNR-000011
D2	VS2-CR01-GNR-000294
D7	VS2-CR01-GNR-000295

The dispositions were use-as-is. The inspectors reviewed the justifications for the use-as-is dispositions to verify compliance with the design calculations, applicable codes, and the UFSAR.

b. Conclusion

Based on the review of the N&Ds justifications, the inspectors concluded the use-as-is dispositions met the licensing basis, applicable codes, and complied with the requirements of 10 CFR Part 50 Appendix B. No findings of significance were identified.

3. Review of Corrective Actions, Causal Analysis and Extent of Condition

a. Scope and Observations

b. Conclusion

Hole No.	N&D for structural rebar impact	N&D for excavating concrete surrounding CVBH impact	N&D for repair of concrete
R1	VS2-1110-GNR-000011	VS2-1110-GNR-000011	VS2-1110-GNR-000012
R2	VS2-CR01-GNR-000279		VS2-1110-GNR-000012
R3	VS2-CR01-GNR-000279		
D1	VS2-CR01-GNR-000293		
D2	VS2-CR01-GNR-000294		
D3	VS2-CR01-GNR-000294		VS2-CR01-GNR-000297
D4	VS2-CR01-GNR-000279	VS2-1110-GNR-000011	VS2-1110-GNR-000012
D5	VS2-CR01-GNR-000279	VS2-1110-GNR-000011	VS2-1110-GNR-000012
D6	VS2-CR01-GNR-000295		VS2-CR01-GNR-000297
D7	VS2-CR01-GNR-000295		VS2-CR01-GNR-000297

Hole	Disposition Summary Unofficial
R1	Excavated during CVBH repair. Structural radial rebar cut. Dispositioned to remove 12" of radial rebar for CVBH repair. Abandon in-place.
R2	Excavated during CVBH repair. No structural rebar encountered.
R3	QC inspected and verified no rebar encountered.
D1	Based on provided design and asbuilt information, no structural rebar encountered.
D2	*Preliminary - assumed structural circumferential and radial rebar cut. Dispostion use as is based on D3 recore indicating no rebar encountered.*
D3	*Preliminary - No rebar encountered during recore and boroscope. Repair recored hole.*
D4	Excavated during CVBH repair. No structural rebar encountered.
D5	Excavated during CVBH repair. No structural rebar encountered.
D6	*Preliminary - Recored. No rebar encountered. Waiting on disposition of N&D.*
D7	*Preliminary - Recored to determine rebar encountered. #8 bar observed cut. Indeterminate if cut bar construction aid or tail of hook bar. Also, determined structural rebar cut. Based on this indeterminate for use as is. Determined to recore D6.*

Travick, Vanette

From: Heisserer, Jamie
Sent: Wednesday, July 08, 2015 2:02 PM
To: Travick, Vanette
Subject: FW: Communication Plan - VC Summer Unit 2 Special Inspection Regarding Inadvertent Damage of the Containment Vessel Bottom Head (February 2015)

This information is releasable.

From: Dubose, Sheila
Sent: Tuesday, February 24, 2015 5:49 PM
To: Heisserer, Jamie
Cc: Yerokun, Jimi; Ernstes, Michael; Seymour, Deborah; Jones, William; Brown, Frederick; Sloan, Kimberly; Adams, Michelle; Dubose, Sheila
Subject: Communication Plan - VC Summer Unit 2 Special Inspection Regarding Inadvertent Damage of the Containment Vessel Bottom Head (February 2015)

View ADAMS P8 Properties ML15055A619
Open ADAMS P8 Package (Communication Plan V.C. Summer Unit 2 Special Inspection Regarding Inadvertent Damage of the Containment Vessel Bottom Head)

Sheila H. DuBose, Administrative Assistant
Deputy Regional Administrator for Construction
Office of the Regional Administrator
U. S. NRC, Region II
Atlanta, GA 30303
(404) 997-4431
(b)(6)

Heisserer, Jamie

From: Heisserer, Jamie
Sent: Tuesday, March 03, 2015 11:21 AM
To: Johnson, Andrea
Subject: Fwd: A New Daily Note Has Been Submitted by RII

FYI

From: "webwork@nrc.gov" <webwork@nrc.gov>
Subject: A New Daily Note Has Been Submitted by RII
Date: 03 March 2015 11:04
To: "EDO GroupAccount" <EDO.GroupAccount@nrc.gov>
Cc: "Pena, Alex" <Alex.Pena@nrc.gov>, "Lee, Pamela" <Pamela.Lee@nrc.gov>, "McCree, Victor" <Victor.McCree@nrc.gov>, "Wert, Leonard" <Leonard.Wert@nrc.gov>, "Brown, Frederick" <Frederick.Brown@nrc.gov>, "Yerokun, Jimi" <Jimi.Yerokun@nrc.gov>, "Heisserer, Jamie" <Jamie.Heisserer@nrc.gov>
Pamela M. Lee of RII has submitted the following daily note(s):

(~~OUO-SII~~)

During the week of February 23, Region II, with support from NRO/DCIP, completed the on-site portion of a Special Inspection at V.C. Summer Unit 2. The inspection evaluated damage to safety related rebar and the lower containment vessel head caused by a crew drilling through previously placed concrete. The team preliminarily identified two green non-cited violations. One related to design control, and the other related to the improper use of procedures, instructions and drawings. The Special Inspection will remain open pending the team receiving and reviewing the licensee's final root cause analysis and engineering evaluations for the affected safety-related rebar.
Points of Contact:
1)Jamie Heisserer, R-II/DCI/CIB2, (404) 997-4451

Special Considerations:
1)N/A

Heisserer, Jamie

From: Yerokun, Jimi
Sent: Wednesday, June 10, 2015 8:12 AM
To: Dudes, Laura; Cheok, Michael; Jones, William
Cc: McCree, Victor; Ernstes, Michael; Heisserer, Jamie
Subject: VC Summer Special Inspection Team Report.

FYI:

We are issuing the VC Summer Special Inspection Team report this week, under Jamie's signature. The special inspection was in response to the concrete boring incident that resulted in damages to safety-related rebar and containment vessel bottom head. Findings: Two Green non-cited violations of App. B Crit. III, Design Control, and Crit. V, Procedure. Associated Human Performance Cross-Cutting aspects of Work Management and Avoid Complacency.

Jimi T. Yerokun
Director, DCI/RII
404 997-4300
(b)(6) ***(cell)***

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Monday, June 08, 2015 3:33 PM
To: OBryan, Phil; Michel(R2), Eric; Dubose, Sheila
Cc: Sloan, Kimberly; Heisserer, Jamie; Ernstes, Michael
Subject: RE: Summer SIT report, final

I concur.

Chad Oelstrom
Construction Resident Inspector
VC Summer Units 2 and 3
USNRC Region II, CCI-DCP-CPB4
Phone: 803-345-6856
Email: mailto:chad.oelstrom@nrc.gov

From: OBryan, Phil
Sent: Monday, June 08, 2015 3:27 PM
To: Michel(R2), Eric; Dubose, Sheila
Cc: Sloan, Kimberly; Heisserer, Jamie; Oelstrom, Chad; Ernstes, Michael
Subject: RE: Summer SIT report, final

I concur

From: Michel(R2), Eric
Sent: Monday, June 08, 2015 2:17 PM
To: Dubose, Sheila
Cc: Sloan, Kimberly; Heisserer, Jamie; Oelstrom, Chad; OBryan, Phil; Ernstes, Michael
Subject: Summer SIT report, final

Shelia,

The VC Summer SIT report has all comments incorporated, and is ready for final concurrence and signature. The file is located at: G:\CCI\DCI\CIB2\VC Summer\SUM SIT Final Draft rev jmh comments.docx.

Chad and Phil – request you concur via reply to this email. Thanks.

Eric

Eric Michel
Senior Project Engineer, TVA Sites
USNRC, Region 2
Atlanta, GA
404-997-4555

Heisserer, Jamie

From: Michel(R2), Eric
Sent: Wednesday, May 27, 2015 11:25 AM
To: Heisserer, Jamie
Subject: FW: Feedback/lessons learned from the VCS Summer SIT

FYI, just keeping you in the loop.

From: OBryan, Phil
Sent: Wednesday, May 27, 2015 10:34 AM
To: Kozak, Thomas; Beardsley, James
Cc: Michel(R2), Eric; Oelstrom, Chad
Subject: Feedback/lessons learned from the VCS Summer SIT

Tom/Jim,

Below are 2 lessons learned from the SIT at VCS. I will put the feedback into the IMC change request database, but wanted to bounce them off of you for insights prior to doing so. Phil

1) IMC 2504 and 2506 describe the use of an SIT for "Non-performance based" events only, and directs that performance based events be dealt with via the CAM process. However, R2 management used the last bullet/deterministic criterion on page C-3 of IMC 2504 app C to direct the SIT be performed. It states:

"Any significant issue(s) not covered by the above that in the judgment of management warrants additional inspection or oversight. The use of an SI may be appropriate. Generally, an AIT would not be warranted."

Use of this criterion apparently is not consistent with the rest of the guidance in IMC 2504. Recommend changing IMCs 2504 and 2506 to describe a performance based set of criteria for performing an SIT, or more clearly state that performance based SITs are not desired.

2) Performing an SIT at a construction site does not require an immediate response by SIT inspectors (as opposed to an operational plant where there may be an immediate safety concern). The VCS SIT would have benefitted from a delay in starting the inspection so that the licensee could gather more information. Since one of the SIT charter items included a review of the licensee's extent of condition, root cause, and corrective actions, the SIT could not be completed until several weeks after the on-site portion of the inspection. Recommend adding language to IMC 2504 to consider delaying the SIT while the licensee works on the root cause of the event.

Side note: considering that there are no immediate safety concerns and a delay of the SIT is desirable, then maybe we should have just performed this inspection as part of there QA program?

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Wednesday, May 27, 2015 7:21 AM
To: Michel(R2), Eric; OBryan, Phil
Subject: RE: SUM SIT lessons learned

I remember discussing the timing considerations. Especially with regards to our inspection influencing their root cause and corrective actions.

Chad Oelstrom
Construction Resident Inspector
VC Summer Units 2 and 3
USNRC Region II, CCI-DCP-CPB4
Phone: 803-345-6856
Email: mailto:chad.oelstrom@nrc.gov

From: Michel(R2), Eric
Sent: Wednesday, May 27, 2015 7:01 AM
To: OBryan, Phil
Cc: Oelstrom, Chad
Subject: RE: SUM SIT lessons learned

The timing considerations could probably use some thought for the construction sites. No real rush to get out since there are no safety immediate safety concerns, and these sites aren't rushing for a restart. Might consider delaying to allow the sites to get further along with their root cause.

From: OBryan, Phil
Sent: Tuesday, May 26, 2015 11:46 AM
To: Michel(R2), Eric
Cc: Oelstrom, Chad
Subject: RE: SUM SIT lessons learned

The only one I have is the confusion associated with screening the event in the IMC in the first place. Do either of you have any others?

From: Michel(R2), Eric
Sent: Monday, May 25, 2015 12:41 PM
To: OBryan, Phil
Subject: SUM SIT lessons learned

Phil,

Did you provide NRO with any lessons learned from the Summer SIT for incorporation into a future construction specific IP or ROI (or any other form of guidance)? If so, can you share those with me? I'm giving a quick presentation at the counterparts meeting the first week of June and want to incorporate any high level take-aways. Thanks.

Eric

Steddenbenz, Katherine

From: Michel(R2), Eric
Sent: Friday, May 22, 2015 11:38 AM
To: Sloan, Kimberly
Cc: Heisserer, Jamie; Dubose, Sheila
Subject: Summer SIT report
Attachments: SUM SIT Final Draft.docx

Kimberly,

I spoke with Jamie and she mentioned you were covering DCI for the moment. If that's still the case, please format the attached Summer SIT report for concurrence and approval. Thanks and have a good weekend!

Eric

Eric Michel
Senior Project Engineer, TVA Sites
USNRC, Region 2
Atlanta, GA
404-997-4555

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

May XX, 2015

Mr. Ronald A. Jones
Vice President, New Nuclear Operations
South Carolina Electric and Gas
P.O. Box 88 (Mail Code P40)
Jenkinsville, SC 29065-0088

SUBJECT: NUCLEAR REGULATORY COMMISSION SPECIAL INSPECTION REPORT NUMBER 05200027/2015-009

Dear Mr. Jones:

The Nuclear Regulatory Commission (NRC) conducted a special inspection from February 23 through February 27, 2015, at the Virgil C. Summer Nuclear Station, Unit 2, in Jenkinsville, SC and a subsequent in-office inspection from April 21 through April 27, 2015. The purpose of the special inspection was to assess the facts and circumstances surrounding an event involving contact with the containment vessel shell and structural rebar located within the containment vessel during concrete coring operations.

Between February 5 and February 10, 2015, ten holes were cored in the Unit 2 containment vessel layer 2 basemat in preparation for relocating vertical dowels interfering with an embed plate to be placed in layer 3. The processes of determining where those holes were to be cored, and the types of dowels to be used contributed to the unintentional drilling through structural rebar in three cored holes, and contacting the containment vessel shell with the drill in one cored hole.

Two NRC-identified findings of very low safety significance (Green) were identified during this inspection. These findings were determined to involve violations of NRC requirements. However, because of their very low safety significance, and because the issues were entered into your corrective action program, the NRC is treating the issues as non-cited violations (NCVs) in accordance with Section 2.3.2.a of the NRC Enforcement Policy.

If you contest these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector office at the Virgil C. Summer Nuclear Station Units 2 and 3.

If you disagree with the cross-cutting aspect assigned to any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region II, and the NRC Resident Inspector office at the Virgil C. Summer Nuclear Station Units 2 and 3.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system Agencywide Document Access and Management System (ADAMS).
ADAMS is Accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Should you have any questions concerning this letter, please contact us.

Sincerely,

Jamie Heisserer, Chief
Construction Inspection Branch 2
Division of Construction Inspection

Docket No. 05200027
License No. NPF-93

Enclosures:

1. NRC Inspection Report No. 05200027/2015-009
2. NFS SIT Charter

cc: (See page 3)

May XX, 2015

Mr. Ronald A. Jones
Vice President, New Nuclear Operations
South Carolina Electric and Gas
P.O. Box 88 (Mail Code P40)
Jenkinsville, SC 29065-0088

SUBJECT: NUCLEAR REGULATORY COMMISSION SPECIAL INSPECTION REPORT NUMBER 05200027/2015-009

Dear Mr. Jones:

The Nuclear Regulatory Commission (NRC) conducted a special inspection from February 23 through February 27, 2015, at the Virgil C. Summer Nuclear Station, Unit 2, in Jenkinsville, SC and a subsequent in-office inspection from April 21 through April 27, 2015. The purpose of the special inspection was to assess the facts and circumstances surrounding an event involving contact with the containment vessel shell and structural rebar located within the containment vessel during concrete coring operations.

Between February 5 and February 10, 2015, ten holes were cored in the Unit 2 containment vessel layer 2 basemat in preparation for relocating vertical dowels interfering with an embed plate to be placed in layer 3. The processes of determining where those holes were to be cored, and the types of dowels to be used contributed to the unintentional drilling through structural rebar in three cored holes, and contacting the containment vessel shell with the drill in one cored hole.

Two NRC-identified findings of very low safety significance (Green) were identified during this inspection. These findings were determined to involve violations of NRC requirements. However, because of their very low safety significance, and because the issues were entered into your corrective action program, the NRC is treating the issues as non-cited violations (NCVs) in accordance with Section 2.3.2.a of the NRC Enforcement Policy.

If you contest these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector office at the Virgil C. Summer Nuclear Station Units 2 and 3.

If you disagree with the cross-cutting aspect assigned to any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region II, and the NRC Resident Inspector office at the Virgil C. Summer Nuclear Station Units 2 and 3.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system Agencywide Document Access and Management System (ADAMS). ADAMS is Accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Should you have any questions concerning this letter, please contact us.

Sincerely,

Jamie Heisserer, Chief
Construction Inspection Branch 2
Division of Construction Inspection

Docket No. 05200027
License No. NPF-93

Enclosures:
1. NRC Inspection Report No. 05200027/2015-009
2. NFS SIT Charter

cc: (See page 3)

☒ PUBLICLY AVAILABLE ☐ NON-PUBLICLY AVAILABLE ☐ SENSITIVE ☒ NON-SENSITIVE
ADAMS: ☒ Yes ACCESSION NUMBER: ☐ SUNSI REVIEW COMPLETE ☐ FORM 665 ATTACHED

OFFICE	RII:DCI	NRO:DCIP	RII:DCI	RII:DCI			
SIGNATURE							
NAME	EMichel	PO'Bryan	COelstrom	JHeisserer			
DATE	5/ /2015	5/ /2015	5/ /2015	5/ /2015			
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: G:\DFFI\REPORTS\DRAFT INSPECTION REPORT FOLDER\NFS\NFS IR 2014-006 SI CHARLIE1.DOCX

Oelstrom, Chad

From: Issa, Alfred
Sent: Friday, May 22, 2015 9:17 AM
To: Oelstrom, Chad
Subject: RE: Do you know how long the cut was in the VC Summer containment? Looks like 2-3 inches maybe? EOM

Thank you very much Chad

From: Oelstrom, Chad
Sent: Friday, May 22, 2015 9:17 AM
To: Michel(R2), Eric
Cc: Thomas, Eric; Issa, Alfred
Subject: RE: Do you know how long the cut was in the VC Summer containment? Looks like 2-3 inches maybe? EOM

2.5 inch diameter

Chad Oelstrom
Construction Resident Inspector
VC Summer Units 2 and 3
USNRC Region II, CCI-DCP-CPB4
Phone: 803-345-6856
Email: mailto:chad.oelstrom@nrc.gov

From: Michel(R2), Eric
Sent: Friday, May 22, 2015 7:37 AM
To: Oelstrom, Chad
Cc: Thomas, Eric; Issa, Alfred
Subject: RE: Do you know how long the cut was in the VC Summer containment? Looks like 2-3 inches maybe? EOM

Chad,

Do you have any info on the diameter of the cores we looked at for the SIT?

Eric

From: Issa, Alfred
Sent: Friday, May 22, 2015 7:31 AM
To: Michel(R2), Eric; OBryan, Phil
Cc: Thomas, Eric
Subject: RE: Do you know how long the cut was in the VC Summer containment? Looks like 2-3 inches maybe? EOM

Diameter.

From: Michel(R2), Eric
Sent: Friday, May 22, 2015 7:23 AM
To: Issa, Alfred; OBryan, Phil
Cc: Thomas, Eric
Subject: RE: Do you know how long the cut was in the VC Summer containment? Looks like 2-3 inches maybe? EOM

Can you be more specific (depth, diameter)? Any idea what's prompting these questions? Might help us answer them better.

From: Issa, Alfred
Sent: Friday, May 22, 2015 7:20 AM
To: Michel(R2), Eric; OBryan, Phil
Cc: Thomas, Eric
Subject: RE: Do you know how long the cut was in the VC Summer containment? Looks like 2-3 inches maybe? EOM

Do you know the size of the hole or the vertical dowel?

Thanks

Al

From: Michel(R2), Eric
Sent: Friday, May 22, 2015 7:18 AM
To: Issa, Alfred; OBryan, Phil
Subject: RE: Do you know how long the cut was in the VC Summer containment? Looks like 2-3 inches maybe? EOM

No, we didn't ask for those details. For the repair, the Code seemed primarily concerned with the depth of the flaw.

From: Issa, Alfred
Sent: Friday, May 22, 2015 5:08 AM
To: Michel(R2), Eric; OBryan, Phil
Subject: FW: Do you know how long the cut was in the VC Summer containment? Looks like 2-3 inches maybe? EOM

Do you know the answer?

Thanks

Al

From: Thomas, Eric
Sent: Thursday, May 21, 2015 2:49 PM
To: Issa, Alfred
Subject: Do you know how long the cut was in the VC Summer containment? Looks like 2-3 inches maybe? EOM

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Thursday, May 21, 2015 1:53 PM
To: Michel(R2), Eric
Subject: RE: SIT report

Complete. Please review my edits to see if I answered your comment.

Chad Oelstrom
Construction Resident Inspector
VC Summer Units 2 and 3
USNRC Region II, CCI-DCP-CPB4
Phone: 803-345-6856
Email: mailto:chad.oelstrom@nrc.gov

From: Michel(R2), Eric
Sent: Thursday, May 21, 2015 1:17 PM
To: Oelstrom, Chad; OBryan, Phil
Cc: Heisserer, Jamie
Subject: SIT report

Chad and Phil,

Did a final look at the SIT report for content and have a few questions. Please take a look at the report on the sharepoint site and let me know what you think of the questions in the comments bar on the right.

I'm still scrubbing for editorial stuff (acronyms etc.) and will get the report to Jamie as soon as we get this last few questions wrapped up. Thanks.

Eric

Eric Michel
Senior Project Engineer, TVA Sites
USNRC, Region 2
Atlanta, GA
404-997-4555

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Tuesday, May 12, 2015 1:17 PM
To: Michel(R2), Eric
Subject: RE: SIT report input

Eric,
I have made my edits to the report and updated the document reviewed list. Please review and provide comments and questions.

Chad Oelstrom
Construction Resident Inspector
VC Summer Units 2 and 3
USNRC Region II, CCI-DCP-CPB4
Phone: 803-345-6856
Email: mailto:chad.oelstrom@nrc.gov

From: Michel(R2), Eric
Sent: Tuesday, May 12, 2015 9:06 AM
To: OBryan, Phil; Heisserer, Jamie; Oelstrom, Chad
Cc: Kozak, Thomas
Subject: RE: SIT report input

Ok, so to be clear –

- We'll call the rebar finding an ITAAC finding because they did not meet the acceptance criteria of the ITAAC for some period of time, but clearly communicate in the report that the corrective actions taken restored compliance.
- The CV finding is a construction finding because, while the condition of the CV was in question, they were able to show that it was not out of compliance with the ASME Code and this is not a "deviations" ITAAC.

Any objections or additional thoughts?

