April Rice
Manager, Nuclear Licensing
New Nuclear Deployment

November 13, 2015
NND-15-0467

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555-0001

Subject: Virgil C. Summer Nuclear Station Units 2 and 3
Docket Numbers 52-027 and 52-028
Request for a Commission-Approved Simulation Facility – Response to Unresolved Items

References:
(1) Letter NND-15-0026, "Request for a Commission-Approved Simulation Facility," dated January 16, 2015

(2) Letter NND-15-0199, "Request for a Commission-Approved Simulation Facility – Revision 1," dated March 30, 2015

(3) Letter NND-15-0273, "Additional Information Related to a Request for a Commission-Approved Simulation Facility," dated April 28, 2015

(4) Letter NND-15-0370, "Request for a Commission-Approved Simulation Facility – Response to a Request for Additional Information," dated June 25, 2015

Pursuant to 10 CFR 55.46(b), South Carolina Electric & Gas Company (SCE&G) requested a Commission-Approved Simulation Facility for Virgil C. Summer Nuclear Station (VCS) Units 2 and 3 (References 1, 2, 3 and 4). By NRC letter to SCE&G dated July 2, 2015, "Virgil C. Summer Nuclear Station Units 2 and 3 – Request for a Commission-Approved Simulation Facility," the NRC temporarily suspended its review of the SCE&G request pending receipt of additional information as specified in the enclosure to the letter. SCE&G has evaluated the unresolved items summarized by the NRC and has prepared proposed resolutions to the technical issues and corrective action items identified. This letter provides the SCE&G response to the July 2, 2015 NRC letter and includes a request for the staff to resume its review of the SCE&G Commission Approved Simulator (CAS) submittal.

In the NRC letter dated July 2, 2015, the staff notified Virgil C. Summer Units 2 and 3 staff of 42 technical issues and corrective action items associated with the licensee request for a CAS [ADAMS Accession No. ML15182A097]. The following paragraphs provide an explanation of how those 42 items are addressed in the attached enclosures.

Item numbers 1 thru 39 of the NRC letter provide a summary of the individual Simulator Discrepancy Report list items (SDRs) which have been statused as “Significant” and were previously unresolved. Each of these items is addressed in Enclosure 3, “Summary of Significant SDRs 060315 – VCS Responses” Redacted Version (Non-Proprietary), and Enclosure 5, “Summary of Significant SDRs 060315 – VCS Responses” Un-Redacted Version (Proprietary). Within these enclosures there are numerous items which have been statused with words similar to “To be fixed as part of the (date provided) Westinghouse Patch update/release.” In each case where an SDR is being resolved by installation of a patch, the licensee intends to retest the fix, when implemented, in the following fashion:

Patch Post-Fix Test Plan

Individual fix testing:

1. Install all Westinghouse and GSE Systems fixes
2. Re-create a base 100% power Initial Condition (IC)
3. Perform a check of any parameter differences between new 100% IC and old IC (RCS temps, SG pressures etc.)
4. Individually check any graphics screens fixes
5. Run each ANSI transient test which had an associated SDR
6. Run each ANSI (Malfunctions) MALFS test which had an associated SDR
7. Perform an individual tests for any SDR not previously covered (RV Head bubble collapse, Rods reject to manual, etc.)
8. Repeat test item plans 2 thru 7 for other required Initial Conditions (i.e., Hot Zero Power, All Rods In IC and some Mode 5 ICs)
9. Perform a reactor startup and plant cooldown to a solid pressurizer, starting from Hot Zero Power, All Rods In IC

ANSI/ANS 3.5 Testing Redux (integrated response):

1. Repeat all Transients tests
2. Repeat all Normal Evolutions tests
3. Repeat selected Malfunctions which are associated with SDRs fixed

A notification of the completion of the described testing will be provided to the NRC when complete.

Item number 40 of the NRC letter addressed a concern to reduce the number of Nuclear Application Program (NAPs) discrepancies, including those not statused as “Significant,” in an effort to reduce the overall operator workload. A table of all additional NAPs and Graphic Display fixes implemented beyond the 39 previously identified Significant SDRs is provided on pages 50 through 53 of Enclosures 3 and 5.

Item number 41 of the NRC letter requested documentation that Westinghouse Electric Company's resolution of Human Engineering Discrepancies (HED-1) is consistent with the VCS conclusions provided in the Commission-Approved Simulator request and its supplements. This documentation is provided on pages 53 through 60 of Enclosures 3 and 5.

Item number 42 of the NRC letter requested the inclusion of all open simulator discrepancy reports when the docketed list of simulator discrepancies is submitted. A list of all newly opened simulator discrepancy report items added since the initial aggregate assessment is found beginning on page 60 of Enclosures 3 and 5. An additional assessment of the potential impact of these new SDR items to the 13 items specified in 10 CRF 55.45(a) is included as Enclosure 4, "Assessment of New SDR List Items Related to CAS" Redacted Version (Non-Proprietary), and Enclosure 6, "Assessment of New SDR List Items Related to CAS" Un-Redacted Version (Proprietary).

As Enclosures 5 and 6 contain information proprietary to Westinghouse Electric Company LLC, it is supported by an Affidavit signed by Westinghouse, the owner of the information. The Affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of 10 CFR 2.390.

Enclosure 1 is the Westinghouse Application for Withholding Proprietary Information from Public Disclosure CAW-15-4287, accompanying Affidavit, Proprietary Information Notice, and Copyright Notice.

Correspondence with respect to copyright or proprietary aspects of the items listed above or the supporting Affidavit should reference CAW-15-4287 and should be addressed to James A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company, 1000 Westinghouse Drive, Building 3 Suite 310, Cranberry Township, Pennsylvania 16066.

Enclosure 2 is an SCE&G Affidavit supporting the request to withhold proprietary information under 10 CFR 2.390.

This letter contains no regulatory commitments.

If there are any questions regarding this request, please contact me by telephone at (803) 941-9858, or by email at arice@scana.com.