Eric

From: Kozak, Thomas
Sent: Tuesday, May 12, 2015 8:50 AM
To: Michel(R2), Eric
Cc: OBryan, Phil; Heisserer, Jamie; Oelstrom, Chad
Subject: RE: SIT report input

There are no other things to do, other than enter the information into CIPIMS, once an ITAAC finding is closed in an inspection report – whether it is closed in the initiating report or a subsequent report.

From: Michel(R2), Eric
Sent: Tuesday, May 12, 2015 8:42 AM
To: Kozak, Thomas
Cc: OBryan, Phil; Heisserer, Jamie; Oelstrom, Chad
Subject: RE: SIT report input

Tom,

You're right that the damaged rebar was within the design, undesirable and caused by poor work practices. However, the acceptance criteria for the 3.3.00.02a.i.a ITAAC says:

A report exists which reconciles deviations during construction and concludes that the as-built containment internal structures, including the critical sections, conform to the approved design and will withstand the design basis loads specified in the Design Description without loss of structural integrity or the safety related functions.

This ITAAC is specifically there to reconcile deviations. At the time of the exit, this report did not exist and therefore they did not meet the ITAAC (and could not submit an ICN); however, now the report does exist, and they have reconciled the deviations, therefore they do meet the ITAAC (and could submit an ICN).

This really is only a game of semantics at this point. The question is does an ITAAC finding become a construction finding once it's resolved, or is it always an ITAAC finding (just one that's been resolved).

I'm good with going either way, and can see Chad's point. My suggestion is we say both were ITAAC findings at the time of the exit, but clearly note that subsequently they restored compliance with the ITAAC. This is in keeping with what I communicated to the licensee; although I used the words that they were "no longer" ITAAC findings...maybe that could be tightened up in the future by saying they are ITAAC findings that no longer affect the ITAAC?

The open & closed references in the Findings table at the back of the report is usually just a reference to the fact that they have a good CAP, and we're not dealing with escalated enforcement, so we close the item trusting their CAP will function correctly. Is there any other "closing" we need to do to make sure the report notes that the ITAAC aspect of the finding has been closed as well? Or is that just an accounting thing we do in CIPMS?

Eric

From: Kozak, Thomas
Sent: Monday, May 11, 2015 2:07 PM
To: Michel(R2), Eric; Oelstrom, Chad
Cc: OBryan, Phil; Heisserer, Jamie
Subject: RE: SIT report input

I tried to find previous email correspondence on this subject, but didn't find anything. From what I recollect from our conversation, my understanding was that the findings were not material to the acceptance criteria of the ITAAC in that the as-built containment internal structures, including the critical sections, conform to the approved design and will withstand the design basis loads. I thought that the damage to the rebar and the minor damage to the containment vessel were within the design, even though undesirable and caused by poor work practices. If there were deviations from the design due to as-built conditions (the drilling through the rebar and into the vessel), then the findings are material to the ITAAC acceptance criteria and should be ITAAC findings. However, since the findings have been resolved, and are no longer material to the ITAAC acceptance criteria, the findings can be opened and closed in the same report. The report should clearly state what the corrective actions were such that the findings are no longer are material to the ITAAC acceptance criteria.

I'm sorry if I originally misunderstood the conditions or provided misleading information. While it is true that we identify findings that are material to ITAAC acceptance criteria as ITAAC findings, and that we do this primarily to keep track of them in CIPMS so we can track corrective actions and verify completion of the ITAAC to support the 103(g) finding, that doesn't mean that if an ITAAC finding is resolved prior to the inspection completion that it is no longer an ITAAC finding. It just means that the ITAAC finding has been corrected, it is no longer material to the ITAAC acceptance criteria, and can be closed, just as if the corrective actions were completed and reviewed during a subsequent inspection.

Please let me know if I can be of further assistance.

Thanks, Tom Kozak, 301-415-6892

From: Michel(R2), Eric
Sent: Monday, May 11, 2015 12:25 PM
To: Oelstrom, Chad; Kozak, Thomas
Cc: OBryan, Phil; Heisserer, Jamie
Subject: RE: SIT report input

These items were appropriately categorized as ITAAC findings when we exited, because at the time they affected the ITAAC. Now that they've taken corrective actions to ensure those findings no longer impact the ITAAC, they are no longer ITAAC findings.

You make a good point that the resolution needs to be documented in the report. I'd be open to wording that says the ITAAC was affected at the time of the inspection, however subsequent repairs and analysis demonstrate that compliance with the ITAAC design commitment has been restored…

However, it doesn't make much sense for us to document this an ITAAC finding in CIPMS if they no longer affect the ITAAC.

Tom – we discussed this a few months ago. Can you add anything?

Eric

From: Oelstrom, Chad
Sent: Monday, May 11, 2015 1:03 PM
To: Michel(R2), Eric; OBryan, Phil
Subject: RE: SIT report input

I went back and reviewed some old reports and the manual chapters. Based on this, the finding is material to the ITAAC, as stated in the email below and is an ITAAC finding. Whether they dispositioned use-as-is or had to repair doesn't change the fact they introduced a deviation and would not have reconciled it. That is material to the ITAAC and is an ITAAC finding.

We have now reviewed and inspected their corrective actions and we can close the finding in the same report as stated in 0613 section 18.08 a) **…NCVs will normally be opened and closed in the initiating inspection report. However, any item related to an ITAAC finding (NCV, VIO, LIV, etc) will remain open until the item is resolved and no longer impacts the ITAAC acceptance criteria. The resolution of the item shall be documented in the report that closes the item.**

This why in the email, attached, I asked if we were closing the NCVs in this report or if we were going to wait for the quarterly report. In the past, ITAAC "structural deviation" findings have been identified and closed in the same report. These findings remained ITAAC findings.

Based on what I have reviewed I don't see how this is not an ITAAC finding. Unless, you can provide specific guidance from the manual chapters that shows reconciled ITAAC findings are no longer ITAAC findings, I plan on adding the verbiage to close this finding in this report and leave it an ITAAC finding.

Chad Oelstrom
Construction Resident Inspector
VC Summer Units 2 and 3
USNRC Region II, CCI-DCP-CPB4
Phone: 803-345-6856
Email: mailto:chad.oelstrom@nrc.gov

From: Michel(R2), Eric
Sent: Friday, May 01, 2015 6:33 AM
To: Oelstrom, Chad; OBryan, Phil
Subject: RE: SIT report input

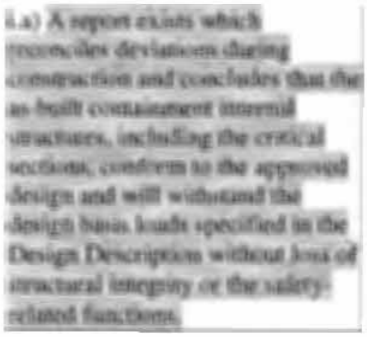
It was an ITAAC finding at our original "exit"/debrief, but now that it's been reconciled it's not. I called Tom Kozak and had this discussion with him; the idea isn't that ITAAC findings are somehow worse or more important, it's only intended to be a tracking mechanism. We identify some findings as ITAAC findings only to keep track of them in CIPMS so we can track corrective actions and verify completion of the ITAAC to support the 103(g) finding. Now that the rebar analyses are complete, and they were dispositioned "use as is," SCE&G could reasonably submit an ICN for that ITAAC. Construction findings are treated like conventional findings under MC 0612 – we rely on the licensee's CAP to correct the issue (although it may be targeted for a look during a PI&R).

I should have shared that conversation with you, hope this helps clear things up. Let me know if there are still questions.

Eric

From: Oelstrom, Chad
Sent: Thursday, April 30, 2015 2:34 PM
To: OBryan, Phil; Michel(R2), Eric
Subject: RE: SIT report input

I don't have time, right now, to look at 0613 and 2519 so, please explain how the cut rebar is not an ITAAC finding? They introduced a deviation and it would not have been reconciled and reported.

2.a) The nuclear island structures, including the critical sections listed in Table 3.3-7, are seismic Category I and are designed and constructed to withstand design basis loads as specified in the Design Description, without loss of structural integrity and the safety-related functions.	i) An inspection of the nuclear island structures will be performed. Deviations from the design due to as-built conditions will be analyzed for the design basis loads.	

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Construction Resident Inspector
VC Summer Units 2 and 3
USNRC Region II, CCI-DCP-CPB4

Phone: 803-345-6856
Email: mailto:chad.oelstrom@nrc.gov

From: OBryan, Phil
Sent: Thursday, April 30, 2015 2:19 PM
To: Michel(R2), Eric; Oelstrom, Chad
Subject: SIT report input

I finished my input except section 5 (designated Eric/Phil). I can complete section 5 but I need some clarification. Are we calling the RCA "interim" or "final?" – if not final, are we going to document the review of the RCA in the RI's quarterly report when a final one is provided?

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Tuesday, May 12, 2015 9:28 AM
To: Michel(R2), Eric
Subject: RE: SIT report input

You got it. Welcome to the crazy world of the "structural deviations" ITAAC.

Chad Oelstrom
Construction Resident Inspector
VC Summer Units 2 and 3
USNRC Region II, CCI-DCP-CPB4
Phone: 803-345-6856
Email: mailto:chad.oelstrom@nrc.gov

From: Michel(R2), Eric
Sent: Tuesday, May 12, 2015 9:06 AM
To: OBryan, Phil; Heisserer, Jamie; Oelstrom, Chad
Cc: Kozak, Thomas
Subject: RE: SIT report input

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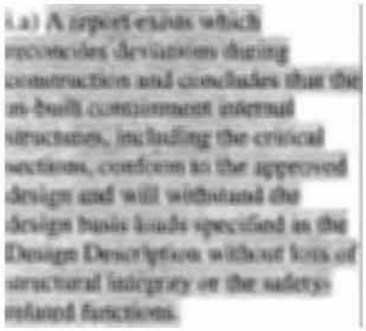
2.a) The nuclear island structures, including the critical sections listed in Table 3.3-7, are seismic Category I and are designed and constructed to withstand design basis loads as specified in the Design Description, without loss of structural integrity and the safety-related functions.	i) An inspection of the nuclear island structures will be performed. Deviations from the design due to as-built conditions will be analyzed for the design basis loads.	

Chad Oelstrom
Construction Resident Inspector
VC Summer Units 2 and 3
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Phone: 803-345-6856
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Oelstrom, Chad

From: Issa, Alfred
Sent: Wednesday, May 06, 2015 11:25 AM
To: Michel(R2), Eric
Cc: Johnson, Andrea; Fredette, Thomas; OBryan, Phil; Oelstrom, Chad; Thomas, Eric
Subject: RE: Draft POE attached. Feedback?

Thanks Eric. I'll recommend the change to the POE publisher, Eric Thomas, unless someone else has a problem with it.

Alfred Issa, P.E.
US NRC
Reactor Operations Engineer
alfred.issa@nrc.gov
(301) 415-5342

From: Michel(R2), Eric
Sent: Wednesday, May 06, 2015 11:23 AM
To: Issa, Alfred
Cc: Johnson, Andrea; Fredette, Thomas; OBryan, Phil; Oelstrom, Chad
Subject: RE: Draft POE attached. Feedback?

Yes, that's cleaner in my opinion.

Eric

From: Issa, Alfred
Sent: Wednesday, May 06, 2015 11:17 AM
To: Michel(R2), Eric
Cc: Johnson, Andrea; Fredette, Thomas; OBryan, Phil; Oelstrom, Chad
Subject: RE: Draft POE attached. Feedback?

Thanks Eric. Would it sound better if we reworded the second sentence as shown below?

"The contractor investigated potential rebar impact from coring at the other locations and determined safety-related rebar was impacted at two additional core locations. The subsequent analysis conservatively assumed that the impacted rebar at both of those locations was horizontal."

Alfred Issa, P.E.
US NRC

Reactor Operations Engineer
alfred.issa@nrc.gov
(301) 415-5342

From: Michel(R2), Eric
Sent: Wednesday, May 06, 2015 10:52 AM
To: Issa, Alfred
Cc: Johnson, Andrea; Fredette, Thomas; OBryan, Phil; Oelstrom, Chad
Subject: RE: Draft POE attached. Feedback?

It makes sense to me, but might be worded better. The idea is: subsequent investigation found that they hit safety related rebar in two additional holes (i.e. in addition to the R1 hole where they hit the containment vessel), and their analysis for those two holes conservatively assumed the rebar was horizontal rebar.

Eric

From: Issa, Alfred
Sent: Wednesday, May 06, 2015 10:42 AM
To: Fredette, Thomas; OBryan, Phil
Cc: Johnson, Andrea; Michel(R2), Eric
Subject: FW: Draft POE attached. Feedback?

I just received the draft POE for a final review before publication. The Summer Unit 2 SIT article generally looks good but the following two statements sound contradicting to me:

"The contractor investigated potential rebar impact from coring at the other locations and determined safety-related rebar was impacted at two additional core locations. The subsequent analysis conservatively assumed horizontal rebar was impacted at both of those locations."

Any thoughts?

Thanks

Al

Alfred Issa, P.E.
US NRC
Reactor Operations Engineer
alfred.issa@nrc.gov
(301) 415-5342

From: Thomas, Eric
Sent: Wednesday, May 06, 2015 8:12 AM
To: Garmon, David; Giantelli, Joseph; King, Mark; Pannier, Stephen; Robles, Jesse; Sigmon, Rebecca; Thomas, Eric; Thompson, John; Issa, Alfred
Subject: Draft POE attached. Feedback?

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Monday, May 04, 2015 9:24 AM
To: Michel(R2), Eric; OBryan, Phil
Subject: RE: sit report

I am actually in Phil's neck of the woods this week. I am on a PI&R this week at Brunswick. I am only here for one week not the entire PI&R. I can look at my stuff next week.

From: Michel(R2), Eric
Sent: Monday, May 04, 2015 6:36 AM
To: OBryan, Phil; Oelstrom, Chad
Subject: RE: sit report

Phil and Chad,

Thanks Phil. I anticipate getting to look through the report this week to get out remaining comments. Are either of you out of the office over the next few weeks? Thanks.

Eric

From: OBryan, Phil
Sent: Friday, May 01, 2015 1:45 PM
To: Michel(R2), Eric; Oelstrom, Chad
Subject: sit report

I have entered my input, including section 5 – so all of the sections have been entered.

Chad, someone made comments on the first finding and it needs editing, also don't forget to remove the "ITAAC finding" wording. Also, one of the doc's needs a revision number (I looked but couldn't find it)

Eric, please double check my SDP. I did not use an example from 0613 app E, I used the "repair" question in the front of app E to determine more-than-minor. I also used row 1 of the risk matrix since the vessel still met its design function (my assumption since it only had 1/8 inch gouge).

Thanks, Phil

Steddenbenz, Katherine

From: SALTER, JAMES FINDLAY <JAMES.SALTER@scana.com>
Sent: Thursday, April 30, 2015 2:19 PM
To: Michel(R2), Eric
Subject: SIT Exit Attendance

SCE&G

Alan Torres
Larry Cunningham
Kyle Young
Ryder Thompson
Richard Troficanto
Garrett Sanders
Findlay Salter

WEC

Gregg Drake
Brian McIntyre
Joe Cole
John Robinson

CB&I

Ken Hollenbach
Dave Jantostik
Jim Comer
Ed Wills
Kathy Getty
Chuck Baucom
John Arnall

J. Findlay Salter, EIT
Associate Engineer
New Nuclear Deployment - Licensing
SCE&G | V.C. Summer Nuclear Station
P.O. Box 88 | MC 846
Jenkinsville, SC 29065-0088
803.941.9855 Office
james.salter@scana.com

Steddenbenz, Katherine

From: OBryan, Phil
Sent: Thursday, April 30, 2015 10:20 AM
To: Michel(R2), Eric
Subject: ed wills discussion

I spoke with Ed this morning. He said that the person who submitted the concern was not the concrete manager, it was someone not associated with the event and had heard things 2nd or 3rd hand. Employee concerns investigated and found that the timeline in the RCA is correct.

I will change my timeline. I should be done with my inputs to the report tomorrow.

Phil

Heisserer, Jamie

From: Hannah, Roger
Sent: Wednesday, April 29, 2015 11:08 AM
To: Michel(R2), Eric; Heisserer, Jamie; Ernstes, Michael
Subject: Re: VC Summer Inquery

Thanks, everyone -- just what I need.

Roger Hannah, APR
Senior Public Affairs Officer
Region II, Atlanta, Ga.
U.S. Nuclear Regulatory Commission
Office: 404-997-4417
Mobile: (b)(6)
Roger.hannah@nrc.gov

On: 29 April 2015 11:01, "Michel(R2), Eric" <Eric.MichelR2@nrc.gov> wrote:
Should have read this first....at least our emails agree!

From: Heisserer, Jamie
Sent: Wednesday, April 29, 2015 10:31 AM
To: Ernstes, Michael; Hannah, Roger
Cc: Michel(R2), Eric
Subject: RE: VC Summer Inquery

The inspection continued beyond the on-site week in February. The exit meeting with the licensee is scheduled for April 30 at 1400. The report will be issued no later than 45 days from that date (June 14).

From: Ernstes, Michael
Sent: Wednesday, April 29, 2015 10:28 AM
To: Hannah, Roger
Cc: Heisserer, Jamie; Michel(R2), Eric
Subject: RE: VC Summer Inquery

I will refer you to Jamie and Eric. Eric is the inspection lead and Jamie is issuing the report.

From: Hannah, Roger
Sent: Wednesday, April 29, 2015 10:27 AM
To: Ernstes, Michael
Subject: Fwd: VC Summer Inquery

I've had a couple of other questions about the report-- what's the status? Thanks,

Roger Hannah, APR
Senior Public Affairs Officer
Region II, Atlanta, Ga.
U.S. Nuclear Regulatory Commission
Office: 404-997-4417

Mobile: (b)(6)
Roger.hannah@nrc.gov

From: "Aaron Larson" <ALarson@accessintel.com>
Subject: VC Summer Inquery
Date: 29 April 2015 10:24
To: "OPAII" <OPAII@nrc.gov>

On February 23, a news release (see attached) stated that the NRC "began a special inspection of inadvertent damage to the containment vessel during construction at Unit 2 of the Summer nuclear plant." Inspectors were expected to spend about a week on site and an inspection report documenting the team's findings was to be publicly available within 45 days of the end of the inspection, which should have been sometime in mid-April. I have not seen the report posted anywhere. Can you help me obtain a copy of the document?

Thanks,

Aaron Larson
Associate Editor
POWER magazine
(320) 305-2657
www.powermag.com

Heisserer, Jamie

From: Brown, Frederick
Sent: Tuesday, April 28, 2015 6:53 PM
To: Yerokun, Jimi
Cc: Jones, William; McCree, Victor; Heisserer, Jamie; Cheok, Michael; Valentin, Andrea; Holahan, Gary; Tracy, Glenn
Subject: Re: VC Summer Special Inspection Exit Meeting

Good summary, thanks Jimi.

From: Yerokun, Jimi
Sent: Tuesday, April 28, 2015 04:20 PM
To: Brown, Frederick
Cc: Jones, William; McCree, Victor; Heisserer, Jamie
Subject: VC Summer Special Inspection Exit Meeting

The VC Summer Special Inspection Team has completed the inspection, including its review of the licensee's root cause analysis, and plans to have an exit meeting at 1pm on Thursday. Eric Michel briefed Bill, Mike, Jamie and I today on the results of the inspection. The licensee's root cause analysis looks good and there was nothing in it that substantially changes the team's previous assessment. Several barriers were broken including design control, procedure usage, and bypassing equipment safety feature. The team has no safety concerns with the containment repair and cut rebar disposition that the licensee completed, i.e., no code compliance issues. Thus low safety significance. The team identified two Green NCVs with associated human performance aspects .... (i) Procedure issues - procedures for core drilling existed but were not recognized to be used and (ii) Design Control - inadequate verification of design inputs in prescribing core dowel relocation.

Jamie can expand if I missed any critical point.

Jimi T. Yerokun
Director, DCI/RII
404 997-4300

Steddenbenz, Katherine

From: Michel(R2), Eric
Sent: Tuesday, April 28, 2015 10:03 AM
To: OBryan, Phil; Oelstrom, Chad
Subject: RE: CVBH RCA

(b)(5)

Eric

From: OBryan, Phil
Sent: Tuesday, April 28, 2015 9:24 AM
To: Michel(R2), Eric; Oelstrom, Chad
Subject: RE: CVBH RCA

(b)(5)

From: Michel(R2), Eric
Sent: Tuesday, April 28, 2015 9:01 AM
To: OBryan, Phil; Oelstrom, Chad
Subject: RE: CVBH RCA

Chad did a good job finding some provisions in their procedures that required them to stop and evaluate the cut rebar.

(b)(5)

From: OBryan, Phil
Sent: Tuesday, April 28, 2015 8:48 AM
To: Michel(R2), Eric; Oelstrom, Chad
Subject: RE: CVBH RCA

(b)(5)

From: Michel(R2), Eric
Sent: Tuesday, April 28, 2015 8:39 AM
To: OBryan, Phil; Oelstrom, Chad
Subject: RE: CVBH RCA

(b)(5)

H.8 **Procedure Adherence:** Individuals follow processes, procedures, and work instructions (WP.4).

Chad – you have any opinions on this?

From: OBryan, Phil
Sent: Tuesday, April 28, 2015 8:18 AM
To: Michel(R2), Eric; Oelstrom, Chad
Subject: RE: CVBH RCA

That one looks good for the first finding. (b)(5)

H.5 **Work Management:** The organization implements a process of planning, controlling, and executing work activities such that nuclear safety is the overriding priority. The work process includes the identification and management of risk commensurate to the work and the need for coordination with different groups or job activities

---

From: Michel(R2), Eric
Sent: Tuesday, April 28, 2015 8:10 AM
To: OBryan, Phil; Oelstrom, Chad
Subject: RE: CVBH RCA

(b)(5)

H.12 **Avoid Complacency:** Individuals recognize and plan for the possibility of mistakes, latent issues, and inherent risk, even while expecting successful outcomes. Individuals implement appropriate error reduction tools (QA.4). **

(b)(5)

From: OBryan, Phil
Sent: Tuesday, April 28, 2015 8:01 AM
To: Michel(R2), Eric; Oelstrom, Chad
Subject: RE: CVBH RCA

I think that is a good approach. (b)(5)

From: Michel(R2), Eric
Sent: Tuesday, April 28, 2015 7:48 AM

To: OBryan, Phil; Oelstrom, Chad
Subject: RE: CVBH RCA

(b)(5)

I'm scheduled to brief Jimi, Bill and Jamie at 11:30 this morning. If we want to have any additional conversation, I'll give you guys a call...email is painful for this stuff sometimes!