Sincerely,

April Rice
Manager, Nuclear Licensing
New Nuclear Deployment

AR/gt

Enclosures:

1. Westinghouse Affidavit, Proprietary Information Notice, and Copyright Notice
2. SCE&G Affidavit for Withholding
3. "Summary of Significant SDRs 060315 - VCS Responses" Redacted Version (Non-Proprietary)
4. "Assessment of New SDR List Items Related to CAS" Redacted Version (Non-Proprietary)
5. "Summary of Significant SDRs 060315 - VCS Responses" Un-Redacted Version (Proprietary)
6. "Assessment of New SDR List Items Related to CAS" Un-Redacted Version (Proprietary)

c (with enclosures):

Billy Gleaves
Chandu Patel
Paul Kallan
Ruth Reyes
DCRM-EDMS@SCANA.COM

c (without enclosures):

Len Wert - Region II Regional Administrator
Marion Cherry - Santee Cooper
Stephen A. Byrne - SCE&G
Jeffrey B. Archie - SCE&G
Ronald A. Jones - SCE&G
Joel Hjelseth - Westinghouse
Carl Churchman - Westinghouse
Brian McIntyre - Westinghouse
Michael Frankle - Westinghouse
Brian Bedford - Westinghouse
Joseph Cole - Westinghouse
Patrick Young - Westinghouse
Ken Hollenbach - CB&I Stone & Webster
Alvis J. Bynum - SCE&G
April Rice - SCE&G
Justin Bouknight - SCE&G
Kathryn M. Sutton - Morgan Lewis
Curtis Castell - CB&I Stone & Webster
Chuck Baucom - CB&I Stone & Webster
Sean Burk - CB&I Stone & Webster
Benny Buras - CB&I Stone & Webster
Charlie White - CB&I Stone & Webster
Unit 1 NRC Resident Inspector
Units 2/3 NRC Resident Inspector
Andy Barbee - SCE&G
Paul Mothena - SCE&G
Pat Leary - SCE&G
Jody Lawter - SCE&G
Gene Guthrie - NRC
Garrett Sanders - SCE&G
Greg Travers - SCE&G
VCSummer2&3ProjectMail@cbi.com
vcsummer2&3project@westinghouse.com
VCSNNDCorrespondence@scana.com

Document Control Desk
NND-15-0467

South Carolina Electric and Gas Company
Virgil C. Summer Nuclear Station (VCSNS) Units 2 and 3

NND-15-0467

Enclosure 1

Westinghouse Affidavit, Proprietary Information Notice, and Copyright Notice

(This enclosure contains 9 pages, including this cover sheet.)

Westinghouse Electric Company
New Plants and Major Projects
1000 Westinghouse Drive, Building 1
Cranberry Township, Pennsylvania 16066
USA

Document Control Desk
U S Nuclear Regulatory Commission
Washington, DC 20852-2738

Direct tel: (412) 374-3382
Direct fax: (724) 940-8519
e-mail: russpa@westinghouse.com
Proj letter: VSL_VSG_000342

CAW-15-4287

11/09/2015

APPLICATION FOR WITHHOLDING PROPRIETARY INFORMATION FROM PUBLIC DISCLOSURE

Subject: Transmittal of "Summary of Significant SDRs 060315 – VCS Responses" and "Assessment of new Simulator Discrepancy Report List Items Related to Commission Approved Simulator"

The proprietary information for which withholding is being requested in the above-referenced reports is further identified in Affidavit CAW-15-4287 signed by the owner of the proprietary information, Westinghouse Electric Company LLC. The Affidavit, which accompanies this letter, sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of 10 CFR Section 2.390 of the Commission's regulations.

Accordingly, this letter authorizes the utilization of the accompanying Affidavit by South Carolina Electric and Gas Company (SCE&G).

Correspondence with respect to the proprietary aspects of the Application for Withholding or the Westinghouse Affidavit should reference CAW-15-4287, and should be addressed to James A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company, 1000 Westinghouse Drive, Building 3 Suite 310, Cranberry Township, Pennsylvania 16066.

Very truly yours,

Paul A. Russ, Director
U.S. Licensing & Regulatory Support

/Enclosures

1. Affidavit, Proprietary Information Notice, Copyright Notice dated November 9, 2015
2. "Summary of Significant SDRs 060315 – VCS Responses" (Proprietary)
3. "Summary of Significant SDRs 060315 – VCS Responses" (Non-Proprietary)
4. "Assessment of new Simulator Discrepancy Report List Items Related to Commission Approved Simulator" (Proprietary)
5. "Assessment of new Simulator Discrepancy Report List Items Related to Commission Approved Simulator" (Non-Proprietary)

cc:

Gregory Glenn	Westinghouse
Sarah DiTommaso	Westinghouse
Brian McIntyre	Westinghouse
Steven Radomski	Westinghouse
April Rice	SCANA
Paul Mothena	SCANA
Patrick Leary	SCANA
Gregory Travers	SCANA

CAW-15-4287
November 09, 2015

AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

ss

COUNTY OF BUTLER:

I, Paul A. Russ, am authorized to execute this Affidavit on behalf of Westinghouse Electric Company LLC (Westinghouse), and that the averments of fact set forth in this Affidavit are true and correct to the best of my knowledge, information, and belief.

Paul A. Russ, Director
U.S. Licensing & Regulatory Support

(1) I am Director, U.S. Licensing & Regulatory Support, Westinghouse Electric Company LLC (Westinghouse), and as such, I have been specifically delegated the function of reviewing the proprietary information sought to be withheld from public disclosure in connection with nuclear power plant licensing and rule making proceedings, and am authorized to apply for its withholding on behalf of Westinghouse.

(2) I am making this Affidavit in conformance with the provisions of 10 CFR Section 2.390 of the Commission's regulations and in conjunction with the Westinghouse Application for Withholding Proprietary Information from Public Disclosure accompanying this Affidavit.

(3) I have personal knowledge of the criteria and procedures utilized by Westinghouse in designating information as a trade secret, privileged or as confidential commercial or financial information.

(4) Pursuant to the provisions of paragraph (b)(4) of Section 2.390 of the Commission's regulations, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.

(i) The information sought to be withheld from public disclosure is owned and has been held in confidence by Westinghouse.

(ii) The information is of a type customarily held in confidence by Westinghouse and not customarily disclosed to the public. Westinghouse has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, utilizes a system to determine when and whether to hold certain types of information in confidence. The application of that system and the substance of that system constitute Westinghouse policy and provide the rational basis required.

Under that system, information is held in confidence if it falls in one or more of several types, the release of which might result in the loss of an existing or potential competitive advantage, as follows:

(a) The information reveals the distinguishing aspects of a process (or component, structure, tool, method, etc.) where prevention of its use by any of Westinghouse's competitors without license from Westinghouse constitutes a competitive economic advantage over other companies.

(b) It consists of supporting data, including test data, relative to a process (or component, structure, tool, method, etc.), the application of which data secures a competitive economic advantage, e.g., by optimization or improved marketability.

(c) Its use by a competitor would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing a similar product.

(d) It reveals cost or price information, production capacities, budget levels, or commercial strategies of Westinghouse, its customers or suppliers.

(e) It reveals aspects of past, present, or future Westinghouse or customer funded development plans and programs of potential commercial value to Westinghouse.

(f) It contains patentable ideas, for which patent protection may be desirable.

(iii) There are sound policy reasons behind the Westinghouse system which include the following:

(a) The use of such information by Westinghouse gives Westinghouse a competitive advantage over its competitors. It is, therefore, withheld from disclosure to protect the Westinghouse competitive position.

(b) It is information that is marketable in many ways. The extent to which such information is available to competitors diminishes the Westinghouse ability to sell products and services involving the use of the information.

(c) Use by our competitor would put Westinghouse at a competitive disadvantage by reducing his expenditure of resources at our expense.

(d) Each component of proprietary information pertinent to a particular competitive advantage is potentially as valuable as the total competitive advantage. If competitors acquire components of proprietary information, any one component may be the key to the entire puzzle, thereby depriving Westinghouse of a competitive advantage.

(e) Unrestricted disclosure would jeopardize the position of prominence of Westinghouse in the world market, and thereby give a market advantage to the competition of those countries.

(f) The Westinghouse capacity to invest corporate assets in research and development depends upon the success in obtaining and maintaining a competitive advantage.

(iv) The information is being transmitted to the Commission in confidence and, under the provisions of 10 CFR Section 2.390, it is to be received in confidence by the Commission.

(v) The information sought to be protected is not available in public sources or available information has not been previously employed in the same original manner or method to the best of our knowledge and belief.

(vi) The proprietary information sought to be withheld in this submittal is that which is appropriately marked in "Summary of Significant SDRs 060315 – VCS Responses" (Proprietary) and "Assessment of new Simulator Discrepancy Report List Items Related to Commission Approved Simulator" (Proprietary), for submittal to the Commission, being transmitted by South Carolina Electric and Gas Company (SCE&G) letter and Application for Withholding Proprietary Information from Public Disclosure, to the Document Control Desk. The proprietary information as submitted by Westinghouse is that associated with the V. C. Summer commission approved simulator, and may be used only for that purpose.

(a) This information is part of that which will enable Westinghouse to:

(i) Manufacture and deliver products to utilities based on proprietary designs.

(b) Further this information has substantial commercial value as follows:

(i) Westinghouse plans to sell the use of similar information to its customers for the purpose of licensing new nuclear power stations.

(ii) Westinghouse can sell support and defense of industry guidelines and acceptance criteria for plant-specific applications.

(iii) The information requested to be withheld reveals the distinguishing aspects of a methodology which was developed by Westinghouse.

Public disclosure of this proprietary information is likely to cause substantial harm to the competitive position of Westinghouse because it would enhance the ability of competitors to provide similar technical evaluation justifications and licensing defense services for commercial power reactors without commensurate expenses. Also, public disclosure of the information would enable others to use the information to meet NRC requirements for licensing documentation without purchasing the right to use the information.

The development of the technology described in part by the information is the result of applying the results of many years of experience in an intensive Westinghouse effort and the expenditure of a considerable sum of money.

In order for competitors of Westinghouse to duplicate this information, similar technical programs would have to be performed and a significant manpower effort, having the requisite talent and experience, would have to be expended.

Further the deponent sayeth not.

PROPRIETARY INFORMATION NOTICE

Transmitted herewith are proprietary and/or non-proprietary versions of documents furnished to the NRC in connection with requests for generic and/or plant-specific review and approval.

In order to conform to the requirements of 10 CFR 2.390 of the Commission's regulations concerning the protection of proprietary information so submitted to the NRC, the information which is proprietary in the proprietary versions is contained within brackets, and where the proprietary information has been deleted in the non-proprietary versions, only the brackets remain (the information that was contained within the brackets in the proprietary versions having been deleted). The justification for claiming the information so designated as proprietary is indicated in both versions by means of lower case letters (a) through (f) located as a superscript immediately following the brackets enclosing each item of information being identified as proprietary or in the margin opposite such information. These lower case letters refer to the types of information Westinghouse customarily holds in confidence identified in Sections (4)(ii)(a) through (4)(ii)(f) of the Affidavit accompanying this transmittal pursuant to 10 CFR 2.390(b)(1).

COPYRIGHT NOTICE

The reports transmitted herewith each bear a Westinghouse copyright notice. The NRC is permitted to make the number of copies of the information contained in these reports which are necessary for its internal use in connection with generic and plant-specific reviews and approvals as well as the issuance, denial, amendment, transfer, renewal, modification, suspension, revocation, or violation of a license, permit, order, or regulation subject to the requirements of 10 CFR 2.390 regarding restrictions on public disclosure to the extent such information has been identified as proprietary by Westinghouse, copyright protection notwithstanding. With respect to the non-proprietary versions of these reports, the NRC is permitted to make the number of copies beyond those necessary for its internal use which are necessary in order to have one copy available for public viewing in the appropriate docket files in the public document room in Washington, DC and in local public document rooms as may be required by NRC regulations if the number of copies submitted is insufficient for this purpose. Copies made by the NRC must include the copyright notice in all instances and the proprietary notice if the original was identified as proprietary.

Document Control Desk
NND-15-0467

South Carolina Electric and Gas Company
Virgil C. Summer Nuclear Station (VCSNS) Units 2 and 3

NND-15-0467

Enclosure 2

SCE&G Affidavit for Withholding

(This enclosure contains 3 pages, including this cover sheet.)