From: OBryan, Phil
Sent: Monday, April 27, 2015 2:12 PM
To: Oelstrom, Chad; Michel(R2), Eric
Subject: RE: CVBH RCA

(b)(5)

From: Oelstrom, Chad
Sent: Monday, April 27, 2015 2:04 PM
To: OBryan, Phil; Michel(R2), Eric
Subject: RE: CVBH RCA

(b)(5)

Chad Oelstrom
Construction Resident Inspector
VC Summer Units 2 and 3
USNRC Region II, CCI-DCP-CPB4
Phone: 803-345-6856
Email: mailto:chad.oelstrom@nrc.gov

From: OBryan, Phil
Sent: Monday, April 27, 2015 1:45 PM
To: Michel(R2), Eric; Oelstrom, Chad
Subject: RE: CVBH RCA

I reviewed the RCA this morning and have one observation. The RCA states a couple of times that neither the WEC Responsible Engineer nor the WEC Reviewer is required to review N&D's for technical accuracy. The RCA points out that this is a deficiency, but claims that neither GAP-428 nor WEC 3.3.3 required WEC engineering to review the technical accuracy of the N&D's. As we discussed during the SIT, we planned to use GAP section 7.18 in our "contrary to" statement. This section states that "a Deviation may be approved by the Site Design Engineering organizations when the following criteria are met:

7.18.1 Does not reduce the AP1000 Safety margin or impact a Licensing Basis Document..."

(b)(5)

From: Michel(R2), Eric
Sent: Monday, April 20, 2015 2:49 PM
To: Oelstrom, Chad; OBryan, Phil
Subject: FW: CVBH RCA

Chad and Phil,

FYI here is the CB&I root cause and associated SCE&G Project Letter. I'll be reviewing this week.

Eric

From: SANDERS, GARRETT R [mailto:GARRETT.SANDERS@scana.com]
Sent: Monday, April 20, 2015 10:52 AM
To: Michel(R2), Eric
Cc: SALTER, JAMES FINDLAY
Subject: CVBH RCA

Please let me know if you have any questions regarding the attached.

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Tuesday, April 21, 2015 9:02 AM
To: Heisserer, Jamie
Subject: RE: SUM SIT hours

PP Week	APP	CO	AT
22-Feb	17	53	3
08-Mar	16	17	
22-Mar	16		
05-Apr	15		

In addition to above, I anticipate another 30 hours to finish report and review RCA.

Chad Oelstrom
Construction Resident Inspector
VC Summer Units 2 and 3
USNRC Region II, CCI-DCP-CPB4
Phone: 803-345-6856
Email: mailto:chad.oelstrom@nrc.gov

From: Heisserer, Jamie
Sent: Tuesday, April 21, 2015 8:42 AM
To: Oelstrom, Chad
Subject: FW: SUM SIT hours

From: Michel(R2), Eric
Sent: Tuesday, April 21, 2015 8:39 AM
To: Heisserer, Jamie
Subject: SUM SIT hours

Sorry for the delay…

PP Week	APP	CO	AT
22-Feb	11.5	38	10.5
08-Mar	2.5		
22-Mar	9		

Eric

Steddenbenz, Katherine

From: Heisserer, Jamie
Sent: Monday, April 20, 2015 7:06 AM
To: Michel(R2), Eric
Subject: Re: Root Cause Update

Yep. Will talk to Jimi at the 0830 and bill later.

On: 20 April 2015 07:05, "Michel(R2), Eric" <Eric.MichelR2@nrc.gov> wrote:

> Jamie,
>
> Please have them send the original RCA and the Project Letter. We'll see what we can make of it after looking through them. As we discussed, if it's not an excessive shift in position we may be able to call the inspection complete. Would you mind bouncing this idea off of the division director types? Would rather not go down that path and be told we've got to wait for the final fully approved RCA. Thanks.
>
> Eric
>
> ---
>
> **From:** Heisserer, Jamie
> **Sent:** Friday, April 17, 2015 2:30 PM
> **To:** Michel(R2), Eric; Oelstrom, Chad; OBryan, Phil
> **Subject:** FW: Root Cause Update
>
> FYI – update from April Rice on the RCE.
>
> ---
>
> **From:** RICE, APRIL R [mailto:ARICE@scana.com]
> **Sent:** Friday, April 17, 2015 2:04 PM
> **To:** Heisserer, Jamie
> **Subject:** Root Cause Update
>
> Sorry I left a long message on your voicemail and got a warning that I exceeded the time limit. I hope you still get the message. Please call me and I can discuss further. Basically we think CB&I should classify one of their Contributing Causes as a Root Cause and create Corrective Actions to Prevent Recurrence. Our formal request is being sent to them today and I think they are receptive to the change but it will take some time for them to revise the report. We are happy to share the final report as it exists today as our comment will only add a few more actions to be taken. Please let me know your preference.
>
> Also I have a request from our insurance folks to estimate the cost of your inspection activities. Is there any way you can give me a rough number of hours that have been spent by the team and your management in support of the SIT?
>
> Thanks

April

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Wednesday, April 15, 2015 8:23 AM
To: Michel(R2), Eric
Subject: RE: Input to SIT report

I have not started on these items. Plan is to start today. Raining here at the site.

Chad Oelstrom
Construction Resident Inspector
VC Summer Units 2 and 3
USNRC Region II, CCI-DCP-CPB4
Phone: 803-345-6856
Email: mailto:chad.oelstrom@nrc.gov

From: Michel(R2), Eric
Sent: Wednesday, April 15, 2015 8:16 AM
To: Oelstrom, Chad
Subject: Input to SIT report

Chad,

Thanks for the work so far on the SIT report. I still have a few items I'm looking for.

- Section 3 (Development of Independent Extent of Condition)
- Section 4 (Engineering Disposition Evaluation)
- Section 5 (Review of Corrective Actions, Causal Analysis, and Extent of Condition) – just the input you have for the corrective actions for the rebar and extent of condition on the rebar.
- List of Persons Contacted
- Documents Reviewed

Please let me know where you stand on these.

Eric

Heisserer, Jamie

From: Ledford, Joey
Sent: Wednesday, April 15, 2015 1:33 PM
To: Ernstes, Michael; Hannah, Roger
Cc: Heisserer, Jamie; Michel(R2), Eric; Donnelly, Patrick
Subject: RE: NRC report on SCE&G unit 3 containment damage?

Mike: I talked to Clements and we are good. He told me he does not plan to attend tomorrow night. He's going to the MOX meeting in Aiken instead.

Joey Ledford
Public Affairs Officer, Region II
U.S. Nuclear Regulatory Commission
O: 404.997.4416
C: (b)(6)
Joey.Ledford@NRC.gov

From: Ernstes, Michael
Sent: Wednesday, April 15, 2015 12:38 PM
To: Ledford, Joey; Hannah, Roger
Cc: Heisserer, Jamie; Michel(R2), Eric; Donnelly, Patrick
Subject: RE: NRC report on SCE&G unit 3 containment damage?

Jamie Heisserer and Eric Michel had the lead on that inspection. They would have the best answer.

Let me know if you don't get what you need.

Patrick Donnelly is going to give a brief discussion of the incident at the public meeting tomorrow.

Do you know if Tom C. is coming to the meeting?

From: Ledford, Joey
Sent: Wednesday, April 15, 2015 12:26 PM
To: Ernstes, Michael; Hannah, Roger
Subject: Fwd: NRC report on SCE&G unit 3 containment damage?

Mike: Can you help here?
Rough estimate is all I need.

Begin Forwarded Message:
From: "Tom Clements" <tomclements329@cs.com<mailto:tomclements329@cs.com>>
Subject: NRC report on SCE&G unit 3 containment damage?
Date: 15 April 2015 10:26
To: "roger.hanah@nrc.gov<mailto:roger.hanah@nrc.gov>"
<roger.hanah@nrc.gov<mailto:roger.hanah@nrc.gov>>
Cc: "Ledford, Joey" <Joey.Ledford@nrc.gov<mailto:Joey.Ledford@nrc.gov>>

Hello Roger & Joey,

When is the NRC report on damage to the SCE&G unit 2 containment (while cutting rebar) due out? Is it finished? When will it be released?

FYI, this news release isn't linked properly on the NRC's list of news releases:
02/23/2015

II-15-004<http://pbadupws.nrc.gov/docs/ML1506/ML15065A341.pdf>

NRC Begins Special Inspection at Summer Nuclear Plant Unit 2 Construction Site

The link is to this http://pbadupws.nrc.gov/docs/ML1506/ML15065A341.pdf, on Monticello.

Proper link is: http://www.nrc.gov/reading-rm/doc-collections/news/2015/15-004.ii.pdf

Thanks,
Tom Clements
SRS Watch<http://www.srswatch.org/>
Columbia, SC

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Tuesday, April 14, 2015 10:08 AM
To: Michel(R2), Eric
Subject: RE: Rebar NCV draft added to SIT draft please review when you get a chance

Eric,
I addressed your comments. For some reason I could not get the track changes functions to work when I edited. I also could not add balloons so I answered some of your questions in the balloons you already created. I revised the discussions of the Criteria V to align more with App. B. Specifically, instead of saying "failed to adequately implement" I changed to "failed to implement appropriate procedures..."

For some reason the Summary of Finding was never updated before, so I inserted my draft Summary. Please review this.

I don't understand your comment M14. I think I addressed it when discussing potential consequences. If not call me to discuss. Also, I revised a part of the analysis to align with the potential consequences.

As far as cross cutting issues, it seems multiple ones apply but H.8 seems to be most appropriate. In the other sections of the report should we discuss these cross cutting issues even though there are not direct findings and violations associated with them? They are more contributing causes.

Also, should we close these NCVs in this report?

Chad Oelstrom
Construction Resident Inspector
VC Summer Units 2 and 3
USNRC Region II, CCI-DCP-CPB4
Phone: 803-345-6856
Email: mailto:chad.oelstrom@nrc.gov

From: Michel(R2), Eric
Sent: Wednesday, April 08, 2015 1:27 PM
To: Oelstrom, Chad
Cc: OBryan, Phil
Subject: RE: Rebar NCV draft added to SIT draft please review when you get a chance - eom

Chad,

I've made some comments on your write up on the sharepoint site. Please take a look when you get a chance.

Just an FYI for you – SCG&E expects the RCA to be available for review on 4/13. Phil and I will review (you are free to join in if you want too!) for a day or so after we get it, then we'll officially exit. Time and date TBD.

Eric

From: Oelstrom, Chad
Sent: Wednesday, April 01, 2015 8:11 AM
To: Michel(R2), Eric
Cc: OBryan, Phil
Subject: Rebar NCV draft added to SIT draft please review when you get a chance - eom

Chad Oelstrom
Construction Resident Inspector
VC Summer Units 2 and 3
USNRC Region II, CCI-DCP-CPB4
Phone: 803-345-6856
Email: mailto:chad.oelstrom@nrc.gov

Steddenbenz, Katherine

From: SALTER, JAMES FINDLAY <JAMES.SALTER@scana.com>
Sent: Tuesday, April 14, 2015 8:02 AM
To: Michel(R2), Eric
Cc: 'Cole, Joseph A'; SANDERS, GARRETT R; Heher, Patrick
Subject: GAP-428

Eric,

Per the follow up info request, I have placed APP-GW-GAP-428 procedure in the following NND_NRC extranet directory location:

NND_NRC\Region II\Special Inspection Team 2-23-15 MICHEL\Follow-up Request

Please work with Patrick Heher to retrieve the document. Let me know if you have any issues,

Findlay
J. Findlay Salter, EIT
Associate Engineer
New Nuclear Deployment - Licensing
SCE&G | V.C. Summer Nuclear Station
P.O. Box 88 | MC 846
Jenkinsville, SC 29065-0088
803.941.9855 Office
james.salter@scana.com

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Monday, April 13, 2015 9:20 AM
To: Michel(R2), Eric
Subject: RE: CVBH Repair Completed

Yes, I observed the UT and visual inspections. I can't think of any other comments.

Chad Oelstrom
Construction Resident Inspector
VC Summer Units 2 and 3
USNRC Region II, CCI-DCP-CPB4
Phone: 803-345-6856
Email: mailto:chad.oelstrom@nrc.gov

From: Michel(R2), Eric
Sent: Wednesday, April 08, 2015 6:50 AM
To: Oelstrom, Chad
Subject: RE: CVBH Repair Completed

Putting some of this in the report. Would it be accurate to say you observed UT and visual inspections of the as-repaired area? Any other comments regarding what you observed? Thanks.

Eric

From: Oelstrom, Chad
Sent: Monday, March 09, 2015 5:16 PM
To: Michel(R2), Eric; Heisserer, Jamie; OBryan, Phil
Cc: Ernstes, Michael
Subject: CVBH Repair Completed

Eric,

FYI…

CVBH indication repair was completed today at approximately 1630.
Based on my observations of the UT and VI:
Base metal thickness: 1.685"
Indication depth: 1/8"
Final grinding depth: 9/64" (1/8" +1/64"), I don't have the final UT thickness.
MT passed.

If needed, I will provide the recorded (QC) values when I see a copy of the signed-off traveler.

Chad

Steddenbenz, Katherine

From: SALTER, JAMES FINDLAY <JAMES.SALTER@scana.com>
Sent: Monday, April 06, 2015 4:05 PM
To: SALTER, JAMES FINDLAY; Michel(R2), Eric
Cc: Donnelly, Patrick; SANDERS, GARRETT R; 'Ewing, Jerrod A.'; 'Cole, Joseph A'; YOUNG, KYLE MATTHEW; CATLEDGE, JOHN THOMAS; 'McIntyre, Brian A'; RICE, APRIL R; 'edward.wills@cbi.com'; 'Baucom, Charles'; Oelstrom, Chad; Heisserer, Jamie; Musser, Randy; ASHCRAFT, ZACHARY WAYNE
Subject: RE: SIT Information request 3-9-15

Eric,

Currently no change to target approval date. The team is continuing to incorporate comments from reviewers. Will notify you over the course of the week if anything changes.

J. Findlay Salter, EIT
Associate Engineer
New Nuclear Deployment - Licensing
SCE&G | V.C. Summer Nuclear Station
P.O. Box 88 | MC 846
Jenkinsville, SC 29065-0088
803.941.9855 Office
james.salter@scana.com

SCE&G
A SCANA COMPANY

From: SALTER, JAMES FINDLAY
Sent: Monday, March 30, 2015 4:46 PM
To: SALTER, JAMES FINDLAY; 'Michel(R2), Eric'
Cc: 'Donnelly, Patrick'; SANDERS, GARRETT R; 'Ewing, Jerrod A.'; 'Cole, Joseph A'; YOUNG, KYLE MATTHEW; CATLEDGE, JOHN THOMAS; 'McIntyre, Brian A'; RICE, APRIL R; 'edward.wills@cbi.com'; 'Baucom, Charles'; 'Oelstrom, Chad'; 'Heisserer, Jamie'; 'Musser, Randy'; ASHCRAFT, ZACHARY WAYNE
Subject: RE: SIT Information request 3-9-15

Eric,

To allow for final comment resolution we are now targeting 4/10/15 to issue final RCA.

Let me know if you need anything additional,

Findlay

From: SALTER, JAMES FINDLAY
Sent: Monday, March 23, 2015 12:41 PM
To: SALTER, JAMES FINDLAY; 'Michel(R2), Eric'
Cc: 'Donnelly, Patrick'; SANDERS, GARRETT R; 'Ewing, Jerrod A.'; 'Cole, Joseph A'; YOUNG, KYLE MATTHEW; CATLEDGE, JOHN THOMAS; 'McIntyre, Brian A'; RICE, APRIL R; 'edward.wills@cbi.com'; 'Baucom, Charles'; 'Oelstrom, Chad';

'Heisserer, Jamie'; 'Musser, Randy'
Subject: RE: SIT Information request 3-9-15

Eric,

1. RCA finalization: RCA team is targeting April 3, as the completion (Final sign off) of the RCA.

2. CV Cores Disposition Update: See attached table for information concerning the CV Core holes.

   All N&Ds are in workflow or are dispositioned. All RAIs have been answered. Daily OCC meetings have been discontinued.

Let me know if you need anything additional,

J. Findlay Salter, EIT
Associate Engineer
New Nuclear Deployment - Licensing
SCE&G | V.C. Summer Nuclear Station
P.O. Box 88 | MC 846
Jenkinsville, SC 29065-0088
803.941.9855 Office
james.salter@scana.com

SCE&G
A SCANA COMPANY

From: SALTER, JAMES FINDLAY
Sent: Monday, March 16, 2015 12:35 PM
To: 'Michel(R2), Eric'
Cc: Donnelly, Patrick; SANDERS, GARRETT R; 'Ewing, Jerrod A.'; 'Cole, Joseph A'; YOUNG, KYLE MATTHEW; CATLEDGE, JOHN THOMAS; 'McIntyre, Brian A'; RICE, APRIL R; 'edward.wills@cbi.com'; 'Baucom, Charles'; Oelstrom, Chad; Heisserer, Jamie; Musser, Randy
Subject: RE: SIT Information request 3-9-15

Eric,

I will plan to provide an update on 3/23.

Findlay

From: Michel(R2), Eric [mailto:Eric.MichelR2@nrc.gov]
Sent: Monday, March 16, 2015 12:34 PM
To: SALTER, JAMES FINDLAY
Cc: Donnelly, Patrick; SANDERS, GARRETT R; 'Ewing, Jerrod A.'; 'Cole, Joseph A'; YOUNG, KYLE MATTHEW; CATLEDGE, JOHN THOMAS; 'McIntyre, Brian A'; RICE, APRIL R; 'edward.wills@cbi.com'; 'Baucom, Charles'; Oelstrom, Chad; Heisserer, Jamie; Musser, Randy
Subject: RE: SIT Information request 3-9-15

Findlay,

Thanks for the update. Unless anything changes drastically in the interim, can we have another update next Monday (3/23)?

Eric

From: SALTER, JAMES FINDLAY [mailto:JAMES.SALTER@scana.com]
Sent: Monday, March 16, 2015 12:09 PM
To: Michel(R2), Eric
Cc: Donnelly, Patrick; SANDERS, GARRETT R; 'Ewing, Jerrod A.'; 'Cole, Joseph A'; YOUNG, KYLE MATTHEW; CATLEDGE, JOHN THOMAS; 'McIntyre, Brian A'; RICE, APRIL R; 'edward.wills@cbi.com'; 'Baucom, Charles'; Oelstrom, Chad; Heisserer, Jamie
Subject: RE: SIT Information request 3-9-15

Eric,

3. RCA finalization: RCA team is targeting Friday, MARCH 25, as the completion (Final sign off) of the RCA.

4. CV Cores Disposition Update: See attached table for information concerning the CV Core holes.

   Final QC Investigations are occurring in re-cored holes D3, D7 today to address VS2-CR01-GNR-000294, VS2-CR01-GNR-000295 RAI's.

Let me know if you need anything additional,

J. Findlay Salter, EIT
Associate Engineer
New Nuclear Deployment - Licensing
SCE&G | V.C. Summer Nuclear Station
P.O. Box 88 | MC 846
Jenkinsville, SC 29065-0088
803.941.9855 Office
james.salter@scana.com

From: Michel(R2), Eric [mailto:Eric.MichelR2@nrc.gov]
Sent: Tuesday, March 10, 2015 9:32 AM
To: SALTER, JAMES FINDLAY
Cc: Donnelly, Patrick; SANDERS, GARRETT R; 'Ewing, Jerrod A.'; 'Cole, Joseph A'; YOUNG, KYLE MATTHEW; CATLEDGE, JOHN THOMAS; 'McIntyre, Brian A'; RICE, APRIL R; 'edward.wills@cbi.com'; 'Baucom, Charles'; Oelstrom, Chad; Heisserer, Jamie
Subject: RE: SIT Information request 3-9-15

Findlay,

Thanks, this is very helpful. Can we ask for an update on Monday 3/16 to see if anything has changed? It would also help to get rough dates when the actions for the N&Ds for the holes will be completed. Again, those dates would be for our planning purposes only. Thanks.

Eric

From: SALTER, JAMES FINDLAY [mailto:JAMES.SALTER@scana.com]
Sent: Monday, March 09, 2015 4:11 PM
To: SALTER, JAMES FINDLAY; Michel(R2), Eric; Oelstrom, Chad
Cc: Donnelly, Patrick; SANDERS, GARRETT R; 'Ewing, Jerrod A.'; 'Cole, Joseph A'; YOUNG, KYLE MATTHEW; CATLEDGE, JOHN THOMAS; 'McIntyre, Brian A'; RICE, APRIL R; 'edward.wills@cbi.com'; 'Baucom, Charles'
Subject: RE: SIT Information request 3-9-15

CORRECTION

From: SALTER, JAMES FINDLAY
Sent: Monday, March 09, 2015 3:48 PM
To: 'Michel(R2), Eric'; 'Oelstrom, Chad'
Cc: 'Donnelly, Patrick'; SANDERS, GARRETT R; 'Ewing, Jerrod A.'; Cole, Joseph A; YOUNG, KYLE MATTHEW; CATLEDGE, JOHN THOMAS; McIntyre, Brian A; RICE, APRIL R; 'edward.wills@cbi.com'; Baucom, Charles
Subject: SIT Information request 3-9-15

Eric,

Per our conversation this morning:

5. RCA finalization: RCA team is targeting Friday, MARCH 20, as the completion (Final sign off) of the RCA.

6. CV Cores Disposition Update: See attached table for information concerning the CV Core holes.

   The outstanding core locations were recently logically grouped and new N&Ds written to facilitate the retrieval of as-built information. The N&Ds will reference each other and will consider cumulative effects of these and other nonconformances.

   As you'll see in the table, we're still in the process of gathering information at four locations (D3, D6 and D7). The information gathering process may lead to re-coring. The extent of those efforts has not yet been defined. As part of excavation D4 and D5 have been exposed for inspection. The cut #11 radial bar in R1 has been dispositioned as abandon in place.