Affidavit of April R. Rice

1. My name is April R. Rice. I am the Manager, Nuclear Licensing, for South Carolina Electric and Gas Company (SCE&G). I have been delegated the function of reviewing proprietary information sought to be withheld from public disclosure and am authorized to apply for its withholding on behalf of SCE&G.

2. I am making this affidavit on personal knowledge, in conformance with the provisions of 10 CFR Section 2.390 of the Commission's regulations, and in conjunction with SCE&G's filings on dockets 52-027 and 52-028 requesting a Commission-Approved Simulation Facility. I have personal knowledge of the criteria and procedures used by SCE&G to designate information as a trade secret, privileged, or as confidential commercial or financial information.

3. Based on the criteria in 10 CFR 2.390(a)(4), this affidavit seeks to withhold from public disclosure Enclosures 5 and 6 of SCE&G's Letter, Request for a Commission-Approved Simulation Facility – Response to Unresolved Items, NND-15-0467.

4. The following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.

a. The information sought to be withheld from public disclosure has been held in confidence by SCE&G and Westinghouse Electric Company.

b. The information is of a type customarily held in confidence by SCE&G and Westinghouse and not customarily disclosed to the public.

c. The release of the information might result in the loss of an existing or potential competitive advantage to SCE&G and/or Westinghouse.

d. Release of the information may harm SCE&G because SCE&G has a contractual relationship with the Westinghouse Electric Company regarding proprietary information. SCE&G is contractually obligated to seek confidential and proprietary treatment of the information.

5. To satisfy the requirements of 10 CFR 2.390(b)(1)(i)(B) and (b)(1)(ii)(E), non-proprietary versions of Enclosures 5 and 6 can be found in Enclosures 3 and 4 (respectively) of SCE&G's Letter, Request for a Commission-Approved Simulation Facility – Response to Unresolved Items, NND-15-0467. Withheld information is bracketed with superscripts of [*a, b, and/or c*], to indicate the following reasons for withholding:

(a) The information reveals the distinguishing aspects of a process (or component, structure, tool, method, etc.) where prevention of its use by any of Westinghouse's competitors without license from Westinghouse constitutes a competitive economic advantage over other companies.

(b) It consists of supporting data, including test data, relative to a process (or component, structure, tool, method, etc.), the application of which data secures a competitive economic advantage, e.g., by optimization or improved marketability.

(c) Its use by a competitor would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing a similar product.

6. The information is being transmitted to the Commission in confidence and, under the provisions of 10 CFR Section 2.390, it is to be received in confidence by the Commission.

7. To the best of my knowledge and belief, the information sought to be protected is not available in public sources or available information has not been previously employed in the same original manner or method.

I declare under penalty of perjury the foregoing is true and correct.

April R. Rice _____ Executed on Nov. 13, 2015
Date

SWORN and SUBSCRIBED to before me on this 13th day of November, [2015] in Fairfield county, South Carolina.

Donna S. Griffin
Notary Public
My Commission Expires:

Document Control Desk
NND-15-0467

South Carolina Electric and Gas Company
Virgil C. Summer Nuclear Station (VCSNS) Units 2 and 3

NND-15-0467

Enclosure 3

Summary of Significant SDRs 060315 - VCS Responses

Redacted Version (Non-Proprietary)

(This enclosure contains 100 pages, including this cover sheet.)

The following SDRs require additional investigation as identified by VC Summer (11 items)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
1	VC-TO-10	MS rad monitors do not respond during SGTR	Yes	**Initial screening**: Critical parameter for diagnosing SGTR **Clarifying information from 5/28/15 RAI response:** Additional investigation of this item is in progress. [ ]a,c **Staff conclusion**: **Additional information available on 8/20/15 by Licensee** This SDR is now closed after further review of system and component functional capabilities, as well as the SG tube leak AOP and background document. The low range detectors, SGS-JS26B/27B have always functioned to detect leakage in the range between [ ]a,c. The high range detectors will not come onto scale until well beyond this point – responding to a range of [ ]a,c alerts the operator that radiation level in the secondary side of the SG is rising to undesired values. A radiation level of [ ]a,c indicates the lower-end scale credible reading of the instrumentation. The simulator design provides the ability to fail a maximum of [ ]a,c of the fuel. Demonstrating an accident scenario which included a SGTR concurrent with a failure of enough

The following SDRs require additional investigation as identified by VC Summer (11 items)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				fuel to release radioactive material of sufficient magnitude to reach the range of the high range instruments utilizes component level failures. The operator diagnosis to determine if entry into E-3 is required is currently made in step 26 of E-0. [ ]a,c • [ ]a,c • [ ]a,c • [ ]a,c • [ ]a,c • [ ]a,c • [ ]a,c • [ ]a,c [ ]a,c Section 15.6.3.1.2 of the current station approved UFSAR also lists those same radiation detectors as the redundant and diverse indication that a crew would use to diagnose a SGTR (The condenser air removal discharge radiation monitor, steam generator blowdown radiation monitor, and/or main steam line radiation monitor alarm indicate an increase in radioactivity in the secondary system.). During a SGTR event the low range radiation detector indications are expected to reach the top of their scale, as will most of the other radiation monitor used for this decision point. The station has determined that the current instrumentation design will fulfill its intended function. **Staff conclusion:**

The following SDRs require additional investigation as identified by VC Summer (11 items)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
2	VC-TO-40	During plant C/D and H/U the subcriticality CSF title block is turning magenta (bad input) intermittently	Yes	**Initial screening:** Creates a false indication associated with reactivity manipulations. **Clarifying information from 5/28/15 RAI response:** Additional investigation of this item is in progress. **Staff conclusion**: **Additional information available on 8/20/15 by Licensee** To be fixed as part of Aug 15th update. **Staff conclusion**:
3	VC-TO-89	During Normal OPS testing, a RX Trip Recovery Startup to 100% Power, a hotwell level low alarm came in during the ramp up. Both CDS Normal and Quick Fill valves were verified full open. Flowrate on CDS-FT160 was only [ ]a,c. Condensate makeup design flow to condenser [ ]a,c according to APP-CDS-M3-001, Rev 1.	Yes	**Initial screening:** Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario. **Clarifying information from 5/28/15 RAI response:** Additional investigation of this item is in progress. **Staff conclusion**: **Additional information available on 8/20/15 by Licensee** To be fixed as part of Aug 15th update. **Staff conclusion**:
4	VC-1410-07	Steam dumps capacity appears to be larger than	Yes	**Initial screening**: Potentially disrupts operational analysis, decision making and action. Could force exam scenario into

The following SDRs require additional investigation as identified by VC Summer (11 items)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
		expected based on the following observations: -- On a turbine trip within [ ]a,c are open. -- If Rapid Power Reduction blocked, steam dumps will allow plant shutdown. Initial post turbine trip steam flow is above [ ]a,c. As Auto rods reduce power, three steam dumps are closed as steam flow reaches [ ]a,c. -- If three steam dumps are isolated before a Turbine Trip, the plant response is nearly identical to having none isolated.		undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario. **Clarifying information from 5/28/15 RAI response:** Additional investigation of this item is in progress. **Staff conclusion**: **Additional information available on 8/20/15 by Licensee:** To be fixed as part of Aug 15th update. **Staff conclusion:**
5	VC-1501-02	During performance of AP-MALF-01-2, LOCA Outside Containment, a decrease in CTMT pressure was noted. WR pressure went [ ]a,c. At the time this pressure decrease started, CTMT exhaust	Yes	**Initial screening**: Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario. **Clarifying information from 5/28/15 RAI response:** Additional investigation of this item is in progress. NRC Note: Slightly different response in section 2 below.

The following SDRs require additional investigation as identified by VC Summer (11 items)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
		fans had started but had not aligned to VAS and VRS. During a RETEST it was noted that if radiation never gets high enough to align VAS/VRS to VFS but VAS flows lower enough to trip the fans the situation with VAS ventilation continues to degrade ultimately leading to a start of VFS exhaust system aligned to CTMT. More investigation is needed to determine if this is proper system response.		Facility clarifying information in section 2: This is being tracked to determine if it is the correct plant system response if no operator intervention is taken. Currently, the simulator is responding as the plant is designed. If this condition were encountered in an exam scenario, then the crew will be expected to respond to these conditions. The exam validation process is used to. NRC comment from section 2: Response seems inconsistent. If issue is being tracked to determine if it is the correct system response how can one know that the simulator is responding as the **Staff conclusion**: **Update as of 9/9/15**: WEC is correcting the implementation of the reference design to sequence flow path alignment with fan start in the Oct. 30 release **Staff conclusion**:
6	VC-1501-08	Rod control urgent failure on loss of EK-12. Appears inconsistently without loss of power	Yes	**Initial screening**: Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario. **Clarifying information from 5/28/15 RAI response:** Additional investigation of this item is in progress. **Staff conclusion**: **Update as of 8/18/15**: WEC to update design in Oct. 30

The following SDRs require additional investigation as identified by VC Summer (11 items)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				release **Staff conclusion:**
7	VC-1502-09	While doing a demo, a steam leak was placed in by lifting several SG Safety valves and no operator action taken. Over power control permissives did not respond as designed. WEC was able to reproduce this event and according to the CR has no response at this time.	Yes	**Initial screening:** Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario. **Clarifying information from 5/28/15 RAI response:** Additional investigation of this item is in progress. **Staff conclusion**: **Additional information available on 8/20/15 by Licensee** Updated tuning constants will be provided in the August 14, 2015 patch, which correct the OP permissive response. **Staff conclusion**:
8	VC-1502-13	During Load Rejection events, Load Unbalance response is inconsistent causing noticeable deltas in several key parameters. These test deltas were previously attributed to the Rods to Manual issue (VC-TO-101). After multiple test runs where initial rod response was correct,	Yes	**Initial screening:** Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario. **Clarifying information from 5/28/15 RAI response:** Additional investigation of this item is in progress. **Staff conclusion**: **Additional information available on 8/20/15 by Licensee**

The following SDRs require additional investigation as identified by VC Summer (11 items)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
		some deltas were still occurring and further testing revealed that Intercept Valve response is inconsistent.		This item is fixed in the August 15th 2015 patch so that Rods no longer reject to Manual. This item did not result in an unanticipated sequence of events. The Load Rejection event used in this simulator test is an inadvertent trip of the Generator Breaker. This initiating event always causes a trip of the turbine after a [ ]a,c second time delay based on [ ]a,c. The crew response that that event will always be an entry into AOP-207 for Loss of Turbine Load to stabilize the plant at a new, lower power level. If no other complications/malfunctions are present, then this is always the outcome. **Staff conclusion:**
9	VC-1503-03 VC-1503-04	RCS wide range pressure dropped from 1400 to 700 psig then stabilized. No action taken for 13 min prior to pressure drop	Yes	**Initial screening:** Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario. **Clarifying information from 5/28/15 RAI response:** Additional investigation of this item is in progress. **Staff conclusion**: **Additional information available on 7/21/15 by Licensee:** [

Westinghouse Non-Proprietary Class 3

The following SDRs require additional investigation as identified by VC Summer (11 items)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				[ ]a,c. [ ]a,c [ ]a,c [ ]a,c [ ]a,c [ ]a,c. **Staff conclusion:**
10	VC-1503-25	When Containment Air Filtration System had no flow, VFS-RY102 alarmed for high iodine. The scenario where this occurred was during a cooldown with an accumulator leak in progress.	Yes	**Initial screening**: Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario. **Clarifying information from 5/28/15 RAI response:** Additional investigation of this item is in progress. **Staff conclusion**: **Additional information available on 8/20/15 by Licensee** This item is fixed with the August 15th patch **Staff conclusion**:

Westinghouse Non-Proprietary Class 3

The following SDRs require additional investigation as identified by VC Summer (11 items)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
11	VC-1503-33	TCS heat transfer characteristics through the H2 coolers are unrealistic. At 50% turbine power the H2 cooler TCV was fully closed, in automatic. Also, the EHC coolers had zero flow demanded, causing TCS high discharge pressure and low flow alarms.	Yes	**Initial screening:** Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario. **Clarifying information from 5/28/15 RAI response:** Additional investigation of this item is in progress. **Staff conclusion**: **Additional information available on 8/20/15 by Licensee:** Set point changes to TSC and Generator H2 cooler TCV settings, and Heat Load modeling fixes are being provided in the Oct. 30 release **Staff conclusion:**