I understand you have been able to review CB&I Services repair documentation.

Let me know if you need anything additional,

J. Findlay Salter, EIT
Associate Engineer
New Nuclear Deployment - Licensing
SCE&G | V.C. Summer Nuclear Station
P.O. Box 88 | MC 846
Jenkinsville, SC 29065-0088
803.941.9855 Office
james.salter@scana.com

Oelstrom, Chad

From: Issa, Alfred
Sent: Thursday, April 02, 2015 5:40 AM
To: Michel(R2), Eric; Oelstrom, Chad
Subject: RE: Periodic Operating Experience Newsletter Article (Summer 2 SIT)

(b)(5)

Alfred Issa, P.E.
US NRC
Reactor Operations Engineer
alfred.issa@nrc.gov
(301) 415-5342

From: Michel(R2), Eric
Sent: Wednesday, April 01, 2015 7:06 AM
To: Issa, Alfred; Oelstrom, Chad
Subject: RE: Periodic Operating Experience Newsletter Article (Summer 2 SIT)

(b)(5)

From: Issa, Alfred
Sent: Tuesday, March 31, 2015 9:41 AM
To: Michel(R2), Eric
Subject: FW: Periodic Operating Experience Newsletter Article (Summer 2 SIT)

Eric,

Please see below and let me know what you think.

Thank you very much

Alfred Issa, P.E.
US NRC
Reactor Operations Engineer
alfred.issa@nrc.gov
(301) 415-5342

From: Issa, Alfred
Sent: Tuesday, March 31, 2015 9:28 AM
To: Johnson, Andrea
Cc: Fredette, Thomas; OBryan, Phil
Subject: RE: Periodic Operating Experience Newsletter Article (Summer 2 SIT)

(b)(5)

Alfred Issa, P.E.
US NRC
Reactor Operations Engineer
alfred.issa@nrc.gov
(301) 415-5342

From: Johnson, Andrea
Sent: Tuesday, March 31, 2015 9:15 AM
To: Issa, Alfred
Cc: Fredette, Thomas; OBryan, Phil
Subject: RE: Periodic Operating Experience Newsletter Article (Summer 2 SIT)

Ok thanks (b)(5)
(b)(5)

From: Issa, Alfred
Sent: Tuesday, March 31, 2015 7:57 AM
To: Johnson, Andrea
Cc: Fredette, Thomas; OBryan, Phil
Subject: RE: Periodic Operating Experience Newsletter Article (Summer 2 SIT)

(b)(5)

Alfred Issa, P.E.
US NRC
Reactor Operations Engineer
alfred.issa@nrc.gov
(301) 415-5342

From: Johnson, Andrea
Sent: Monday, March 30, 2015 4:09 PM
To: Issa, Alfred
Cc: Fredette, Thomas; OBryan, Phil
Subject: RE: Periodic Operating Experience Newsletter Article (Summer 2 SIT)

(b)(5)

From: Issa, Alfred
Sent: Monday, March 30, 2015 3:48 PM
To: Johnson, Andrea; Fredette, Thomas; OBryan, Phil
Cc: Thomas, Eric; Anderson, Brian
Subject: FW: Periodic Operating Experience Newsletter Article (Summer 2 SIT)

(b)(5)

Alfred Issa, P.E.
US NRC
Reactor Operations Engineer
alfred.issa@nrc.gov
(301) 415-5342

From: Michel(R2), Eric
Sent: Monday, March 30, 2015 2:36 PM
To: Issa, Alfred
Subject: RE: Periodic Operating Experience Newsletter Article (Summer 2 SIT)

Here's the revised write up. Let me know if there are any other questions.

Eric

From: Michel(R2), Eric
Sent: Monday, March 30, 2015 1:47 PM
To: Issa, Alfred
Cc: Oelstrom, Chad
Subject: RE: Periodic Operating Experience Newsletter Article (Summer 2 SIT)

Al,

Please see Chad's comments attached.

Eric

From: Michel (OGC), Eric
Sent: Friday, March 27, 2015 3:40 PM
To: Michel(R2), Eric
Subject: FW: Periodic Operating Experience Newsletter Article (Summer 2 SIT)

From: Johnson, Andrea
Sent: Friday, March 27, 2015 3:16 PM
To: Issa, Alfred; Thomas, Eric
Cc: Michel (OGC), Eric; OBryan, Phil; Fredette, Thomas; Anderson, Brian
Subject: RE: Periodic Operating Experience Newsletter Article (Summer 2 SIT)

Al, see revisions in the attached (b)(5) (b)(5) Unless Phil or Tom have additional changes, please use this version.

From: Issa, Alfred
Sent: Friday, March 27, 2015 3:00 PM
To: Thomas, Eric
Cc: Michel (OGC), Eric; OBryan, Phil; Fredette, Thomas; Johnson, Andrea; Anderson, Brian
Subject: Periodic Operating Experience Newsletter Article (Summer 2 SIT)

Hi Eric T.,

Please review the attached draft article regarding the Summer 2 SIT and provide me with comments (b)(5) (b)(5)

Everybody else,

Please review especially for accuracy and provide me with any additional information/links that the NRC staff at large may be interested in, keeping in mind space limitations. Also, if you have a better sketch than Figure 1, please let me know. I may delete Photo 2 if I have to in order to meet space limitations. I would appreciate it if you can provide me with your comments and inputs by April 2nd, 2015.

Thank you

Al

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Wednesday, April 01, 2015 7:09 AM
To: Michel(R2), Eric
Subject: FW: Periodic Operating Experience Newsletter Article (Summer 2 SIT)

(b)(5)

Chad Oelstrom
Construction Resident Inspector
VC Summer Units 2 and 3
USNRC Region II, CCI-DCP-CPB4
Phone: 803-345-6856
Email: mailto:chad.oelstrom@nrc.gov

From: Oelstrom, Chad
Sent: Tuesday, March 31, 2015 7:09 AM
To: Johnson, Andrea
Subject: RE: Periodic Operating Experience Newsletter Article (Summer 2 SIT)

(b)(5)

Chad Oelstrom
Construction Resident Inspector
VC Summer Units 2 and 3
USNRC Region II, CCI-DCP-CPB4
Phone: 803-345-6856
Email: mailto:chad.oelstrom@nrc.gov

From: Johnson, Andrea
Sent: Monday, March 30, 2015 4:13 PM
To: Oelstrom, Chad
Subject: FW: Periodic Operating Experience Newsletter Article (Summer 2 SIT)

(b)(5)

From: Issa, Alfred
Sent: Monday, March 30, 2015 3:48 PM
To: Johnson, Andrea; Fredette, Thomas; OBryan, Phil
Cc: Thomas, Eric; Anderson, Brian
Subject: FW: Periodic Operating Experience Newsletter Article (Summer 2 SIT)

(b)(5)

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Thursday, March 26, 2015 8:16 AM
To: Michel(R2), Eric
Cc: OBryan, Phil
Subject: Cut Rebar Dispositions

Eric,
I have reviewed the cut rebar N&Ds and have found no issues with their dispositions and justifications for use as is. I am still working on my write-up. Let me know if you have any questions.

Chad Oelstrom
Construction Resident Inspector
VC Summer Units 2 and 3
USNRC Region II, CCI-DCP-CPB4
Phone: 803-345-6856
Email: mailto:chad.oelstrom@nrc.gov

Steddenbenz, Katherine

From: Heher, Patrick
Sent: Tuesday, March 10, 2015 10:30 AM
To: Michel(R2), Eric
Subject: RE: Temporary EGM

Eric,

Sorry for not responding yesterday – I wanted to make sure I gave you the right answer. Per 0613 (Section 18.04.b), we still reference the EGM (George told me that Tom Kozak says that it may get changed sometime this year). Use similar wording to Katie's write-up in the Vogtle 2014005 report: http://pbadupws.nrc.gov/docs/ML1503/ML15037A406.pdf (End of Section 1A12) – "Failure to Establish Qualified Welding Procedures In Accordance With AWS D1.1:2000), consistent with Section 2.3.2 of the NRC Enforcement Policy and EGM 11-006." Also, you can use wording from the summary section of the Vogtle 2014005 report instead of the Summer 2014005 report.

For cross-cutting – we do use the new Appendix F of 0613. Again, Katie's writeup mentions App. F. You can use similar wording for the body of the report. The summary is probably ok just leaving it as "Construction Cross Cutting Aspects are determined using IMC 0613, "Power Reactor Construction Inspection Reports."

Thanks,
Patrick

From: Michel(R2), Eric
Sent: Monday, March 09, 2015 7:19 AM
To: Heher, Patrick
Subject: Temporary EGM

Patrick,

The most recent Summer integrated report makes a reference to "the temporary enforcement guidance outlined in enforcement guidance memorandum number EGM-11 006" in the Summary of Findings. Is that EGM still active? Thought that had been incorporated into the Enforcement Policy. Didn't look like the Vogtle report included that reference.

The report also mentions that "Construction Cross Cutting Aspects are determined using IMC 0613, "Power Reactor Construction Inspection Reports." We don't use that anymore, correct? We're using App F in 0613?

Eric

Steddenbenz, Katherine

From: Oelstrom, Chad
Sent: Monday, March 09, 2015 11:29 AM
To: Michel(R2), Eric; OBryan, Phil
Subject: RE: Update from Findlay

I was not able to attend the OCC this morning but Patrick Donnelly did attend. They plan to have the dispositions completed by march 15.

From: Michel(R2), Eric
Sent: Monday, March 09, 2015 10:35 AM
To: Oelstrom, Chad; OBryan, Phil
Subject: Update from Findlay

Just a quick update. I spoke with Findlay this morning, and asked him to put together some simple, high level descriptions of where they stand with respect to evaluating each of the holes, and the milestones for the root cause. I'll share that as soon as I have it. No discussions of briefing anyone yet until we actually close the SIT.

Eric

Oelstrom, Chad

From: Ernstes, Michael
Sent: Tuesday, March 10, 2015 6:58 AM
To: Oelstrom, Chad
Subject: RE: CVBH Repair Completed

Outstanding Chad....thanks.

From: Oelstrom, Chad
Sent: Monday, March 09, 2015 5:16 PM
To: Michel(R2), Eric; Heisserer, Jamie; OBryan, Phil
Cc: Ernstes, Michael
Subject: CVBH Repair Completed

Eric,

FYI...

CVBH indication repair was completed today at approximately 1630.
Based on my observations of the UT and VI:
Base metal thickness: 1.685"
Indication depth: 1/8"
Final grinding depth: 9/64" (1/8" +1/64"), I don't have the final UT thickness.
MT passed.

If needed, I will provide the recorded (QC) values when I see a copy of the signed-off traveler.

Chad

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Monday, March 09, 2015 1:56 PM
To: Michel(R2), Eric; OBryan, Phil
Subject: Photos were released by SCE&G added to sharepoint

I put the photos in a powerpoint so I could label. Once the excavation photos are releases I will add those.

Chad

Heisserer, Jamie

From: Heisserer, Jamie
Sent: Monday, March 09, 2015 8:28 AM
To: McCree, Victor; Jones, William; Yerokun, Jimi
Cc: Ernstes, Michael; Michel(R2), Eric
Subject: RE: Summer

Gentlemen,

Here is the latest:

Over the weekend, the licensee excavated an area around hole R1 (the core where the CVBH was impacted). Today, CB&I, Westinghouse and SCE&G will be examining the excavation/CVBH to assess next steps. They are still working on the dispositions of the impacted rebar. The residents are following the issue, and will let us know as more information becomes available.

Thanks,
Jamie

-----Original Message-----
From: Ernstes, Michael
Sent: Monday, March 09, 2015 8:01 AM
To: Heisserer, Jamie
Subject: FW: Summer

-----Original Message-----
From: McCree, Victor
Sent: Monday, March 09, 2015 8:01 AM
To: Jones, William; Yerokun, Jimi
Cc: Brown, Frederick; Ernstes, Michael
Subject: Summer

G'morning Bill/Jimi,

Any update on the status of SCE&G's plans to disposition the CVBH indication and impacted rebar at VCS U2?

Vic

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Monday, March 09, 2015 11:28 AM
To: Michel(R2), Eric
Subject: RE: Correct ITAAC?

Yes. I have not started on any of my write-ups. When do you need these?

From: Michel(R2), Eric
Sent: Monday, March 09, 2015 10:14 AM
To: Oelstrom, Chad
Subject: Correct ITAAC?

Chad,

Just want to double check – is this the deviations ITAAC affected by the SIT violation: 760 (3.3.00.02a.i.a)?

Eric

Oelstrom, Chad

From: Ernstes, Michael
Sent: Monday, March 09, 2015 8:02 AM
To: Donnelly, Patrick; Oelstrom, Chad
Subject: FW: Summer

Anything new on this?

-----Original Message-----
From: McCree, Victor
Sent: Monday, March 09, 2015 8:01 AM
To: Jones, William; Yerokun, Jimi
Cc: Brown, Frederick; Ernstes, Michael
Subject: Summer

G'morning Bill/Jimi,

Any update on the status of SCE&G's plans to disposition the CVBH indication and impacted rebar at VCS U2?

Vic

Oelstrom, Chad

From: Heisserer, Jamie
Sent: Wednesday, March 04, 2015 1:58 PM
To: Ernstes, Michael; Oelstrom, Chad
Subject: RE: SIT Inspection Time

I agree with Mike.

From: Ernstes, Michael
Sent: Wednesday, March 04, 2015 10:46 AM
To: Oelstrom, Chad; Heisserer, Jamie
Subject: RE: SIT Inspection Time

I don't have a preference. It all gets billed the same way.

My opinion would be that if is related to an activity described in the Charter, charge it to the SI.

From: Oelstrom, Chad
Sent: Wednesday, March 04, 2015 9:53 AM
To: Ernstes, Michael; Heisserer, Jamie
Subject: SIT Inspection Time

Mike and/ or Jamie,
Should I bill the time I have spent this week, related to the CVBH issue, to the SI report number or to the quarterly report?

Thanks,
Chad

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Wednesday, March 04, 2015 1:47 PM
To: Michel(R2), Eric; OBryan, Phil
Subject: RE: construction SDP

Off the record, since the dispositions have not been complete:

I asked WEC what they thought the dispostions would be based on available data. If the rebar impacted was the radial rebar, like in R1, then all these holes could be dispositioned use as is. If the circumferential bars were impacted than that would need to be evaluated in more detail.

Based on my screening using 2519, the highest I can get this to go is Green: Column 3 – Intermediate Structure, Row 2- Findings associated with a portion of a structure such that reasonable assurance is not provided that the portion of the structure can meet its design function.

From: Michel(R2), Eric
Sent: Wednesday, March 04, 2015 1:01 PM
To: OBryan, Phil
Cc: Heisserer, Jamie; Oelstrom, Chad
Subject: RE: construction SDP

Phil,

Thanks for the suggestion. Taking a look at it now. My sense from Chad and the email exchange with Tomy was the rebar typically has plenty of available margin. We still need to look at the engineering disposition before we close the SIT, so if something unusual comes up we'll have a chance to evaluate.

With regard to the CV, we don't expect it to be below minimum wall. I think below the basemat the CV's function is more like that of a liner and only needs to provide a leak boundary – similar to a class CC containment. If they end up doing a weld repair I'll ask for some assistance to review their assessment, but based on what we know today I think it's unlikely we'd move into anything higher than green. A white finding would require that the finding had a "substantial impact" on the CV in that reasonable assurance is not provided that the CV would perform it's intended safety function (Row 3 of the SDP risk matrix).

Eric

From: OBryan, Phil
Sent: Monday, March 02, 2015 10:23 AM
To: Michel(R2), Eric
Subject: construction SDP

Eric, did you go through IMC 2519 for the two preliminary findings? It looks like if they should determine that the severing of the structural rebar would affect the design function of containment, then the issue could go higher than green. That's just a quick look though…

Oelstrom, Chad

From:	Oelstrom, Chad
Sent:	Wednesday, March 04, 2015 8:54 AM
To:	Michel(R2), Eric; OBryan, Phil
Subject:	Please Review SIT PPT Slide attached
Attachments:	SIT Observations.pptx

Eric and Phil,
NRO and RII Management are going to be onsite tomorrow and I will need to brief them on our observations. SCE&G will be giving them a timeline of events so I will not be briefing them on that. Please review the attached slide to make sure I have captured all that we observed. This is high level the actual details of no GFCI or cutting of rebar and continuing, etc. I think falls under the items on the slide. I need this back by this 3:00 pm.

Thanks,
Chad

SIT Observations

- Field Engineers are a single point of vulnerability
- WEC failed to cross check embed location with provided dowel drawing and description
- Embed plate locations incorrectly located in field by carpenters
- Pre-job briefs focus on personal safety not potential hazards. Questioning attitude?
- Field Engineers trained on CAQ and CARs; not confident on how to identify in the field.
- Lack of understanding of applicable procedures and precautions

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Wednesday, March 04, 2015 9:57 AM
To: OBryan, Phil; Michel(R2), Eric
Subject: RE: SIT Exit meeting notes

I agree with Phil. I will keep the focus on not following procedures.

From: OBryan, Phil
Sent: Wednesday, March 04, 2015 9:56 AM
To: Michel(R2), Eric; Oelstrom, Chad
Cc: Musser, Randy; Heisserer, Jamie
Subject: RE: SIT Exit meeting notes

I agree with the observations. For potential vio #1, I don't think you need to say "***with no corrective action program entry or intent to submit***" since the previous sentence is purely factual and demonstrates the point. I'd avoid making statements about the workers "intent."

From: Michel(R2), Eric
Sent: Wednesday, March 04, 2015 9:47 AM
To: Oelstrom, Chad
Cc: OBryan, Phil; Musser, Randy; Heisserer, Jamie
Subject: RE: SIT Exit meeting notes

Chad,

Here's a summary from my notes. Please let me know about any inaccuracies you note. If they're substantial, we'll circle back with the licensee to let them know.

Scope – covered the charter, as items were available for review.

Violations:

1. Potential Crit V, Green NCV. Procedures cited 1) NCSP 3-33-1, ¶ 6.2.2.d & e; and 2) NCSP 3-42-1 ¶ 6.8.b. Contrary to above, on Feb 10 core bore D2 was drilled which cut through structural rebar. Then on Feb 11, core bore D2 was grouted with the damaged rebar remaining in place, unanalyzed, ***with no corrective action program entry or intent to submit (Any thoughts on this portion? I'm concerned it may be wandering into Crit XVI space).*** As a result ITAAC 3.3.00.02a.i.a was materially impacted. More than minor b/c similar to Example 7 in App E. Cross cutting aspect TBD.
2. Potential Crit III, Green NCV. N&D VS2-CR01-GNR-00263, having misidentified the correct dowel type resulted in contact with CV. WEC (design authority) failed to recognize error (APP-GW-GAP-428, ¶ 7.25.3). More than minor b/c similar to Example 1 from App E. Cross cutting aspect TBD.

Observations:

1. Human performance tools focused almost exclusively on industrial safety. Little thought given to adversely affecting safety related SSCs. Noticed this at the craft and FE level.
2. R1 not filling with water viewed as a near miss to a latent defect in the CV.
3. Single point vulnerability in the FEs to generate the N&D, then develop the means and methods, all with little to no management oversight or backup.

4. N&Ds are used almost exclusively as the tool to disposition hardware issues, therefore the CAP isn't being used effectively to address CAQs. FEs know and use the right language when describing the CAP program basics, but aren't actually implementing.

Hope this helps. Let me know if there's anything else you need.

Eric

From: Oelstrom, Chad
Sent: Tuesday, March 03, 2015 7:14 AM
To: Michel(R2), Eric
Subject: SIT Exit meeting notes

Eric,
Could you please scan in and email me your exit meeting notes? There is a NRC Management Meeting here on Thursday and I know they will ask about the SIT. In your exit you summed up the issues very well and made some good points. I want to keep the same message and use some of the wording you used.

Thanks,
Chad

Oelstrom, Chad

From: Ernstes, Michael
Sent: Wednesday, March 04, 2015 10:46 AM
To: Oelstrom, Chad; Heisserer, Jamie
Subject: RE: SIT Inspection Time
Attachments: Summer SI Charter.docx

I don't have a preference. It all gets billed the same way.

My opinion would be that if is related to an activity described in the Charter, charge it to the SI.

From: Oelstrom, Chad
Sent: Wednesday, March 04, 2015 9:53 AM
To: Ernstes, Michael; Heisserer, Jamie
Subject: SIT Inspection Time

Mike and/ or Jamie,
Should I bill the time I have spent this week, related to the CVBH issue, to the SI report number or to the quarterly report?

Thanks,
Chad

Steddenbenz, Katherine

From: OBryan, Phil
Sent: Tuesday, March 03, 2015 3:11 PM
To: Oelstrom, Chad; Michel(R2), Eric
Subject: Key contacts list for SIT
Attachments: people contacted.docx

Attached is my list of key contacts for the report. They are listed is alphabetical order by last name – if you want to add additional contacts, please send them to me and I'll keep a master list until we get a report shell on the sharepoint site (or just add them to the sharepoint site later).

Phil

John Arnall, CB&I Concrete Manager
Zach Ashcroft, SCE&G Construction Supervisor and Root Cause Analysis Team Member
Karre Bridge, CB&I Field Engineer
Justin Cagle, CB&I Concrete Superintendent
Jim Comer, CB&I Performance Improvement Manager
John Ervin, CB&I Field Engineer
Andrew Fleetwood, CB&I Lead Field Engineer
Patrick Gibbons, SCE&G Construction Engineer
Andrew Jones, CB&I Concrete Finisher
Jim Karmozyn, CB&I Site Engineering and Root Cause Analysis Team Member
Dan Krebes, WEC Lead Mechanical Engineer
David Rau, CB&I Quality Control Inspector
James Robinson, CB&I Concrete Foreman
John Robinson, WEC Site Engineering Manager
Findlay Salter, SCE&G Licensing
Garrett Sanders, SCE&G Licensing
Alan Torres, SCE&G Units 2 & 3 Site Vice President
Jerome Wallace, CB&I Concrete Finisher
Bill Wood, CB&I Site Director
Terry Williams, CB&I Field Engineer
Ed Wills, CB&I Director, Licensing and Regulatory Compliance
Kyle Young,, SCE&G Issue Manager
Wanchao Zhao, WEC Civil Engineer

Steddenbenz, Katherine

From: Oelstrom, Chad
Sent: Tuesday, March 03, 2015 4:22 PM
To: Michel(R2), Eric
Subject: Holes to be excavated and SCE&G involvement

Eric,

Here is an update on the proposed excavation and SCE&G's review of dispositions and work plans associated with the issue of the cut rebar and CVBH contact by the core drill. This update is based on 0900 OCC meeting, the 1400 Readiness Review Meeting and conversations with SCE&G staff.