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
1	VC-TO-04	EDS batteries last [ ]$_{a,c}$ hours and when they go low enough to drop loads; voltage swings cause all powered	Yes	**Initial screening**: Time compression is used in some scenarios. This condition would affect accurate system response is such circumstances and could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
		components to cycle. This includes Ovation controllers and hardware relays.		undesired complexity/distractions to the exam scenario. **Clarifying information from 5/28/15 RAI response:** This SDR has minimal impact on training and almost no impact on examination. [ ]$_{a,c}$. License Operator exam scenarios do not typically last past the 4 hour point, which would still be before this is expected to occur. Any training, exam scenario or JPM which would need to exercise this feature would then have to use time compression and jump to an IC with this occurring. A much more likely training and exam activity would be the performance of the load shedding, which is unaffected by this SDR. **Staff conclusion**: Clarification needs to be focused on how the condition affects exam reliability rather than on the probability that a testing scenario will include conditions which could be affected by the issue. Exam guidance does not preclude the inclusion of conditions which could be affected by the issue and additionally Rev .10 of NUREG-1021 was modified to enhance use of time compression to be able to test the long time actions, **Additional information available on 8/20/15 by Licensee** To be fixed as part of Aug 15th update.
2	VC-TO-45	Rods are rejecting to MANUAL ~25% of the time when there is a power loss to Incore	Yes	Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario.

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
		instrumentation PROCESSING CABINET 1 or 2. From a [ ]a,c power condition, after power loss to either cabinet, corrected Rx Power points (PC-PRPP-COMP-A [B,C,D]) are driven down to [ ]a,c before returning to normal. Rods move rapidly OUT then IN in response to this event when they don't reject to manual.		**Clarifying information from 5/28/15 RAI response:** Two Westinghouse patches have been installed since this SDR was initiated; [ ]a,c. It has also been identified that minor changes in plant conditions at the test starting point can be caused by running multiple iterations of a testing scenario in an automated "chain" overnight. These, in turn, also affect plant performance – in particular causing minor deviations in [ ]a,c. Overall changes to simulator operating practices which include much more frequent simulator rebooting have been implemented along with changes to "chained" testing. The results have been a significant reduction of instances of rods rejecting to manual over several months of training and examinations. The item is being left open to continue monitoring for issues, and to track any future design hardening improvements. **Staff conclusion**: • Rapid Rod motion has not been explained. • Is there an estimate on frequency of occurrence? **Additional information available on 8/20/15 by Licensee** Q#1: Rapid Rod motion outward is caused when the channels that loose power input [ ]a,c and that low value impacts the averaged value fed into rod control. The rapid motion inward occurs when the [

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				]a,c Q#2: This occurs ~ ½ of the time there is a power supply loss. **Update as of 8/18/15**: WEC to update Rod Control design in Oct. 30 release so that rapid rod motion no longer occurs
3	VC-TO-47	Malfunction ATWS with Turbine Trip - non-repeatability. Rods were noted during several tests rejecting to MAN on Hi Auct Tavg MERE signal.	Yes	**Initial screening**: Inconsistent response could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario. **Clarifying information from 5/28/15 RAI response:** Two Westinghouse patches have been installed since this SDR was initiated; [ ]a,c. It was also discovered that minor changes in plant conditions at starting point which can be caused by running multiple iterations of a testing scenario in an automated "chain" overnight also affect plant performance – in particular causing minor [ ]a,c. Overall changes to simulator operating practices which include much more frequent simulator rebooting has also been implemented along with changes to "chained" testing. The results have been a significant reduction in instances of Rods rejecting to manual over several months of training and examinations. **Staff conclusion**: Can the reduced frequency be quantified?

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				Additional information available on 7/21/15: Q#1: This occurs ~ ½ of the time this test is run. **Additional information available on 8/20/15 by Licensee** This item is fixed with the Aug 14th 2015 patch.
4	VC-TO-54 VC-TO-58 VC-TO-88 VC-1502-11	This SDR expands upon previously identified problems with [ ]a,c issues. Previous feedwater SDRs have FW control problems during RX Startup and also at low power conditions affecting MFW/SFW transfer during startup. Previous SDRs on [ ]a,c /Rod performance after Incore Instrumentation System (IIS) server power losses and corrected RX power at >100% steam flow conditions. This SDR expands these issues to include:	Yes	**Initial screening**: Multiple problems could trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario. They would also place unplanned and probably unreasonable workload on the operators. **Clarifying information from 5/28/15 RAI response:** This SDR is expanding the previously cited SDRs (VC-TO-45, VCS-TO-54, VCS-TO-58, VC-TO-101, and VC-1502-9) to note that the interactions between the secondary plant and the primary plant during complex plant power changes are impacting Simulator SAT/ANS/ANSI 3.5 test results. Those results, then need to discuss this impact. The aggregate impact of events which cause perturbations to steady state conditions in the secondary plant affect the primary plant, as expected. For cases where plant response produces process parameters that are within the deadband of controller responses, the system responses can vary – as expected. In all cases, training scenarios and exam scenarios which are used by the students are validated IAW training processes. The variances that are potentially seen are not impacting the ability to successfully train the learning objectives of scenarios or accomplish the expected procedural flowpath through exam

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
		1. Variations in the timing for the transfer from MFW to SFW control valves during re-runs of tests where a Rapid Power Reduction actuation occurs without operator action. 2. While software modifications have significantly reduced the frequency of Rods Rejecting to Manual, inconsistencies in rod response (documented on other SDRs) persist, including cases where AO Rod movement and Urgent Failures occur. 3. SGWLCS control degrades significantly as reactor power is lowered. This results in control system induced oscillations in many transients where reduction in reactor power or a reactor trip occurs. The timing and characteristics of these oscillations may be very sensitive to minute		scenarios. The impact is in line with the differences between different license class crews performing the same exam scenario. The SDR is written to track the eventual re-run of these cited simulator engineering evolutions when secondary plant tuning data becomes available. **Staff conclusion**: Didn't see anything in RAI that would change significance. Staff observations during ISV indicate plant performance was not what was expected and was frequently commented on by participants. Controller response seemed a major causal factor but information needs to be provided that as to why better initial controller setup cannot be performed. See questions associated with VC-1502-10. **Additional information available on 8/20/15 by Licensee** Secondary plant tuning improvements will be provided with the October 30, 2015 release. Rod control design improvements, as discussed in VC-TO-45 and VC-1501-08 will also be provided with the October 30, 2015 release.

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
		differences in initial conditions. These effects can propagate back to the primary side and may cause differences in test results directly or indirectly by influencing Control Rod response.		
5	VC-TO-75 VC-TO-76	VRS monitor and VHS monitor go up by [ ]$_{a,c}$ decades in [ ]$_{a,c}$ minutes on a loss of process flow. This gives a pri 1 alarm and leads to an unnecessary entry into AOP.	Yes	**Initial screening**: Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario. **Clarifying information from 5/28/15 RAI response:** This event occurs during a prolonged loss of power to the associated power supplies for these HVAC systems. During any electric plant malfunction there are [ ]$_{a,c}$. Crews are required to use the same skill set employed at existing fleet plant to diagnose the aggregate of these alarms, and diagnose the loss of power supply. Once that is accomplished, the crew will then prioritize their response by deciding which AOPs will be used, as well as the order they will be addressed. As currently configured, there is not enough data to conclude that the rad monitor's response is incorrect. Given this, the crews are expected to respond as described: treat this as a real indication and prioritize the crew response accordingly, while continuing to address to loss or power supply.

Westinghouse Non-Proprietary Class 3

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				Staff conclusion: • What will be done to determine if the priority 1 alarm response is correct or incorrect? • How does the alarm interface with emergency response action levels • Are there automatic actions associated with the monitors? There appears to be a discontinuity in the use of alarms. In the SDR on alarm avalanche, prioritization is a key component of managing the alarms. Yet here a priority 1 alarm is being treated as one of many and without knowledge of whether the alarm function is correct. The original concern over undesired sequence remains. **Additional information available on 7/21/15:** Q#1: High Radiation alarms are intended to be priority 1, so that part is correct. Q#2: The Control Room Supervisor is expected to prioritize the crews' response. Entry into, or processing of, an AOP is not expected to be done if it interferes with the crew progress through an EOP. This is stated in the AOP/EOP user's guide and taught to the crews. Q#3: there are no automatic actions that occur as a result of this alarm. **Additional information available on 8/20/15 by Licensee** Will be corrected in the August 14, 2015 patch
6	VC-TO-96	Malfunction TOS02,	Yes	**Initial screening**: Potentially disrupts operational analysis,

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
		Turbine Trip Failure, has "future" information in the Cause and Effect info. "In More Current Baselines"...the PLS will [ ]$_{a,c}$. That feature is not functional in BL7 and should be removed from the TOS02 C&E document for this baseline.		decision making and action **Clarifying information from 5/28/15 RAI response:** This SDR documents incorrect information in the "Cause and Effect" information of the malfunction, not anything incorrect in the malfunction as currently configured in this baseline, or in the plant response to the malfunction. Use of the malfunction produces the effects that are currently designed to actuate. This does not impact operational analysis, or decision making or actions, because the instructor, the students, and the simulator are all doing/seeing the plant effects as they currently are configured. **Staff conclusion**: • Does the simulator respond the same as what would be expected from design approved in the design certification? • Confirm this issue is associated with the MCR simulation and not the instructor station. **Additional information available on 8/20/15 by Licensee** The note in the Cause and Effects for TOS02 Malfunction on the Instructor Station referenced in the SDR states the following: "NOTE Due to the various redundancies of TCPS and the PLS "backup" in more current I&C baselines, a turbine trip failure in the Reference Plant due to the given Probably Cause is somewhat unlikely." The note was/is intended to alert the simulator

Westinghouse Non-Proprietary Class 3

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				instructor/scenario developer that only using this malfunction to maintain the turbine on line in the future I&C configuration (beyond what the simulator is currently built to) will not prevent the turbine from tripping**.** Conversely, when using it in the current baseline, it will CORRECTLY prevent a turbine trip from occurring, if desired for the scenario. This is because in future I&C baselines, PLS will have a feature that it is notified of when other protective systems (PMS, DAS, TCPS) order a turbine trip, and, if after a certain time, PLS senses the turbine trip solenoid valves are still open (i.e., the turbine has not tripped), PLS automatically drives the power-control valves shut to force a turbine trip. The current malfunction TOS02 does not prevent this feature. If you look at the current I&C on the simulator you will notice the logic that has this feature; Sheet 6200100300, is currently loaded. If you explode the macro you will notice in the upper left hand corner that this software is currently being prevented from operating due to a DVAL GEN being set to a value of “0”. The circuitry is being nulled out as it is waiting for an approved ENDCR from Toshiba before being activated and design completed. In summary, this note is there for the instructor to explain why the circuitry is there but nulled out and also for alerting future users that in the future more actions will be needed if they plan on using this malfunction to prevent a turbine trip.
7	VC-TO-101 VC-TO-104	It has been noted that sometimes the control rods reject to manual for no known reason. This	Yes	**Initial screening**: Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario.

Westinghouse Non-Proprietary Class 3

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
		past weekend the simulator was left in run at 100% power (rods in auto) and ran for the entire weekend. On Monday morning the rods were noted to be in manual. This has been noted before but it does not appear to be connected to any specific operation."		**Clarifying information from 5/28/15 RAI response:** Two Westinghouse patches have been installed since this SDR was initiated; [ ]a,c. It was also discovered that minor changes in plant conditions at starting point which can be caused by running multiple iterations of a testing scenario in an automated "chain" overnight also affect plant performance – in particular causing minor deviations in [ ]a,c. Overall changes to simulator operating practices which include much more frequent simulator rebooting has also been implemented along with changes to "chained" testing. The results have been significantly reduced instances of Rods rejecting to manual at the station over several months of training and examinations. The item is being left open to continue monitoring for issues, and to track any future design hardening improvements. **Staff conclusion**: Is there an estimate on frequency of occurrence? **Additional information available on 8/20/15 by Licensee** This SDR was written based on turnover information at BL7 delivery. It has not occurred at the station since the implementation of regimented simulator reset protocols. This item is being closed. A separate SDR is initiated to investigate if improvements can be made which will eliminate the need to perform simulator resets so often.