CB&I Services (CVBH):
CB&I Services needs to evaluate R1 for CVBH contact. In addition, they are questioning if the CVBH was contacted in D4.

WEC (impacted rebar):
WEC has only provided a disposition for R1. The disposition for the excavation has been completed based on R1 and D4. There is a push for D5 non-conformance or RAI (explained below). The remaining holes are to be dispositioned next week. The disposition allows for up to 12" of rebar to be removed for evaluation and repair of the CVBH. The cut rebar at R1 was evaluated and determined that it can be abandoned in place with no repair.

CB&I Power:
Based on the CB&I Services concerns and the WEC disposition, a work scope instruction has been created. This work scope will incorporate CB&I Services request, WEC disposition, SCE&G comments, and procedures developed and/ or revised. Currently, the work scope only includes holes R1 and D4 based on CB&I Services request and current WEC RAI's and dispositions. Only a portion of the depth of D5 will be excavated. CB&I Power is trying to get WEC to issue an RAI for D5 for the need of full excavation, so WEC can disposition no rebar encountered now and not later.

CB&I Power will perform a mock-up of the Hydro-demolition tomorrow 3/4/15. All crews to be trained on new procedures tomorrow. Excavation work is planned to begin 3/5/15. The work scope contains hold points for evaluating excavation. Excavation complete date is 3/11/15.

SCE&G:
SCE&G has been reviewing all dispositions, requests, procedural changes, etc. SCE&G Quality, Engineering, Licensing, Construction and Issue Manager are assigned to the oversight of the corrective actions and the plan forward. SE&G concurrence is required on the following documents to release CB&I to work:

- New and revised procedures
- Job Hazard Analysis
- Demolition Plan
- Demolition Work Package

In addition to the concurrence, SCE&G are also reviewing dispositions and the technical justifications. After all the reviews are complete and comments addressed and when SCE&G determines training has been performed and is adequate and the mock-up is satisfactory, they will issue a Project Letter to CB&I to allow excavation. There is a hold at repair for the same type of reviews.

I think this everything. Let me know if you have any questions.
Chad

Oelstrom, Chad

From: Heisserer, Jamie
Sent: Tuesday, March 03, 2015 2:51 PM
To: Oelstrom, Chad; OBryan, Phil; Michel(R2), Eric; Kent, Jonathan
Subject: FW: SIT HRMS Report No Status

Jonathan - Thanks for your efforts

Team - FYI

From: Kent, Jonathan
Sent: Tuesday, March 03, 2015 2:45 PM
To: Heisserer, Jamie
Subject: RE: SIT HRMS Report No Status

Ok. I have been working this out with our HRMS people and they stated that we should be good to go tomorrow (it apparently takes 24 hours for the changes to process through the system). So I'm thinking by the afternoon tomorrow the inspectors should be able to input time correctly. If not we will get to fixing the issue again. I appreciate your patience on this.

From: Heisserer, Jamie
Sent: Monday, March 02, 2015 1:26 PM
To: Kent, Jonathan
Subject: RE: SIT HRMS Report No Status

Thank you sir.

From: Kent, Jonathan
Sent: Monday, March 02, 2015 1:14 PM
To: Heisserer, Jamie
Cc: Oelstrom, Chad
Subject: RE: SIT HRMS Report No Status

I noticed that today as well. I'm in touch with the HRMS folks regarding this. Hoping to figure out the issue and get some resolution ASAP for you guys.

From: Heisserer, Jamie
Sent: Monday, March 02, 2015 1:07 PM
To: Kent, Jonathan
Cc: Oelstrom, Chad
Subject: FW: SIT HRMS Report No Status

FYI – the team is still not able to enter time to the SIT.

From: Oelstrom, Chad
Sent: Monday, March 02, 2015 1:02 PM
To: Heisserer, Jamie
Subject: SIT HRMS Report No Status

Jamie,

Do you know when the 05200027/2015009 report will be added to HRMS? I am not able to enter any time for the SIT.
Chad

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Tuesday, March 03, 2015 1:07 PM
To: Michel(R2), Eric
Subject: RE: Photos of Core Holes

Thanks for the reminder. I will check. I completely forgot about the photos.

From: Michel(R2), Eric
Sent: Tuesday, March 03, 2015 1:05 PM
To: Oelstrom, Chad
Subject: RE: Photos of Core Holes

Chad,

Any word from SCE&G on releasing these? Do you have any descriptive notes to go along with each picture? Thanks.

Eric

From: Oelstrom, Chad
Sent: Friday, February 27, 2015 7:37 AM
To: SALTER, JAMES FINDLAY
Cc: Michel(R2), Eric
Subject: Photos of Core Holes

Findlay,

Attached are the photos I would like you to review and release for NRC use. Let me know if you have any questions.

Eric,
These photos are for internal use only for the team and have not been released by SCE&G.

Thanks,

Chad

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Tuesday, March 03, 2015 12:53 PM
To: Michel(R2), Eric
Subject: RE: Choice of holes to excavate

Eric,
There is a Readiness Review mtg at 1400 today. I will give you an update after that mtg. Then you can share with management.

From: Michel(R2), Eric
Sent: Tuesday, March 03, 2015 12:50 PM
To: Brown, Frederick
Cc: Yerokun, Jimi; Jones, William; Heisserer, Jamie; Oelstrom, Chad; OBryan, Phil
Subject: RE: Choice of holes to excavate

Fred,

The confirmed cutting of structural rebar occurred in D2 (so a different location). When we left on Friday they were still dispositioning all of the D2-D7 holes for rebar damage, so I don't have any good information on what their plans are, or how SCE&G is participating in the decision making. We'll make sure to factor that into our look at the engineering evaluation of the structural rebar.

Eric

From: Brown, Frederick
Sent: Friday, February 27, 2015 7:44 AM
To: Michel(R2), Eric
Cc: Yerokun, Jimi; Jones, William; Heisserer, Jamie
Subject: RE: Choice of holes to excavate

Thanks Eric. The 32" by 16" (assume on the CV surface for pre-heat, larger at the top of the excavation) dimensions sound like there is continuity from the Monday morning discussion.

Is the hole with the demonstrated cutting of safety-related rebar included in the R2, D4, D5 group, or is that a different location? If different, have you heard what their plans are for it?

My interest is what the consortium decides that they are going to do for repair vs. "use as is" of the damaged SR rebar, and how SCE&G involve themselves in that decision making. Again, I don't know that there is a "right" answer, and I don't want us to inject ourselves in their decision making process, I just want to be able to assess how they evaluate and disposition the situation.

Thanks again,
Fred

From: Michel(R2), Eric
Sent: Friday, February 27, 2015 7:15 AM
To: Brown, Frederick
Cc: Yerokun, Jimi; Jones, William; Heisserer, Jamie
Subject: Choice of holes to excavate

Fred,

To follow up on your question from the debrief Wednesday, the decision to excavate R2, D4 and D5 wasn't as much of a choice as it was the default due to their proximity to R1. Please see the attached drawing. The current plan for excavation is to open a 32" x 16" hole around R1. The sizing of the excavation is based on CB&I's needs to accommodate people and equipment for the CV repair. We have confirmed that the licensee continues to be involved in the repair process. Please let me know if that doesn't answer your question.

Eric

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Tuesday, March 03, 2015 12:35 PM
To: OBryan, Phil; Michel(R2), Eric
Subject: RE: draft timeline
Attachments: VCS SIT Timeline (2).docx

Phil,
I made some edits to the timeline

(b)(5)

Please review. If you have any comments or disagree, I have no heartburn with using the original. Just adding my two cents.

Chad

From: OBryan, Phil
Sent: Tuesday, March 03, 2015 10:18 AM
To: Michel(R2), Eric; Oelstrom, Chad
Subject: draft timeline

Here's a draft timeline to aid you in your sections of the report. Let me know if you find any errors.

Phil

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Withheld pursuant to exemption

(b)(5)

of the Freedom of Information and Privacy Act

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Withheld pursuant to exemption

(b)(5)

of the Freedom of Information and Privacy Act

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Withheld pursuant to exemption

(b)(5)

of the Freedom of Information and Privacy Act

Page 091 of 960

Withheld pursuant to exemption

(b)(5)

of the Freedom of Information and Privacy Act

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Tuesday, March 03, 2015 10:45 AM
To: OBryan, Phil; Michel(R2), Eric
Subject: RE: draft timeline

Thanks. Have either of you tried to enter your time? I can't enter anytime under the report number for last week.

From: OBryan, Phil
Sent: Tuesday, March 03, 2015 10:18 AM
To: Michel(R2), Eric; Oelstrom, Chad
Subject: draft timeline

Here's a draft timeline to aid you in your sections of the report. Let me know if you find any errors.

Phil

Heisserer, Jamie

From: Issa, Alfred
Sent: Friday, February 27, 2015 8:51 AM
To: Anderson, Brian
Subject: NEW OpE COMM: Inadvertent Damage to the V. C. Summer Unit 2 AP1000 Containment Vessel - Special Inspection (SIT)

~~Information Security Reminder: OpE COMMs may contain preliminary information, may be pre-decisional and may contain sensitive/proprietary information. OpE COMMs are not intended for distribution outside the agency.~~

This email is being sent to notify recipients of a new OpE COMM in ADAMS (**ML 5057A20**)

Inadvertent Damage to the V.C. Summer Unit 2 AP1000 Containment Vessel - Special

Summary

While performing core boring activities at the V.C. Summer Unit 2 construction site, the core bit cut into safety-related rebar in two locations and made contact with the containment vessel. Region II management determined that the appropriate level of NRC response in accordance with Inspection Manual Chapter (IMC) 2504, is a Special Inspection.

This OpE COMM is being distributed to the following groups: ***Containment; Human Performance; Inspection Programs; New Reactors; QA & Vendor Issues; SIT & AIT; Structural; Welding & Non-Destructive Examination; All COMMs***

To unsubscribe from this distribution list, or to subscribe to a different list in the OpE Community, please contact Joe Giantelli
For more information on the Reactor OpE Program, please visit our SharePoint site.

Thank you reviewing and using Operating Experience.

Heisserer, Jamie

From: Michel(R2), Eric
Sent: Thursday, February 26, 2015 9:05 AM
To: Artayet, Alain
Cc: Heisserer, Jamie; Musser, Randy; Steddenbenz, Katherine
Subject: RE: Containment Vessel Repair
Attachments: FW: Scan Data from [R2RDLCM-Summer-2-3]

RT is very unlikely to be needed. Probable depth of flaw is around 0.15."

Eric

-----Original Message-----
From: Artayet, Alain
Sent: Thursday, February 26, 2015 7:57 AM
To: Michel(R2), Eric
Cc: Heisserer, Jamie; Musser, Randy; Steddenbenz, Katherine
Subject: RE: Containment Vessel Repair

Is anyone discussing use of straight-beam UT or possibly phased-array UT or eddy current on curved surface in lieu of RT for base metal repair similar to weld buildup?

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From: Michel(R2), Eric
Sent: Thursday, February 26, 2015 7:12 AM
To: Steddenbenz, Katherine
Cc: Artayet, Alain; Heisserer, Jamie; Musser, Randy
Subject: RE: Containment Vessel Repair

Thanks Katie. Had some additional conversations with CB&I and they pointed me to NE-4214 and that gives allowance to use the repair paragraph (NE-4131) when the min thickness is broached by a "fabrication operation." I'm comfortable with their path forward on that question.

Good call on NE-3855.2. Gotta love how the Code seemingly contradicts itself here and there! If NRO is good with the use of this paragraph, we'll go with it. Thanks again!

Eric

-----Original Message-----
From: Steddenbenz, Katherine
Sent: Wednesday, February 25, 2015 4:27 PM
To: Michel(R2), Eric
Cc: Artayet, Alain; Heisserer, Jamie
Subject: RE: Containment Vessel Repair

I spoke with John and he believes that since Section NE-4000 applies to both fabrication and installation, it doesn't matter whether the discovered defect was created before or after the material arrived on site. NE-4131 in whole states "Material originally accepted on delivery in which defects exceeding the limits of NE-2500 are known or discovered during the process of fabrication or installation is unacceptable. The material may be used provided the condition is corrected in accordance with the requirements of NE-2500 for the applicable product form." We interpret this as the defect in the CVBH, which is material that was originally accepted on

delivery, was discovered during the process of installation, is unacceptable, and must be corrected in accordance with the requirements of NE-2500.

NCA-3855, Control of Purchased Materials, Source Materials, and Services, allows the certificate holder to conduct welding repairs in the field after the material has been accepted. Specifically, NCA-3855.2(c) states "Services including performance and certification of operations, processes, the results of tests, examinations, repairs, or treatments required by the material specification or by this Section shall be furnished by a Material Organization, by an approved supplier, or by a Certificate Holder."

So CB&I is going to bend the base material to repair the defect rather than grind it smooth, and this won't decrease the thickness below 1 5/8 inches? Are they still planning to cut a 4' by 4' square in the concrete to access it?

Katie

From: Steddenbenz, Katherine
Sent: Wednesday, February 25, 2015 10:13 AM
To: Heisserer, Jamie; Michel(R2), Eric
Cc: Artayet, Alain
Subject: RE: Containment Vessel Repair

I left John a voicemail. I'll let you know when I hear back from him.

Alain and I actually discussed this on Monday, and I thought we came to the conclusion that section of the code applied to both the fabrication and installation phase, which we assumed this situation would fall under installation. I'll retrace our thought path.

Jamie, I've been working to get Citrix fixed on my computer this morning, can you send me the link to access IHS (although I may need Citrix to use that link)? If I can't access it, would you mind sending me ASME Section III, NE-2000 and 4000 from our references folder in CIB3 on the G drive. Thanks!

From: Heisserer, Jamie
Sent: Wednesday, February 25, 2015 8:33 AM
To: Michel(R2), Eric; Steddenbenz, Katherine
Cc: Artayet, Alain
Subject: Re: Containment Vessel Repair

John Honcharik is the person Matt Mitchell said you should contact.

On: 25 February 2015 08:20, "Michel(R2), Eric" <Eric.MichelR2@nrc.gov> wrote:
Katie,

The paragraph cited below which gets us into material repairs, namely NE-4131, is for defects in materials after delivery in which defects are "known or discovered." This doesn't cover the conditions at the site, in that the defects were created here and not known or discovered during the process of fabrication. My suspicion is that there's an interpretation which allows the N Certificate Holder to make use of those provisions for defects created during the act of fabrication. Can you ask around about that?

In addition, while it doesn't sound like welding repairs are required in this case since the depth of the defect and subsequent blending to remove it will broach the minimum design thickness. The interesting question regarding that is that NE-2539 states that the Material Organization may repair by welding materials… The N certificate holder isn't typically the Material Organization, so does this paragraph prevent the certificate holder from conducting welding repairs in the field during fabrication (ie after the material was accepted)?

These would be helpful questions to chase down if you have some time. This will probably require you to contact NRO, Matt Mitchell's branch. Thanks.

Eric

From: Steddenbenz, Katherine
Sent: Tuesday, February 24, 2015 4:53 PM
To: Michel(R2), Eric
Cc: Heisserer, Jamie; Donnelly, Patrick; Artayet, Alain
Subject: RE: Containment Vessel Repair

Ahh gotcha…

SA-738/SA-738M, Section 3.1, states "material supplied to this specification shall conform to the requirements of Specification A 20/A 20M. These requirements outline the testing and retesting methods and procedures, permissible variations in dimensions and mass, quality, repair of defects, marking, loading, etc."

A 20/A 20M, Section 9, Quality

- 9.1, states "plates shall be free of injurious defects and shall have a workmanlike finish.

- 9.2.1.1, states "shallow imperfections shall be ground to sound metal; the ground area shall be well faired and the thickness of the ground plate shall not be reduced below the minimum thickness permitted."

- 9.2.1.2, states "all surface imperfections, the removal of which will reduce the plate thickness below the minimum thickness permitted, shall be cause for rejection of the plate, except that, by agreement with the purchaser, the metal so removed may be replaced with weld metal (see 9.4)."

Section 9.4, Repair by Welding

- 9.4.2, states "preparation for repair welding shall include inspection to confirm complete removal of the defect."

- 9.4.3 states repairs shall be made using WPSs and welders qualified in accordance with ASME Section IX.

- 9.4.7 states "repair welds shall meet the requirements of the construction code specified by the purchaser."

Which just takes us back to ASME Section III, Subsection NE, correct?

From: Michel(R2), Eric
Sent: Tuesday, February 24, 2015 3:53 PM
To: Steddenbenz, Katherine
Cc: Heisserer, Jamie; Donnelly, Patrick; Artayet, Alain
Subject: RE: Containment Vessel Repair

I mean the material spec SA-738, and subsequently SA-20.

From: Steddenbenz, Katherine
Sent: Tuesday, February 24, 2015 11:55 AM
To: Michel(R2), Eric
Cc: Heisserer, Jamie; Donnelly, Patrick; Artayet, Alain
Subject: RE: Containment Vessel Repair

Yes, NE-2000 is where most of the discussion below comes from. NE-4000 directs you to NE-2000, and NE-2510 states "Pressure retaining material shall be examined and repaired in accordance with the material specification and as otherwise required by this Subarticle." Below in yellow is what's required by that Subarticle.

Does that answer your question?

From: Michel(R2), Eric
Sent: Tuesday, February 24, 2015 11:18 AM
To: Steddenbenz, Katherine
Cc: Heisserer, Jamie; Donnelly, Patrick; Artayet, Alain
Subject: RE: Containment Vessel Repair

Did you consider NE-2000? This states the material spec is required to be followed, and I didn't notice any discussion below.

From: Steddenbenz, Katherine
Sent: Monday, February 23, 2015 2:32 PM
To: Michel(R2), Eric
Cc: Heisserer, Jamie; Donnelly, Patrick; Artayet, Alain
Subject: Containment Vessel Repair

Hi Eric,

Hope you made it to the site safely! Patrick and I went through ASME, Section III, Subsection NE, on Wednesday to figure out where they stood in terms of repairing the containment vessel. I was discussing the conclusion we came to with Jamie and Alain, and they thought I should send you our code interpretation in case you haven't started gathering this information yet. I paraphrased most sections for simplicity.

NE-4131, Elimination and Repair of Defects, takes you to NE-2500 since exceptions (a) through (c) do not apply.

NE-2538, Elimination of Surface Defects, states that surface defects shall be removed by grinding or machining. Also when the elimination of the defect reduces the thickness of the section below the minimum required by NE-3000, the material shall be repaired in accordance with NE-2539.

NOTE: We believe they will need to use UT to determine the thickness of the containment vessel in that area after grinding it smooth.

NE-3000 --> I believe this will just take you to the design specification, which requires the thickness of the bottom head to be 15/8". However, this area may have been thicker than required, meaning the defect may not impact the thickness and the vessel would not need to be repaired in accordance with NE-2539.

But if it does…

NE-2539, Repair by Welding, states the material may be repair by welding after the defect has been removed, provided the depth of the repair cavity does not exceed one-third of the nominal thickness and requirements of NE-2539.1 through 6 are met.

NOTE: Judging by the picture, the depth of this defect once grinded down should not exceed 1/3 of the CVBH thickness.

NE-2539.3, Blending of Repaired Areas, states after repair the surface shall be blended uniformly into the surrounding surface.

NE-2539.4, Examination of Repair Welds, states the repair weld shall be examined by MT or PT. In addition, when the depth of the repair cavity exceeds the lesser of 3/8 in. or 10% of the section thickness, the repair weld shall also be examined by RT.

NOTE: Since the thickness of the bottom head is 15/8", in this case 10% (.1625") of that thickness is less than 3/8".

NE-2539.5, Heat Treatment After Repairs, states the product shall be heat treated after repair in accordance with the requirements of NE-4620.

NOTE: I believe Table NE-4622.7(b)-1 exempts this repair.

So our conclusion is, per the code, the licensee is required to, at a minimum, repair the defect by grinding/machining it flush with the surrounding surface. They plan to cut 2 feet in all directions surrounding the core hole in order to access the defect. If the defect reduces the thickness below the minimum required by NE-3000, they will have to do weld buildup, again grind it flush, and preform either MT of PT to verify the repair is acceptable. If the repair cavity is greater than 0.1625", then they are also required to perform RT, in which they will have to have access to both sides of the vessel thereby requiring concrete removal surrounding that area below the bottom head.

Hope this helps,

Katie

Steddenbenz, Katherine

From: Michel(R2), Eric
Sent: Thursday, February 26, 2015 9:38 AM
To: Artayet, Alain
Cc: Heisserer, Jamie; Steddenbenz, Katherine; Davis, Robert; Honcharik, John; Musser, Randy
Subject: RE: Containment Vessel Repair

I understand that; thanks. No welding is expected.

-----Original Message-----
From: Artayet, Alain
Sent: Thursday, February 26, 2015 9:32 AM
To: Michel(R2), Eric
Cc: Heisserer, Jamie; Steddenbenz, Katherine; Davis, Robert; Honcharik, John; Musser, Randy
Subject: RE: Containment Vessel Repair

For further clarification (I should of mentioned earlier), vacuum testing would possibly apply if repair by welding would occur.

-----Original Message-----
From: Artayet, Alain
Sent: Thursday, February 26, 2015 8:10 AM
To: Michel(R2), Eric
Cc: Heisserer, Jamie; Steddenbenz, Katherine; Davis, Robert; Honcharik, John; Musser, Randy
Subject: RE: Containment Vessel Repair

I forgot to mention that vacuum testing maybe required after the base metal repair, if the concrete is hopefully not removed external to the CVBH.

-----Original Message-----
From: Artayet, Alain
Sent: Thursday, February 26, 2015 8:02 AM
To: Honcharik, John; Davis, Robert
Cc: Michel(R2), Eric; Heisserer, Jamie; Steddenbenz, Katherine
Subject: FW: Containment Vessel Repair

Because we know the meaning of ASME on taking exceptions to code provisions for unusual repairs that do not require a weld joint, see my question in previous email.

-----Original Message-----
From: Artayet, Alain
Sent: Thursday, February 26, 2015 7:57 AM
To: Michel(R2), Eric
Cc: Heisserer, Jamie; Musser, Randy; Steddenbenz, Katherine
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Subject: RE: Containment Vessel Repair

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Cc: Heisserer, Jamie; Donnelly, Patrick; Artayet, Alain
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Hope you made it to the site safely! Patrick and I went through ASME, Section III, Subsection NE, on Wednesday to figure out where they stood in terms of repairing the containment vessel. I was discussing the conclusion we came to with Jamie and Alain, and they thought I should send you our code interpretation in case you haven't started gathering this information yet. I paraphrased most sections for simplicity.

NE-4131, Elimination and Repair of Defects, takes you to NE-2500 since exceptions (a) through (c) do not apply.

NE-2538, Elimination of Surface Defects, states that surface defects shall be removed by grinding or machining. Also when the elimination of the defect reduces the thickness of the section below the minimum required by NE-3000, the material shall be repaired in accordance with NE-2539.

NOTE: We believe they will need to use UT to determine the thickness of the containment vessel in that area after grinding it smooth.

NE-3000 --> I believe this will just take you to the design specification, which requires the thickness of the bottom head to be 15/8". However, this area may have been thicker than required, meaning the defect may not impact the thickness and the vessel would not need to be repaired in accordance with NE-2539.

But if it does...

NE-2539, Repair by Welding, states the material may be repair by welding after the defect has been removed, provided the depth of the repair cavity does not exceed one-third of the nominal thickness and requirements of NE-2539.1 through 6 are met.

NOTE: Judging by the picture, the depth of this defect once grinded down should not exceed 1/3 of the CVBH thickness.

NE-2539.3, Blending of Repaired Areas, states after repair the surface shall be blended uniformly into the surrounding surface.

NE-2539.4, Examination of Repair Welds, states the repair weld shall be examined by MT or PT. In addition, when the depth of the repair cavity exceeds the lesser of 3/8 in. or 10% of the section thickness, the repair weld shall also be examined by RT.

NOTE: Since the thickness of the bottom head is 15/8", in this case 10% (.1625") of that thickness is less than 3/8".

NE-2539.5, Heat Treatment After Repairs, states the product shall be heat treated after repair in accordance with the requirements of NE-4620.

NOTE: I believe Table NE-4622.7(b)-1 exempts this repair.

So our conclusion is, per the code, the licensee is required to, at a minimum, repair the defect by grinding/machining it flush with the surrounding surface. They plan to cut 2 feet in all directions surrounding the core hole in order to access the defect. If the defect reduces the thickness below the minimum required by NE-3000, they will have to do weld buildup, again grind it flush, and preform either MT of PT to verify the repair is acceptable. If the repair cavity is greater than 0.1625", then they are also required to perform RT, in which they will have to have access to both sides of the vessel thereby requiring concrete removal surrounding that area below the bottom head.

Hope this helps,

Katie

OpE COMM

Date Released: 02/25/2015

Operating Experience Communication

Good Judgment Comes from Experience

Note - OpE COMMs contain preliminary information in the interest of timely internal communication of operating experience. This information is often subject to change and is not intended for distribution outside the agency in this form.

Inadvertent Damage to the V. C. Summer Unit 2 AP1000 Containment Vessel - Special Inspection (SIT)

By: Alfred Issa *(Please contact the author with comments and/or additional information)*

Executive Summary:

While performing core boring activities at the V.C. Summer Unit 2 construction site, the core bit cut into safety-related rebar in two locations and made contact with the containment vessel. Region II management determined that the appropriate level of NRC response in accordance with Inspection Manual Chapter (IMC) 2504, is a Special Inspection.

COMM Groups Notified:

Containment; Human Performance; Inspection Programs; New Reactors; QA & Vendor Issues; SIT & AIT; Structural; Welding & Non-Destructive Examination; All COMMs

Description

During the week of February 9, 2015, while Chicago Bridge & Iron (CB&I) was installing embed plates and preparing for pouring Layer 3 of concrete inside containment, interferences were identified with 7 dowels (vertical rebar) extending from Layer 2. These dowels were cut off and ten 27-inch holes were drilled in the concrete to grout in replacement dowels. To prepare for grouting, each hole was filled with water. However, workers noted that one of the holes closest to the containment vessel did not hold water. A subsequent boroscope examination of that hole revealed that the drill had damaged the containment vessel to some degree. In addition, the core bit cut into horizontal safety-related rebar in two locations. CB&I reported the issue to South Carolina Electric & Gas (SCE&G) on Monday February 16, 2015 who subsequently informed the NRC on Tuesday February 17, 2015.

In accordance with Inspection Manual Chapter (IMC) 2504, "Construction Inspection Program: Inspection of Construction and Operational Programs," Appendix C, "Response to Non-Performance Related Issues/Events," deterministic criteria were used to evaluate the level of NRC response to this construction event. Through review of the deterministic criteria in IMC 2504, Region II management determined that this was a significant event that, while not covered by deterministic criteria, warrants additional inspection or oversight. Specifically, the circumstances which resulted in the inadvertent damage to safety related rebar and the containment vessel revealed several concerns regarding construction practices which warrant additional inspection. Principal among these concerns were: the appropriate use of the corrective action program; the use of approved procedures by field personnel; the bypassing of safety features such as cutting off the autostop on the drill in order to continue coring; and the timeliness of communication to the licensee (the event took place on February 9, 2015 but the licensee was not notified until February 16, 2015). Region II determined that the appropriate level of NRC response is a Special Inspection. See the following documents for additional information:

- NON-PUBLIC SIT Charter
- NON-PUBLIC IMC 2504 decision documentation
- NON-PUBLIC related photographs

Also note that the NRC issued a publicly available news release in this regard, "NRC Begins Special Inspection at Summer Nuclear Plant Unit 2 Construction Site."

Construction Experience Insights:

This section will be completed as appropriate, after the publication of the SIT inspection report.

Point of Contact

This OpE COMM contains preliminary and developing information; it will be updated as new information becomes available. Please send feedback, questions and additional information concerning this event to Alfred Issa, NRO/DCIP/IGCB.

Heisserer, Jamie

From: Anderson, Brian
Sent: Wednesday, February 25, 2015 4:09 PM
To: Ernstes, Michael; Heisserer, Jamie
Cc: Yerokun, Jimi; Jones, William; Cheok, Michael; Valentin, Andrea; Issa, Alfred
Subject: RE: OpE/ConE COMM re Summer Special Inspection
Attachments: Inadvertent Damage to the V. C. Summer Unit 2 AP1000 Containment Vessel ....pdf

Mike, Jamie – Attached is the OpE/ConE COMM (internal, non-public) for the Summer containment vessel issue. It's being distributed today. FYI.

Brian

From: Anderson, Brian
Sent: Monday, February 23, 2015 1:18 PM
To: Ernstes, Michael; Heisserer, Jamie
Cc: Yerokun, Jimi; Jones, William; Cheok, Michael; Valentin, Andrea; Issa, Alfred
Subject: OpE/ConE COMM re Summer Special Inspection

Mike, Jamie –

No action for you; just FYI. As part of our Operating Experience (OpE) - Construction Experience (ConE) program activities, we're developing a COMM (internal, non-public distribution) about the Summer special inspection. The OpE/ConE program routinely issues COMMs for reactive inspections to provide preliminary information about the event, including pertinent information from the inspection charter and agency press releases. This COMM will be consistent with previous OpE products (see attached example) and should be published later this week.

Again, no action needed from you. If you have any questions, please let me know.

Thanks,
Brian

Musser, Randy

From: Michel(R2), Eric
Sent: Wednesday, February 25, 2015 11:05 AM
To: Brown, Frederick; McCree, Victor; Jones, William
Cc: Yerokun, Jimi; Donnelly, Patrick; Heisserer, Jamie; Musser, Randy
Subject: RE: Summer SIT

Fred,

The site is open and we'll be ready for the 4:00 call.

Eric

-----Original Message-----
From: Brown, Frederick
Sent: Wednesday, February 25, 2015 9:34 AM
To: McCree, Victor; Jones, William
Cc: Yerokun, Jimi; Donnelly, Patrick; Michel(R2), Eric
Subject: RE: Summer SIT

still on the calendar, and site should be open
From: McCree, Victor
Sent: Wednesday, February 25, 2015 9:29 AM
To: Brown, Frederick; Jones, William
Cc: Yerokun, Jimi
Subject: Re: Summer SIT

Thanks. Is it still on for 4:00?

----- Original Message -----
From: Brown, Frederick
Sent: Wednesday, February 25, 2015 09:10 AM
To: McCree, Victor; Jones, William
Cc: Yerokun, Jimi
Subject: RE: Summer SIT

800-621-8494 , Passcode: (b)(6)

From: McCree, Victor
Sent: Wednesday, February 25, 2015 8:56 AM
To: Jones, William
Cc: Brown, Frederick
Subject: Summer SIT

Bill.

Please send me the number for the SIT call today, assuming its still on.

Thx, Vic

Heisserer, Jamie

From: PDR Resource
Sent: Wednesday, February 25, 2015 9:28 AM
To: Heisserer, Jamie
Subject: RE: Request from public for Summer 2 special inspection charter, ML15051A104

ML15051A104 is already publicly available

Hi Jamie,

Thanks so much for looking into it – no hurry.

Mary

From: Heisserer, Jamie
Sent: Wednesday, February 25, 2015 8:42 AM
To: PDR Resource
Subject: Re: Request from public for Summer 2 special inspection charter, ML15051A104

Hi Mary,

I know the charter is normally released as an attachment when the inspection report is issued (45 days after the conclusion of the inspection). Let me dig into our guidance to see what precludes us from releasing it now, or if a FOIA is necessary. The Region II office is closed today, so it may take me some time to get to the answer.

Thanks,
Jamie

On: 25 February 2015 07:59, "PDR Resource" <PDR.Resource@nrc.gov> wrote:

Dear Jamie,

The Public Document Room has received a request from a member of the public for this document below, ML15051A104. I saw your name listed as the contact person in the document.

Since it is categorized as non-public but non-sensitive, can it be released to public ADAMS, or should the requester file a FOIA request for it?

View ADAMS P8 Properties ML15051A104
Open ADAMS P8 Document (Special Inspection Charter to Evaluate the Inadvertent Damage of the V. C. Summer Unit 2 Containment Vessel.)

Thanks so much,

Mary Mendiola
Technical Librarian
US NRC Public Document Room O-1 F21

OIS/CSD/User Services Branch
Mary.Mendiola@nrc.gov
301-415-2821

Heisserer, Jamie

From: Mitchell, Matthew
Sent: Tuesday, February 24, 2015 7:00 AM
To: Beardsley, James; Clark, Theresa
Cc: Heisserer, Jamie; Michel(R2), Eric; Honcharik, John; Reichelt, Eric
Subject: RE: Support for Summer Special Inspeciton the week of Feb 23rd

Jim,

My apologies that it took me a bit to respond. Thursday and Friday of last week were a bit complicated.

For DE/MCB, I'd recommend that you contact either Eric Reichelt or John Honcharik of my staff if questions come up.

Matt Mitchell, Chief
NRO/DE/MCB

From: Beardsley, James
Sent: Wednesday, February 18, 2015 4:13 PM
To: Clark, Theresa; Mitchell, Matthew
Cc: Heisserer, Jamie; Michel(R2), Eric
Subject: Support for Summer Special Inspeciton the week of Feb 23rd

Theresa & Matt,

As you heard today, the residents at VC Summer are tracking a relatively significant issue with respect to borings inside containment. RII has decided to send a Special Inspection Team to Summer next week to look at the issues and programmatic breakdowns. Jamie Heisserer, the RII Branch Chief responsible for the team, wanted to ensure that the NRO technical staff with ASME expertise are available for consultation if needed next week. Eric Mitchel will be the team leader for the team. If you could let us know who will be available, we would appreciate it. Jamie and Eric are CCed on this eMail.

Jim Beardsley
Chief, Construction Inspection Program Branch (CIPB)
U.S. Nuclear Regulatory Commission
Office of New Reactors
Division of Construction, Inspection, & Operational Programs
Office: T-7D49
MS: T-7D24
W: (301) 415-5998
C: (b)(6)

Steddenbenz, Katherine

From: SALTER, JAMES FINDLAY <JAMES.SALTER@scana.com>
Sent: Monday, February 23, 2015 6:00 PM
To: Michel(R2), Eric
Subject: Entrance Attendees
Attachments: 201502231753.pdf

Eric,

The attendance list from the SIT Entrance meeting is attached.

Findlay Salter
(803) 941-9855

NRC Special Inspection Team
Entrance Briefing
February 23, 2015

Name	Title
Patrick Young	Consortium Engineering Director
John Robinson	WEC Site Design Eng. Mgr.
Dan MacIntyre	WEC
Marion Cherry	SANTEE COOPER SITE REP
Walt Trombley	SCE&G
Don Chapman	WEC QA
Joe Cole	Consortium Licensing (WEC)
Jerrod Ewing	Consortium Licensing (WEC)
CT Baucom	Consortium Lic (CB&I)
Bradley McClung	CB&I QC Mgr
Jim Johnson	CB&I Site QA Mgr
Brindley Perricelli	OOH Specialist, SCE&G
Roosevelt Word	SCE&G Mgr CAP/PI
Bill Wood	CB&I SD
Brian McIntyre	Consortium Licensing Director

NRC Special Inspection Team
Entrance Briefing
February 23, 2015

Name	Title
Sean Burck	CBI Project Mgmt.
KEN HOLLENBACH	CBI MNGR
Nick Karlovich	NRC
Phil O'Bryan	NRC
Eric Michel	NRC
CHAD OELSTROM	NRC
Al HARRIS	VCS 2/3 OPERATIONS MANAGER
Rodney Delage	VCS 2-3 Operations Supervisor
Richard Trificanto	SCEG Eng.
John Catledge	SCEG Construction
GARRETT SANDERS	SCEG LICENSING
BOB Johnson	CBI Unit 2 ASSOC CONST. MGR
John Arnall	CBI - Concrete CM
KYLE YOUNG	CONSTR. SUPV. - SCE&G
BRAD STOKES	SCE&G - GM ENGINEERING
April Rice	SCE&G Licensing
Alan A. Torres	SCE&G Constr GM
Ron Jones	SCE&G VP, NNO
FINDLAY SALTER	SCE&G LICENSING

NRC Special Inspection Team
Entrance Briefing
February 23, 2015

Name	Title
Drake, Gregory A.	CV Program Mgr (W)
Jim Comer	Performance Improvement Mgr
Fred Krause	Procurement Manager
David Jastosik	Director Quality CB&I
Jeanne Copsey	Mngr, ECP, CB+I
William J Tate	CBI FLD ENGR MGR.
Keith Savastano	SCE&G Weld. Eng.
Ryder Thompson	SCE&G ITBAC Supv.
Ed Wills	Director CB&I
Steven Vias	NRC - SPM
Gary Moffatt	Engineering SCE&G.
[illegible]	Acting Consortium Prot Dir (WEC)

Steddenbenz, Katherine

From: Collins, Brendan
Sent: Monday, February 23, 2015 9:41 AM
To: Michel(R2), Eric
Subject: Summer containment issue

Hey, man –

I wasn't blowing you off. I was out of the office (Hatch ISI) last week, and I don't check my phone messages when I'm out of the office.

The issue that you recall was the "leak chase" issue. It resulted in Green NCVs at Summer, Farley and Sequoyah. Summer was actually found by John Zeiler, and completely independently (I didn't know about the issue at Summer until after we issued the NCV at Farley), I found it at Farley and Sequoyah. There was an Information Notice issued about a year later...
http://pbadupws.nrc.gov/docs/ML1407/ML14070A114.pdf

The issues – at least from what you described in your message – are not that similar, but I'm certainly willing to dialogue with you and help in any way I can.

Give me a call when you get a minute. I'm in the office for the next few weeks.

BC

Heisserer, Jamie

From: Yerokun, Jimi
Sent: Monday, February 23, 2015 2:14 PM
To: Heisserer, Jamie
Cc: Jones, William
Subject: FW: Construction Inspection and Evaluation Support Available Under the NRC Enterprise Wide Contract
Attachments: NRC Begins Special Inspection at Summer Nuclear Plant Unit 2 Construction Site; Design and Construction Inspections 10.14.docx; Hill NUMARK JR Rev1 KH SDR KH.docx; Yeniscavich NUMARK BKG Rev 1 KH.docx

FYI Only – Following the news release…

From: Stuart Rubin [mailto:SRubin@numarkassoc.com]
Sent: Monday, February 23, 2015 11:58 AM
To: Cheok, Michael
Cc: 'Jim Moorman' (james.moorman.iii@gmail.com); Yerokun, Jimi
Subject: Construction Inspection and Evaluation Support Available Under the NRC Enterprise Wide Contract

Good Morning Mike,

This morning I read the attached public announcement about the special inspection at the Summer Unit 2 construction site regarding the containment vessel damage event. The announcement prompted me to pull together some additional information to send to you regarding NUMARK capabilities and experience in the conduct of construction inspections and in particular NUMARK expertise and experience related to inspecting and evaluating potential and actual containment damage events.

Attached please find:

- Numark Technical Team Summary for Design and Construction Inspections
- Resume of Dr. Howard Hill - extensive experience in evaluating PWR reinforced concrete containment damage and repairs
- Resume of Dr. William Yeniscavich - experience in the investigation of PWR containment vessel cylindrical shell course cracking

The attachments are illustrative of the very specialized expert knowledge and experience which is available to the NRO and Region II Construction Inspection Programs through the NUMARK EWC with the NRC.

Again, please note the proprietary nature of the attached NUMARK documents.

Please let me know if you would like to further discuss.

Best regards,

Stu

Good Afternoon Mike,

Thank you for speaking to me earlier in the week about the technical support which is available to the NRC offices in the "Oversight" arena as part of the recently awarded NRC Enterprise-Wide Contract (EWC).

Numark Associates was one of two existing NRC contractors which were awarded an EWC under both a small business set aside contract and an unrestricted (open to small and large businesses) contract.

At the end of our discussions I indicated that I would send you information on the EWC scope of work in Oversight arena so that you could familiarize yourself with the scope of technical support services that are to be provided in this arena.

To address this follow up action I have attached to this message the NRC's RFP for the EWC solicitation. The attached RFP covers both the small business set aside and the unrestricted EWC contracts

For your convenience I have highlighted the text which is directed at the "oversight" scope of work in the attached RFP.

Additionally I have taken the liberty to attached the NUMARK proposal with highlighted text which is directed at the "oversight" scope of work.

(Please note the restricted use statement on the first page of the NUMARK proposal.)

NUMARK certainly would look forward to an opportunity to respond to NRC RFPs to provide technical support in the oversight arena as well as in other arenas identified in the RFP.

Have a great weekend!

Best regards,

Stu Rubin

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Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

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Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

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of the Freedom of Information and Privacy Act

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Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Ponko, Anthony

From: Ponko, Anthony
Sent: Monday, February 23, 2015 8:20 AM
To: Shams, Mohamed
Subject: RE: Summer Core Drilling Impact w/ CV
Attachments: VC Summer Special Inspection status

Nothing really. See attached email for latest. Just a heads-up as you may have to weigh in - internally the question was asked if grouting reinforcement is allowed by ACI 349-01. Section B2.2 says that grouted anchors are not covered, but Section B.12 addresses grouted embedments. One interpretation is that only grouted shear keys and baseplates are allowed. The apparent conflict, however, appears to be an oversight that was clarified in ACI 349-06. Section B2.2 was revised in this edition removing the exclusion on grouted anchors. The SIT should get the consortium's and licensee's perspective on this issue.

On another issue, have you had an opportunity to review the information I sent concerning N690-94 and AWS D1.1-92? I'll be getting into the issue this week in preparation for the upcoming inspection and would like to nail down some positions. Perhaps we can talk today or tomorrow. Thanks.

Anthony F. Ponko, PE
Senior Construction Inspector
Division of Construction Inspection
U.S. Nuclear Regulatory Commission
245 Peachtree Center Avenue NE, Suite 1200
Atlanta, GA 30303
(404) 997-4509 (phone)
(404) 997-4917 (fax)
Anthony.Ponko@nrc.gov

From: Shams, Mohamed
Sent: Monday, February 23, 2015 7:47 AM
To: Ponko, Anthony
Subject: RE: Summer Core Drilling Impact w/ CV

Tony – good morning. thanks for the info. Anything new on this topic?

From: Ponko, Anthony
Sent: Thursday, February 19, 2015 9:31 AM
To: Shams, Mohamed
Subject: FW: Summer Core Drilling Impact w/ CV

FYI

Anthony F. Ponko, PE
Senior Construction Inspector
Division of Construction Inspection
U.S. Nuclear Regulatory Commission
245 Peachtree Center Avenue NE, Suite 1200
Atlanta, GA 30303
(404) 997-4509 (phone)
(404) 997-4917 (fax)
Anthony.Ponko@nrc.gov

From: Heisserer, Jamie
Sent: Tuesday, February 17, 2015 12:43 PM
To: Buford, Angela; Davis, Bradley; Lizardi, Jonathan; Oelstrom, Chad; Ponko, Anthony; Smith, Clint; Smith, Steven; Vasquez, Jose
Subject: FW: Summer Core Drilling Impact w/ CV

FYI – drilling issue at VCS2. We may be asked to support a special inspection team. I will keep you informed.

From: Donnelly, Patrick
Sent: Tuesday, February 17, 2015 12:31 PM
To: Ernstes, Michael; Heisserer, Jamie; Musser, Randy
Cc: Chandler, Timothy; Karlovich, Nicholas; Heher, Patrick
Subject: Summer Core Drilling Impact w/ CV

Mike-

CB&I found interferences between layer 2 rebar dowels and layer 3 embed plates inside containment. An N&D was written and the disposition was to cut the interfering dowels flush with the layer 2 concrete, core drill 2.5" holes at least 25" into the concrete and grout in new dowels in more appropriate locations.

We have been informed by SCE&G of several issues with the evolution.

1. In location Core R1 per the attached N&D, it was found that the core drill bit cut into/gouged the containment vessel. This was found when the hole could not hold water when trying to soak the concrete to prepare for grouting and CB&I brought in a borescope. It is not known how deep the gouge is in the CV or what corrective actions will be necessary to correct or accept the current configuration.
2. CB&I learned of the gouge in the CV on Thursday and did not inform the licensee until Monday and as of this morning had not yet initiated any corrective action report to document the issue. Update: N&D VS2-1110-GNR-000008 has been written and is attached.
3. The ground fault system, a function of the core driller that cuts power to the drill if metal is encountered by the drill bit, was not engaged. A rebar mat, used as a construction aid, exists inches below the concrete surface. The ground fault system was disengaged because the rebar mat would have caused the drill to shut off before the full depth of the hole could be drilled. In addition to gouging the CV shell, CB&I also cut through rebar on some of the other bore holes due to the ground fault system not being utilized. CB&I did not label the cores and have not located all the cores drilled. They have already grouted 7 of the 10 holes they bored out. It is unclear at this time how they will address the cutting of rebar.
4. The locations of the new core holes were not explicitly marked. Points were marked by the survey team, and offsets were provided. The crew performing the work was to pull the offset off the marked locations to determine where the new holes should be drilled. This was not done. In addition, the N&D (263) that provided the "repair" disposition did not provide enough amplifying information to guard against the potential for this incident to occur. For instance, the N&D provides a minimum embedment depth, but a maximum depth was not given. No CAR has been provided that captures the human performance errors or addresses how the work was completed without a proper special work instruction generated for the craft to follow.

I will provide updates as they are made available.

Patrick Donnelly
Construction Resident Inspector
US NRC - V.C. Summer Units 2 & 3
Patrick.Donnelly@NRC.gov
O: 803-345-6856
C: (b)(6)

Steddenbenz, Katherine

From: Michel(R2), Eric
Sent: Friday, February 20, 2015 1:34 PM
To: OBryan, Phil; Oelstrom, Chad
Cc: Heisserer, Jamie
Subject: SIT Entrance meeting

Looks like our entrance is interfering a bit with the Commissioner Ostendorff visit. At this point it's looking like the entrance will be around 4:00, with a briefing directly afterwards. Licensing understands we'll be on site before that time and inspecting.

Eric

Steddenbenz, Katherine

From: Donnelly, Patrick
Sent: Friday, February 20, 2015 9:20 AM
To: Michel(R2), Eric; Heher, Patrick; Ernstes, Michael; Heisserer, Jamie
Cc: Khouri, George; OBryan, Phil; Oelstrom, Chad
Subject: RE: Comm Plan and Message Map

I agree with all of Eric's comments.

EM1: There were 4 dowels that had to be cut, replaced with 6. 3 holes were drilled in the wrong location, giving them 9 total. There was a 10th hole from a separate N&D.

EM2: I would say Approximately 26" deep holes. The N&D told them to go at least 25" deep but we don't know at this time how deep they actually went.

EM3: Agree w/ "contacted"

EM4: CB&I concluded they cut through safety-related rebar in at least 2 locations.

EM5: Correct, not a safety feature. It's the same idea but used to detect contact with rebar.

Patrick Donnelly
V.C. Summer Resident Inspector
(803)345-6856

From: Michel(R2), Eric
Sent: Thursday, February 19, 2015 2:42 PM
To: Heher, Patrick; Ernstes, Michael; Heisserer, Jamie; Donnelly, Patrick
Cc: Khouri, George; OBryan, Phil; Oelstrom, Chad
Subject: RE: Comm Plan and Message Map

Forgot the attachment.

From: Michel(R2), Eric
Sent: Thursday, February 19, 2015 2:42 PM
To: Heher, Patrick; Ernstes, Michael; Heisserer, Jamie; Donnelly, Patrick
Cc: Khouri, George; OBryan, Phil; Oelstrom, Chad
Subject: RE: Comm Plan and Message Map

Patrick,

Please see the attached for some comments on the comms plan, which may also affect the message map.

Eric

From: Heher, Patrick
Sent: Thursday, February 19, 2015 10:53 AM
To: Ernstes, Michael; Heisserer, Jamie; Donnelly, Patrick; Michel(R2), Eric
Cc: Khouri, George
Subject: Comm Plan and Message Map

Everyone,

Here is the first draft of the Comm plan and corresponding message map for the SIT inspection at Summer. Please review and provide any comments that you may have before I send it out to anyone else.

Communications Plan -
http://fusion.nrc.gov/regions/rii/cci/dcp/cpb4/Shared%20Documents/Communications/Communications%20Plan%20-%20Summer%20CV%20Drilling%20Issue%20SIT%20(Rev%201).docx

Communications Message Map -
http://fusion.nrc.gov/regions/rii/cci/dcp/cpb4/Shared%20Documents/Communications/Communications%20Message%20Map%20(Summer%20CV%20Drilling%20Issue)%20Rev1.dotx

Thanks,

Patrick J. Heher

Senior Construction Project Inspector
U.S. Nuclear Regulatory Commission
Region II - Division of Construction Projects
Phone: 404-997-4450
E-mail: Patrick.Heher@nrc.gov

Steddenbenz, Katherine

From: Heisserer, Jamie
Sent: Friday, February 20, 2015 3:04 PM
To: Michel(R2), Eric
Subject: RE: Report

Yes, DCI will be signing. I will follow-up and let you know.

From: Michel(R2), Eric
Sent: Friday, February 20, 2015 2:42 PM
To: Heisserer, Jamie
Subject: Report

Jamie,

My plan for the report is to follow what was done for the very recent NFS SIT. Fortunately we have an example of a recent, Region 2 SIT that follows the 93812 procedure (attached). They basically follow the charter as an outline. Tony signed that one out; will Jimi be signing this one? Can you verify we'll be on the right track if we essentially use the charter as the report outline? Thanks.

Eric

Steddenbenz, Katherine

From: Michel(R2), Eric
Sent: Friday, February 20, 2015 3:09 PM
To: OBryan, Phil; Oelstrom, Chad
Subject: SIT plan and report
Attachments: Charter Plan.docx; NFS Special Inspection Report.pdf

Phil and Chad,

Plan: Attached is my first swing at breaking down the charter items into areas for each of us. There's a little overlap between items, so I tried to prevent duplication of efforts. If you have any thoughts, please let me know.

Report: I anticipate the final report following the charter outline. See the attached NFS report as an example. Typically there will just be a "Scope and Observations" and "Conclusion" section for each charter item. Please keep this format in mind as you inspect. Regarding enforcement – If we find something that can easily be fully dispositioned within the week we're on site, we will include that in the report. If there's any chance it would take longer than the week, we'll write a URI. The idea is to stay focused on the charter items. Let me know if there are any questions. Thanks.

Eric

SIT Charter Plan

1. Develop a sequence of events, including key decision points associated with the removal and replacement of the dowels. - *Phil.*

2. Review the licensee's (and CB&I's) assessment of

    a. human performance issues, - *Phil*
    b. procedure violations, - *Chad*
    c. and/or code violations. – *Chad (civil codes)*
    d. Develop an independent assessment based on the sequence of events. – *Same as a. – c.*

3. Develop an independent extent of condition considering the 10 core bores from this event and any similar repairs made using this method. - *Chad*

4. Evaluate the engineering dispositions for the coring/cut rebar and the CV surface defect to determine if they meet appropriate license and code requirements. – *Eric and Chad*

5. Review the licensee's

    a. corrective actions (CAs), - *Eric and Chad (mech and civil respectfully)*
    b. causal analysis and - *Phil*
    c. extent of condition associated with this event. - *Chad*

    Considerations should include:

- Decision making - *Phil*
- Design change process - *Phil*
- Nonconformance assessment process - *Phil*
- Use of and availability of procedures - *Chad*
- Timeliness of communication with the licensee - *Phil*
- Use of construction experience (internal and external) - *Chad (MOX?)*

Steddenbenz, Katherine

From:	Ernstes, Michael
Sent:	Friday, February 20, 2015 12:23 PM
To:	Abbott, Coleman; Chandler, Timothy; Donnelly, Patrick; Fuller, Justin; Heher, Patrick; Huffman, Chad; Karlovich, Nicholas; Kent, Jonathan; Khouri, George; Steddenbenz, Katherine; Taylor, Cynthia; Temple, Sarah; Nazario, Tomy
Cc:	Huffman, Chad; Seymour, Deborah; Gloersen, William; Haag, Robert; Baptist, James
Subject:	Summer Special Inspection
Attachments:	Summer SI Charter.docx; Summer SI 2504.docx; Communications Plan - Summer CV Drilling Issue SIT (Rev 2).docx

Just wanted to take a moment and catch everyone up on the Summer Special Inspection.

Based on the circumstances which led to the drilling into the CV and safety related rebar, we wanted to get a thorough and relatively quick understanding of the causes and consequences. We debated just sending out some DCI folks to assist the residents under 35007. We also looked to Appendix C of MC 2504 to consider a special inspection. We decided that a special inspection would be a good means to our objectives. Please look at the attached Form from 2504 which documents that decision. I believe it is the first one we have done for construction.

Jamie Heisserer is the coordinating the inspection so any information or questions should go through her. Eric Michel is the inspection team lead. Chad Oelstrom and Phil O'Bryan from DCIP are on the team. (If you don't know Phil, he is very experienced. He was the SRI at Brunswick before he went to DCIP.) Special Inspections have a Charter issued by Vic. It is also attached. The team will be on site next week.

Patrick Heher and Cynthia are working on a Communications Plan. I ask that everyone become familiar with the "Key Messages" in case you get questions.

Steddenbenz, Katherine

From: Michel(R2), Eric
Sent: Thursday, February 19, 2015 2:43 PM
To: OBryan, Phil; Oelstrom, Chad
Subject: FW: CB&I RCA Procedures
Attachments: QS 16.6 Causal Analysis.pdf; QS 16.05.Corrective Action Program.pdf

FYI.

From: SALTER, JAMES FINDLAY [mailto:JAMES.SALTER@scana.com]
Sent: Thursday, February 19, 2015 12:48 PM
To: Michel(R2), Eric
Cc: YOUNG, KYLE MATTHEW
Subject: CB&I RCA Procedures

Eric,

Attached are the applicable CB&I procedures for performing Casual Analysis:

QS 16.05 – Corrective Action Program
QS 16.06 – Causal Analysis

Thanks,

J. Findlay Salter, EIT
Associate Engineer
New Nuclear Deployment - Licensing
SCE&G | V.C. Summer Nuclear Station
P.O. Box 88 | MC 846
Jenkinsville, SC 29065-0088
803.941.9855 Office
james.salter@scana.com

Steddenbenz, Katherine

From: SALTER, JAMES FINDLAY <JAMES.SALTER@scana.com>
Sent: Thursday, February 19, 2015 7:35 PM
To: Michel(R2), Eric
Cc: YOUNG, KYLE MATTHEW
Subject: Corrective Action Documents #2
Attachments: CAR 2015-0539 2-19-15.pdf; VS2-1110-GNR-000008.pdf; VS2-CR01-GNR-000279.pdf

Eric,

CAR 2015-0539 is CB&I CAR initiated to capture the initially identified programmatic issues,
VS2-1110-GNR-000008 is an N&D that documents the CV impact
VS2-CR01-GNR-000279 is an N&D that documents cut reinforcing steel

J. Findlay Salter, EIT
Associate Engineer
New Nuclear Deployment - Licensing
SCE&G | V.C. Summer Nuclear Station
P.O. Box 88 | MC 846
Jenkinsville, SC 29065-0088
803.941.9855 Office
james.salter@scana.com

Steddenbenz, Katherine

From: Michel(R2), Eric
Sent: Thursday, February 19, 2015 2:37 PM
To: OBryan, Phil; Oelstrom, Chad
Subject: FW: Comm Plan and Message Map

Please see the links below. Although these may not be directly in the forthcoming charter, let's be prepared to eventually answer the following questions:

- potential impact on safety related structures (the CV and structural longitudinal reinforcement bars)
- information indicating that a grounding (safety) feature on the core boring drill was intentionally disabled
- apparently untimely notification of the licensee (and NRC) regarding the occurrence of the event
- apparent breakdown in controls to preclude such an event

These were the key factors identified in sending an SIT for starters.

Eric

From: Heher, Patrick
Sent: Thursday, February 19, 2015 10:53 AM
To: Ernstes, Michael; Heisserer, Jamie; Donnelly, Patrick; Michel(R2), Eric
Cc: Khouri, George
Subject: Comm Plan and Message Map

Everyone,

Here is the first draft of the Comm plan and corresponding message map for the SIT inspection at Summer. Please review and provide any comments that you may have before I send it out to anyone else.

Communications Plan -
http://fusion.nrc.gov/regions/rii/cci/dcp/cpb4/Shared%20Documents/Communications/Communications%20Plan%20-%20Summer%20CV%20Drilling%20Issue%20SIT%20(Rev%201).docx

Communications Message Map -
http://fusion.nrc.gov/regions/rii/cci/dcp/cpb4/Shared%20Documents/Communications/Communications%20Message%20Map%20(Summer%20CV%20Drilling%20Issue)%20Rev1.dotx

Thanks,

Patrick J. Heher
Senior Construction Project Inspector
U.S. Nuclear Regulatory Commission
Region II - Division of Construction Projects
Phone: 404-997-4450
E-mail: Patrick.Heher@nrc.gov

Steddenbenz, Katherine

From: Michel(R2), Eric
Sent: Thursday, February 19, 2015 2:49 PM
To: OBryan, Phil; Oelstrom, Chad
Cc: Heisserer, Jamie
Subject: FW: OCC Call Info

Phil and Chad,

I'll be calling into this tomorrow. You may want to as well.

Eric

From: SALTER, JAMES FINDLAY [mailto:JAMES.SALTER@scana.com]
Sent: Thursday, February 19, 2015 1:58 PM
To: Michel(R2), Eric
Cc: Donnelly, Patrick; YOUNG, KYLE MATTHEW
Subject: OCC Call Info

Eric,

See OCC Call in information below. The OCC will be held Monday-Friday at 0900 until further notice to discuss technical path forward concerning CV impact:

0900 HRS OCC:
800-210-5706 call in number
(b)(6) **access code**

Thanks,

J. Findlay Salter, EIT
Associate Engineer
New Nuclear Deployment - Licensing
SCE&G | V.C. Summer Nuclear Station
P.O. Box 88 | MC 846
Jenkinsville, SC 29065-0088
803.941.9855 Office
james.salter@scana.com

Oelstrom, Chad

From: Oelstrom, Chad
Sent: Thursday, February 19, 2015 10:27 AM
To: Ernstes, Michael; Fuller, Justin
Cc: Heisserer, Jamie; Michel(R2), Eric
Subject: RE: Summer Core Drilling Impact w/ CV ~~*** PROPRIETARY INFORMATION*** (Control accordingly)~~

Tracking:

Recipient	Delivery	Read
Ernstes, Michael	Delivered: 02/19/2015 10:27 AM	Read: 02/19/2015 10:28 AM
Fuller, Justin	Delivered: 02/19/2015 10:27 AM	Read: 02/19/2015 10:28 AM
Heisserer, Jamie	Delivered: 02/19/2015 10:27 AM	Read: 02/19/2015 10:28 AM
Michel(R2), Eric	Delivered: 02/19/2015 10:27 AM	Read: 02/19/2015 10:29 AM

Justin,
To answer your question on grouting of reinforcement, ACI 349-01 does allow this. But they need to have tests data to support the use of the grouted embedment.

Per 349-01, Appendix B – Anchoring to Concrete,

B.1- Definitions - ***Embedment***—A steel component embedded in the concrete to transmit applied loads to or from the concrete structure. The embedment may be fabricated of plates, shapes, anchors, reinforcing bars, shear connectors, specialty inserts, or any combination thereof.

B.2- Scope – **B.2.1** This Appendix provides design requirements for structural embedments in concrete used to transmit structural loads from attachments into concrete members or from one connected concrete member to another by means of tension, shear, bearing, or a combination thereof. Safety levels specified are intended for in-service conditions, rather than for short term handling and construction conditions.

B.2.2 This Appendix applies to both cast-in anchors and post-installed anchors. Through bolts, multiple anchors connected to a single steel plate at the embedded end of the anchors, adhesive or grouted anchors, and direct anchors such as powder or pneumatic-actuated nails or bolts are not included. Reinforcement used as part of the embedment shall be designed in accordance with other parts of the code.

B.12 – Grouted Embedments – **B.12.1** Grouted embedments shall meet the applicable requirements of this Appendix.

Section B.2.2 creates some confusion with Section B.12 because this section states in part "adhesive or grouted anchors… are not included." The grouted anchor statement is removed in later additions of the Code to remove the confusion with section B.12. Section B.12 in 349-01 is applicable to post installing anchors and reinforcement and is endorsed by the NRC in Reg Guide 1.199.

Reg. Guide 1.199, Regulatory Position 1.7, for Section B.12 of ACI 349-01, recommends that code requirements be followed. - "**When grouting is the only option, it is recommended that tests be performed in accordance with Sections B.12.3 and B.12.4 of Appendix B.**" In addition, other sections of the Reg. Guide discuss inspections of the grout mixing and placement.

As far as adhesives, I need to do more research. I know future additions of the ACI code allow the use of adhesives for anchorage. According to B.2.2 above, ACI 349-01 does not allow the use of adhesives and no other section specifically allows adhesives only.

Hopefully this answers your question.

Chad Oelstrom
Construction Inspector
USNRC Region II, CCI-DCI-CIB2
Phone: 404-997-4493
Fax: 404-997-4917
Email: mailto:chad.oelstrom@nrc.gov

From: Ernstes, Michael
Sent: Thursday, February 19, 2015 8:56 AM
To: Fuller, Justin
Cc: Heisserer, Jamie; Oelstrom, Chad
Subject: RE: Summer Core Drilling Impact w/ CV ~~*** PROPRIETARY INFORMATION*** (Control accordingly)~~

I will forward this to Jamie and Chad O.

I don't need any action on this from Vogtle now that Sarah determined they don't use this practice.

From: Fuller, Justin
Sent: Thursday, February 19, 2015 8:53 AM
To: Ernstes, Michael
Cc: Khouri, George
Subject: FW: Summer Core Drilling Impact w/ CV ~~*** PROPRIETARY INFORMATION*** (Control accordingly)~~

Mike,

Based on ConE from MOX related to post-installing rebar with grout / epoxy, Vogtle (SNC and CB&I) have made a conscious decision to NOT allow this practice at Vogtle. I'm confused about whether or not the ACI Code allows this or not, but according to Mel Shannon, the code does not allow it. I would like to ask the special inspection team or DCI staff to provide me some clarification in this area. I specifically want to know if the current licensing basis allowed VC Summer to modify the rebar dowels like they were. It's probably a simple answer to the Civil branch, but it is confusing to me. I should also note that I have not done any research on this on my own, and I don't want to bother Sarah and Coleman with a research project considering that DCI will be looking into all of this next week at Summer.

Thanks!

Justin

From: Temple, Sarah
Sent: Tuesday, February 17, 2015 4:50 PM
To: Ernstes, Michael; Fuller, Justin; Jones, William; Abbott, Coleman
Cc: Khouri, George
Subject: RE: Summer Core Drilling Impact w/ CV ~~*** PROPRIETARY INFORMATION*** (Control accordingly)~~

As Justin promised, I have an update on the status of this issue here at Vogtle.

I spoke with Southern Company licensing and U3 oversight. The people I spoke to were not aware of the exact issue of concrete drilling affecting the CVBH at Summer. They were however aware of interference issues between imbed plates and primary reinforcing dowels located in the east and west steam generator compartments. The approach taken at Vogtle for addressing this (and documented in 2 E&DCRs) was that the primary reinforcement would not be altered and the embed plate anchorage would be reconfigured instead (i.e. (b)(4)).

To our knowledge (and the knowledge of those I spoke to), no cutting of rebar dowels or drilling of concrete to allow for new dowels has been planned or executed at Vogtle. Because none of this work is planned or ongoing, there is not a stop work in place.

I spoke with CB&I licensing here at Vogtle, and they were not aware of this specific issue at Summer. However, they said that they would ask other CB&I contacts (responsible for interface activities and civil issues) to determine if those specific people were aware of the issue. They plan on getting back to me as soon as possible.

I have requested a more formal response from both SNC and CB&I related to this. I will touch base with them in the morning. I will let you know of any new information and when I receive a formal response.

Please let me know if you have any questions,

Sarah Temple

Construction Resident Inspector
Vogtle Units 3 & 4
U.S. Nuclear Regulatory Commission
E-mail: Sarah.Temple@nrc.gov
Office: 706-437-2543
Cell: (b)(6)

From: Ernstes, Michael
Sent: Tuesday, February 17, 2015 1:48 PM
To: Fuller, Justin; Jones, William; Abbott, Coleman; Temple, Sarah
Cc: Khouri, George
Subject: RE: Summer Core Drilling Impact w/ CV ~~*** PROPRIETARY INFORMATION*** (Control accordingly)~~

Thanks Justin. To their defense, SCE&G just found out yesterday.

From: Fuller, Justin
Sent: Tuesday, February 17, 2015 1:46 PM
To: Jones, William; Abbott, Coleman; Temple, Sarah
Cc: Ernstes, Michael; Khouri, George
Subject: RE: Summer Core Drilling Impact w/ CV ~~*** PROPRIETARY INFORMATION*** (Control accordingly)~~

Sarah is running this down as I type. She will send an email about Vogtle today.

After a short discussion with SNC oversight staff, they informed her that *they* had not heard about this. *[this doesn't mean that nobody at Vogtle was aware... Sarah will be speaking with CB&I staff and SNC licensing]*

They also stated that they are not aware of any similar drilling activity taking place at Vogtle. Where they have had interferences, they have issued E&DCRs to modify the embed plates.

From: Jones, William
Sent: Tuesday, February 17, 2015 1:38 PM
To: Abbott, Coleman; Fuller, Justin; Temple, Sarah
Subject: Fw: Summer Core Drilling Impact w/ CV ~~*** PROPRIETARY INFORMATION*** (Control accordingly)~~

From: Jones, William
Sent: Tuesday, February 17, 2015 01:29 PM
To: Donnelly, Patrick
Subject: Fw: Summer Core Drilling Impact w/ CV ~~*** PROPRIETARY INFORMATION*** (Control accordingly)~~

From: Jones, William
Sent: Tuesday, February 17, 2015 01:16 PM
To: Ernstes, Michael
Subject: Re: Summer Core Drilling Impact w/ CV ~~*** PROPRIETARY INFORMATION*** (Control accordingly)~~

Do we know if this was shared with Vogtle and is there a stop work

---

From: Ernstes, Michael
Sent: Tuesday, February 17, 2015 12:40 PM
To: Brown, Frederick; Yerokun, Jimi; Jones, William
Subject: FW: Summer Core Drilling Impact w/ CV ~~*** PROPRIETARY INFORMATION*** (Control accordingly)~~

Additional information on the Summer CV issue.

From: Donnelly, Patrick
Sent: Tuesday, February 17, 2015 12:31 PM
To: Ernstes, Michael; Heisserer, Jamie; Musser, Randy
Cc: Chandler, Timothy; Karlovich, Nicholas; Heher, Patrick
Subject: Summer Core Drilling Impact w/ CV

Mike-

CB&I found interferences between layer 2 rebar dowels and layer 3 embed plates inside containment. An N&D was written and the disposition was to cut the interfering dowels flush with the layer 2 concrete, core drill 2.5" holes at least 25" into the concrete and grout in new dowels in more appropriate locations.

We have been informed by SCE&G of several issues with the evolution.

1. In location Core R1 per the attached N&D, it was found that the core drill bit cut into/gouged the containment vessel. This was found when the hole could not hold water when trying to soak the concrete to prepare for grouting and CB&I brought in a borescope. It is not known how deep the gouge is in the CV or what corrective actions will be necessary to correct or accept the current configuration.
2. CB&I learned of the gouge in the CV on Thursday and did not inform the licensee until Monday and as of this morning had not yet initiated any corrective action report to document the issue. Update: N&D VS2-1110-GNR-000008 has been written and is attached.
3. The ground fault system, a function of the core driller that cuts power to the drill if metal is encountered by the drill bit, was not engaged. A rebar mat, used as a construction aid, exists inches below the concrete surface. The ground fault system was disengaged because the rebar mat would have caused the drill to shut off before the full depth of the hole could be drilled. In addition to gouging the CV shell,

CB&I also cut through rebar on some of the other bore holes due to the ground fault system not being utilized. CB&I did not label the cores and have not located all the cores drilled. They have already grouted 7 of the 10 holes they bored out. It is unclear at this time how they will address the cutting of rebar.

4. The locations of the new core holes were not explicitly marked. Points were marked by the survey team, and offsets were provided. The crew performing the work was to pull the offset off the marked locations to determine where the new holes should be drilled. This was not done. In addition, the N&D (263) that provided the "repair" disposition did not provide enough amplifying information to guard against the potential for this incident to occur. For instance, the N&D provides a minimum embedment depth, but a maximum depth was not given. No CAR has been provided that captures the human performance errors or addresses how the work was completed without a proper special work instruction generated for the craft to follow.

I will provide updates as they are made available.

Patrick Donnelly
Construction Resident Inspector
US NRC - V.C. Summer Units 2 & 3
Patrick.Donnelly@NRC.gov
O: 803-345-6856
C: (b)(6)

Heisserer, Jamie

From: Hite, Christine
Sent: Thursday, February 19, 2015 4:48 PM
To: Curran, Bridget; Kozak, Thomas; Hayes(NRO), Michelle
Cc: Heisserer, Jamie; Masters, Anthony
Subject: RE: Need New Activity Code for Phase Code 2, Docket P, IMI Code 38

The update to use Activity Code "RR" (Regional Reactive) with Procedure 93812 for Summer Unit 2 should be available for use in HRMS tomorrow; please confirm then.

Thanks,
Chris

From: Curran, Bridget
Sent: Thursday, February 19, 2015 1:47 PM
To: Kozak, Thomas; Hayes(NRO), Michelle
Cc: Hite, Christine; Heisserer, Jamie; Masters, Anthony
Subject: RE: Need New Activity Code for Phase Code 2, Docket P, IMI Code 38

At least overnight..... ☺

From: Kozak, Thomas
Sent: Thursday, February 19, 2015 1:42 PM
To: Curran, Bridget; Hayes(NRO), Michelle
Cc: Hite, Christine; Heisserer, Jamie; Masters, Anthony
Subject: RE: Need New Activity Code for Phase Code 2, Docket P, IMI Code 38

Thank you Bridget. When can Region II start charging time to IP 93812 and RR?

From: Curran, Bridget
Sent: Thursday, February 19, 2015 1:38 PM
To: Hayes(NRO), Michelle
Cc: Kozak, Thomas; Hite, Christine; Heisserer, Jamie; Masters, Anthony
Subject: RE: Need New Activity Code for Phase Code 2, Docket P, IMI Code 38

In RPS/IPAS, I have associated IMC 2504 App B with IP 93812, docket type P, Phase code 2, and activity code of RR.

Currently RR is only associated with FUEL, but that is being changed for Summer Unit 2.

I do not assign PA numbers or IMI codes/descriptions in IPAS.

Thanks,

bridget

From: Hayes(NRO), Michelle
Sent: Thursday, February 19, 2015 1:01 PM
To: Curran, Bridget
Cc: Kozak, Thomas
Subject: RE: Need New Activity Code for Phase Code 2, Docket P, IMI Code 38

Summer Unit 2

From: Curran, Bridget
Sent: Thursday, February 19, 2015 1:00 PM
To: Kozak, Thomas; Hayes(NRO), Michelle
Subject: RE: Need New Activity Code for Phase Code 2, Docket P, IMI Code 38

By the way, which site is this where the reactive inspection is taking place?

From: Kozak, Thomas
Sent: Thursday, February 19, 2015 12:33 PM
To: Hayes(NRO), Michelle; Hite, Christine; Curran, Bridget
Subject: RE: Need New Activity Code for Phase Code 2, Docket P, IMI Code 38

Yes, the information request below is correct and the inspection is fee-billable. Tom Kozak

---

From: Hayes(NRO), Michelle
Sent: Thursday, February 19, 2015 12:32 PM
To: Hite, Christine; Curran, Bridget; Kozak, Thomas
Subject: Need New Activity Code for Phase Code 2, Docket P, IMI Code 38
Importance: High

Hi Christine and Bridget,

RII has been tasked to perform their first reactive inspection on new construction, starting tomorrow. These hours will need to be tracked separately, so they can be reported to the commission in the Reactive category. There is currently no activity code set up to capture this, so could you please add
Phase Code: **2**, Docket Type: **P**, Activity Code: **RR**, Activity Description: **Regional Reactive**, PA No: **175111**, IMI Code **0038**, IMI Description: **New Reactors Construction Inspection** ?

The procedure for special inspections is **93812**. Can this be added to system so they can charge to this procedure?

How long will it take before inspectors can start charging in HRMS?

Tom – Please confirm this inspection will be fee-billable.

Thanks,
Michelle Hayes
TA, DCIP/NRO
301-415-8375 |T-7D14

Heisserer, Jamie

From: Michel(R2), Eric
Sent: Thursday, February 19, 2015 11:00 AM
To: Donnelly, Patrick; Heisserer, Jamie; Oelstrom, Chad
Cc: Ernstes, Michael
Subject: RE: Containment Core Drilling Update

That's all I'm looking for at this point. Thanks.

From: Donnelly, Patrick
Sent: Thursday, February 19, 2015 10:53 AM
To: Heisserer, Jamie; Michel(R2), Eric; Oelstrom, Chad
Cc: Ernstes, Michael
Subject: RE: Containment Core Drilling Update

Team Special-

I just got out of an OCC meeting on the CV issue. They are having OCC meetings M-F at 9 am (I suggest you get to the site by 9 on Monday).

The phone call at 11 should have Jim Comer, who is the manager for the root cause evaluation, Greg Drake (goes by Drake) who is the program manager for the field response, and Sean Burk, who is the manager in charge of risk assessment. They will only be able to tell you about what is under their purview and a little about where they are headed at this time, but will probably be light on specifics. This will at least give you a lay of the land with respect to how things are being organized at this time.

Patrick Donnelly
V.C. Summer Resident Inspector
(803)345-6856

From: Steddenbenz, Katherine
Sent: Wednesday, February 18, 2015 5:15 PM
To: Heisserer, Jamie; Michel(R2), Eric; Oelstrom, Chad
Cc: Donnelly, Patrick; Ernstes, Michael
Subject: Containment Core Drilling Update

Attached are the following six documents:

1. CB&I's timeline of events
2. CAR 2015-0539
3. N&D VS2-CR01-GNR-000263 (to address rebar interfering with embed plates P1, P2, and P3)
4. N&D VS2-CR01-GNR-000275 (to address three holes cored in the wrong location and still interfering with the embed plates P1 and P2)
5. N&D VS2-1110-GNR-000008 (to address the CVBH being nicked)
6. N&D VS2-CR01-GNR-000279 (to address the #11 rebar cored through)
7. Picture of cores

The timeline does a good job of summarizing the activities that have occurred to date and linking them to the associated N&Ds. However, we do have a question with the bullet that states on February 13, cores from **each** core hole were reviewed and cores showed containment rebar had been cored through in three locations (which are identified in N&D VS2-CR01-GNR-000279). In a discussion with someone working at the batch plant, he stated that they recovered what cores they could from the dumpster and attempted to put the pieces

together to conduct their review. They are missing a good bit of the cores and were unable to match a lot of it as shown in the attached photo. At the top of each column, starts what they believe to be a core. He also mentioned there was no way to tell which core had come from which core hole, except the one that hit containment which is smooth on the bottom (core on the left). He stated only two had impacted #11 rebar, but the N&D states 3 locations, which we're not sure how they determined. We have asked SCE&G to include a discussion on his aspect in the briefing tomorrow.

They drilled 10 new holes. The first six were to replace the four that would have interfered with the embed plates to maintain clearance and spacing. Three of those six were put in the wrong place (N&D VS2-CR01-GNR-000275, should there be a CAR??), so they drilled three more in conformance with the original N&D. And the 10th hole (Core D1 in the drawing) is not associated with this issue at all. We have requested the N&D for why this hole was drilled.

The CAR addresses the programmatic aspects such as human performance, procedures, and training.

SCE&G believes they are planning to discuss the potential path forward in the 7am meeting tomorrow with CB&I and WEC representatives. They will touch base to schedule a subsequent meeting with us (Patrick, Jamie, Eric, and Chad) as soon as their meeting ends. They have been notified that we are potentially using a special inspection team to address this issue and that Jamie, Eric, and Chad will potentially be on it.

Heisserer, Jamie

From: Yerokun, Jimi
Sent: Thursday, February 19, 2015 8:23 AM
To: Ernstes, Michael; Heisserer, Jamie
Cc: Jones, William
Subject: VC Summer Charter and Comm Plan

The charter is going around for review/concurrence. Thanks! Anything that can be done to expedite so we can get to Fred/Vic by noon will be appreciated.
How's the Comm. Plan (and message map) coming along? Are we aligned that a daily note and news release will accompany? Remember that Tim Steadham had some "Comm. Plan" savvy that we can tap from.
Thanks.

Jimi T. Yerokun
Director, DCI/RII
404 997-4300

Heisserer, Jamie

From: Heisserer, Jamie
Sent: Thursday, February 19, 2015 7:17 AM
To: Michel(R2), Eric
Subject: Re: Summer Special Inspection

You're right. The initial intent was just to have you and Chad. However, I talked to Jim Beardsley to facilitate DE phone support, as needed, and he suggested Phil. Phil is a long time resident inspector with great experience. Now he works for NRO and could be very valuable on this first special inspection to determine where our program documents need work. He will also be very valuable in helping with the PI&R piece of it.

On: 19 February 2015 06:27, "Michel(R2), Eric" <Eric.MichelR2@nrc.gov> wrote:
Jamie,

I thought we weren't requesting any HQ participation? I don't think we need a third body for this.

Eric

From: Beardsley, James
Sent: Wednesday, February 18, 2015 4:26 PM
To: OBryan, Phil
Cc: Fredette, Thomas; Johnson, Andrea; Heisserer, Jamie; Michel(R2), Eric; Cheok, Michael; Valentin, Andrea
Subject: Summer Special Inspection

Phil,

RII has requested your participation on the VC Summer Special Inspection next week. The team will be traveling to Summer, Monday. Eric Michel in the team leader, please work with him on the logistics.

In addition to supporting the team, I would appreciate it if you would look over our program to see if we can make improvements to our documentation and structure. The tentative plan is to do the inspection based on IMC 2504 Appendix C, but it is basically management discretion. The inspection will be under IP 35007, but the team will reference IP 93812 as it has guidance appropriate for a special inspection. Unfortunately, our program does not have a special inspection procedure like IP 93812 and that procedure is currently only assigned to IMC 2515. My question (for you) is should be write our own procedure, have IP 93812 added to IMC 2504 applicability or is there another approach that would make sense. After the inspection is complete, I look forward to your thoughts.

Jim Beardsley
Chief, Construction Inspection Program Branch (CIPB)
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Steddenbenz, Katherine

From: Heisserer, Jamie
Sent: Wednesday, February 18, 2015 8:57 AM
To: Michel(R2), Eric; Oelstrom, Chad
Subject: FW: Summer CV issue

From: Ernstes, Michael
Sent: Tuesday, February 17, 2015 12:12 PM
To: Yerokun, Jimi; Jones, William; Heisserer, Jamie; Musser, Randy
Cc: Brown, Frederick; Donnelly, Patrick; Heher, Patrick; Chandler, Timothy
Subject: Summer CV issue

We don't have much new information on the Containment Vessel issue at Summer yet. Patrick D. said that an N&D has been written and that CB&I and WEC are evaluating a course of action.

I have a call into April Rice to get the SCE&G perspective.

To recap the issue which occurred inside the Summer Unit 2 Containment Vessel last week:

- **During installation of embeds in preparation for pouring Layer 3 of concrete, interferences were identified with 7 dowels (vertical rebar) extending from Layer 2.**
- **These dowels were cut off.**
- **Holes were drilled in the concrete to grout in replacement dowels. The holes were 27" deep.**
- **To prepare for the grout, the holes are filled with water.**
- **One of the holes did not hold water.**
- **A borascope was inserted into the hole and it revealed that the containment liner had been penetrated (not all the way through).**

Based on the additional details we get (or don't get) we may want to consider sending some technical help to the site to get an understanding of the cause of the event, the extent of condition and the technical fix. Patrick said he would appreciate the help.

I don't believe we have ever used it but Appendix C of MC 2504 lists criteria for Special Inspections. Under Significant Offsite or Onsite Industrial Event, it says: "Possibility of significant impact on stored or constructed items or materials." There is also a catch all under Any Other Significant Issue which says: "Significant issue not covered above judged by management to warrant additional inspection or followup."

I don't think we know enough to say we need a Special Inspection but it is something to keep in mind.

I will let everyone know when we get more details. Patrick Donnelly is following the issue from the site.

Steddenbenz, Katherine

From: Heisserer, Jamie
Sent: Wednesday, February 18, 2015 11:56 AM
To: Michel(R2), Eric; Oelstrom, Chad
Subject: FW: IMC2504 Appendix C (VC Summer February 2015).docx
Attachments: IMC2504 Appendix C (VC Summer February 2015).docx

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From: Ernstes, Michael
Sent: Wednesday, February 18, 2015 11:31 AM
To: Jones, William
Cc: Yerokun, Jimi; Donnelly, Patrick; Heisserer, Jamie; Heher, Patrick
Subject: IMC2504 Appendix C (VC Summer February 2015).docx

Bill, I have drafted the Decision Documentation to support a special inspection at Summer.

If you are okay with the wording, please have Kim prepare for signature or let me know an I will get Michelle to prepare it.

Ponko, Anthony

From: Ponko, Anthony
Sent: Wednesday, February 18, 2015 7:05 AM
To: Heisserer, Jamie
Subject: RE: Summer CV support

I could go, but would need to be back in office next week.

Anthony F. Ponko, PE
Senior Construction Inspector
Division of Construction Inspection
U.S. Nuclear Regulatory Commission
245 Peachtree Center Avenue NE, Suite 1200
Atlanta, GA 30303
(404) 997-4509 (phone)
(404) 997-4917 (fax)
Anthony.Ponko@nrc.gov

From: Heisserer, Jamie
Sent: Wednesday, February 18, 2015 6:37 AM
To: R2DCI_B2
Subject: Summer CV support

Good morning,

Is anyone available/willing to support Patrick Donnelly at summer Thursday and/or Friday to assist with the containment vessel damage issue?

Thanks,
Jamie

Heisserer, Jamie

From: Yerokun, Jimi
Sent: Wednesday, February 18, 2015 11:21 AM
To: Heisserer, Jamie; Jones, William; Heher, Patrick
Cc: Ernstes, Michael; Cheok, Michael
Subject: VC Summer Special Inspection

Mike Cheok and I briefed Vic at 10:15am. He agreed with our recommendation to launch a special inspection team. The process (2504, App. C) and the supporting reasons – damage to safety equipment(s), broken barriers, timeliness of identification, etc. – warrant such response. He will notify NRO and the Licensee.

Vic reminded me to ensure that we include the "message map" concept in the communication plan and check with OPA about the need for a news release as part of our communication. He is aware that Katie, as the first responder, is onsite already and interested in when the rest of the team will be onsite.

Let's discuss when we plan to have a charter for his signature.

The assumption is that Vogtle has been made aware of this issue by SCANA or through our resident inspectors?

Jimi T. Yerokun
Director, DCI/RII
404 997-4300

Decision Documentation for a Construction SI/AIT		
PLANT: ***V.C. Summer Unit 2***	EVENT/ ISSUE DATE: ***February 10-12, 2105***	EVALUATION DATE: ***February 18, 2015***
Brief Description of the Event/Issue: ***On February 10, 2015, while making modifications to the location of rebar inside of the containment vessel, core bores were taken which caused apparent damage to safety related rebar and the containment vessel.***		

Significant Weather-Related, Natural Disaster, or Man-Made Event	
Y/N	**SI Deterministic Criteria**
	Significant damage to SSCs having ITAAC
	Remarks:
Y/N	**AIT Deterministic Criteria**
	Extensive damage to SSCs having ITAAC
	Remarks:
	Involved the loss or damage of SNM or sources
	Remarks:
SIGNIFICANT SECURITY-RELATED ISSUE	
Y/N	**SI Deterministic Criteria**
	Potential tampering or sabotage
	Remarks:
	Unauthorized, actual discharge of a weapon
	Remarks:
	Multiple FFD issues
	Remarks:
	Other (explain in remarks)
	Remarks:
Y/N	**AIT Deterministic Criteria**
	Loss or theft of SNM
	Remarks:
	Confirmed tampering or sabotage
	Remarks:
	Other (explain in remarks)
	Remarks:

ONSITE ACCIDENT RESULTING IN SIGNIFICANT DAMAGE TO SSCs WITH ITAAC	
Y/N	**SI Deterministic Criteria**
	Significant damage to SSCs or other program elements with ITAAC
	Remarks:
Y/N	**AIT Deterministic Criteria**
	Extensive damage to SSCs with ITAAC
	Remarks:
SIGNIFICANT OFFSITE OR ONSITE INDUSTRIAL EVENT	
Y/N	**SI Deterministic Criteria**
	Possibility of significant impact on stored or constructed items or materials
	Remarks:
Y/N	**AIT Deterministic Criteria**
	Provide rationale in response decision block
	Remarks:
STOP WORK ORDER ISSUED BY LICENSEE	
Y/N	**SI Deterministic Criteria**
	Stop work order for which the underlying issue(s) are not fully understood
	Remarks:
Y/N	**AIT Deterministic Criteria**
	Provide rationale in response decision block
	Remarks:
PLANT STRIKE	
Y/N	**SI Deterministic Criteria**
	Plant strike
	Remarks:
Y/N	**AIT Deterministic Criteria**
	Provide rationale in response decision block
	Remarks:
POTENTIAL FINANCIAL IMPACT ON PROGAMS/QUALITY	
Y/N	**SI Deterministic Criteria**
	Potential financial impact on programs/quality
	Remarks:
Y/N	**AIT Deterministic Criteria**
	Provide rationale in response decision block
	Remarks:

SIGNIFICANT SCWE ISSUE OR ALLEGATION	
Y/N	**SI Deterministic Criteria**
	Significant SCWE issue or allegation that cannot be addressed through IMC 2505 or independent licensee action
	Remarks:
Y/N	**AIT Deterministic Criteria**
	Provide rationale in remarks
	Remarks:
ANY OTHER SIGNIFICANT ISSUE	
Y/N	**SI Deterministic Criteria**
YES	Significant issue not covered above judged by management to warrant additional inspection or followup
	Remarks:
Y/N	**AIT Deterministic Criteria**
	Provide rationale in remarks
	Remarks:

RESPONSE DECISION	
USING THE ABOVE INFORMATION AND OTHER KEY ELEMENTS OF CONSIDERATION AS APPROPRIATE, DOCUMENT THE RESPONSE DECISION TO THE EVENT OR ISSUE, AND THE BASIS FOR THAT DECISION	
DECISION AND DETAILS OF THE BASIS FOR THE DECISION: *The circumstances which resulted in the inadvertent damage to safety related rebar and the containment vessel revealed several concerns regarding construction practices which warrant additional inspection. Principal among these were appropriate use of the corrective action program, use of approved procedures by field personnel, bypassing of safety features such as the Ground Fault Circuit Interrupter and timeliness of communication to the licensee. Looking forward there is a need to verify compliance with ASME and ACI codes and assurance that appropriate corrective actions are taken in response to any technical concerns as well as the causes that led to the event.*	
BRANCH CHIEF REVIEW: M. Ernstes /RA/	DATE: 2/18/2015
DIVISION DIRECTOR REVIEW: W. Jones /RA/	DATE:2/18/2015
RA REVIEW: V. McCree /RA/	DATE: 2/20/2015