Westinghouse Non-Proprietary Class 3

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
8	VC-TO-102	The purpose of this RITS is to evaluate the calculation of the BEACON operability Ovation points within the reactor core model. There is concern that the fidelity of the current calculation is sufficient for training purposes. During failure testing of the BDP application a potential situation was noted relative to the operability status points and how it is calculated. Failure of the BDP application causes the manual override signal originated by BDP to have BAD quality. The BAD indication is passed through the BEACON operability calculations in the PST application and appears on the OPDMS displays as ""operable"" but with BAD quality. Failure of the BDP application should cause BEACON to be inoperable via the logic in	Yes	**Initial screening**: Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario. **Clarifying information from 5/28/15 RAI response:** This SDR tracks a question originating from Westinghouse staff members while preparing for ISV to evaluate adding additional functionality in the simulator to the "calculated" plant computer point which [ ]$_{a,c}$. The Westinghouse staff was concerned that they did not have enough ways to manipulate this point to make it show bad quality, INOPERABLE, etc. In other words, adding additional malfunctions or overrides that impact this point – or the datalinks points that feed this point. Currently, for any point which is within the scope of the simulator, e.g. these NAPs points inputting to OPDMS, a change to the status of those points will correctly change OPDMS Operability. VCS can cause OPDMS [on line power distribution monitoring system] to become INOPERABLE whenever that is required for training or evaluation. **Staff conclusion**: • VCS acronym is unclear (VC Summer and Containment recirculation cooling system) do now seem to apply. • The real BEACON executables have operability logic based on Tech Specs. This implies the simulator BEACON is different but the difference is unclear. • explain the relationship between NAPs, OPDMS, and BEACON **Additional information available on 8/20/15 by Licensee**

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
		BEACON input processing. As part of the investigation of this issue a concern was raised as to how the reactor core model calculates the BEACON operability points. The reactor core model currently simulates all BEACON / BEACON datalink outputs. The real BEACON executables have logic that is used to determine operability that is based on tech spec requirements.		Answers to the specific questions asked are provided below. The bottom line is that this SDR was tracking a question from the WEC simulator group about adding additional ways, beyond those already available, to fault the OPDMS "OPERABLE/INOPERABLE" status lights in the simulator. Both WEC and the utilities chose not to pursue those, because the current BL7 modeling/simulator booth interface is already well suited to the needs of the station. This item is now closed. General discussion of BEACON: ⌈]a,c. The Technical Specifications provide LCOs and Actions for when OPDMS is OPERABLE – meaning getting full input from BEACON where required, and a tighter set of LCOs and ACTIONS for when OPDMS is INOPERABLE. ⌈]a,c.

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				Q#1: The acronym VCS was intended to stand for VC Summer units 2&3. Explaining the last sentence further; VC Summer units 2&3 simulators and control room displays have computer point displayed on the OPDMS top page which automatically calculates if OPDMS is OPERABLE or INOPERABLE. This information is required for the AP1000 operators to determine how to apply those Technical Specifications who's LCOs and/or action statements change based on this information (e.g. T.S. 3.1.4 Rod Group Alignment Limits, 3.1.7 Rod Position Indication, etc.) The V.C. Summer Simulator in both BL5 and BL7 has always had the ability to make this calculated point "OPERABLE" or "INOPERABLE". Q#2 and Q#3: In order for the On-line Power Distribution Monitoring System (OPDMS) to provide information to the crew concerning the limiting core parameters that it monitors certain values [ ]a,c. [ ]a,c – [ ]a,c

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				– [ ]a,c – [ ]a,c – [ ]a,c – [ ]a,c – [ ]a,c – [ ]a,c – [ ]a,c – [ ]a,c – [ ]a,c – [ ]a,c – [ ]a,c – [ ]a,c – [ ]a,c [ ]a,c – [ ]a,c – [ ]a,c – [ ]a,c – [ ]a,c – [ ]a,c – [ ]a,c – [ ]a,c

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				– [ ]a,c – [ ]a.c – [ ]a.c [ ]a,c.
9	VC-TO-122	On PMS displays, divisions C and D the circled box does not ever get an X in it. [ ]a,c. As noted by the customer on the simulator, having this box on these divisions when it is not driven does not make sense and could	Yes	**Initial screening**: Potentially disrupts operational analysis, decision making and action **Clarifying information from 5/28/15 RAI response:** T**h**e display configuration was changed between Simulator Factory Acceptance Testing, when this item was documented, and installation at the site. These items currently have an "N/A" in those fields which will not change state in that division. This potential error likely situation does not exist at VCS. This SDR item is being held open because a further change to this graphic and configuration is being considered for design BL8. **Staff conclusion**: • What is the intended use of the indication?

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
		lead to an error likely situation.		• Does N/A mean “not available” or “not applicable?” **Additional information available on 8/20/15 by Licensee** Q#1: The indication shows the function summary of each division (A, B, C, D) output to ADS stage actuation. There is a difference to the displays (as expected by design) between the A and B divisions and the C and D divisions because some outputs are only driven by specific divisions, not all divisions. When these graphics were originally set up – before delivery to the station – [ ]$_{a,c}$. The operators are trained to look at the RCS control screen, WPIS, and all 4 divisions of PMS to monitor the correct operation of the ADS valves. This change makes it easier for the operators to recognize that no change of state will ever be shown on divisions C & D. Q#2: N/A stands for Not Applicable.

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
10	VC-TO-128	MSR valve response during shutdown is incorrect and causes an undesired RCS temperature transient.	Yes	**Initial screening**: Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario. **Clarifying information from 5/28/15 RAI response:** This SDR item is not tracking a simulator issue, rather a current plant configuration issue which will occur unless the deadbands, and control gains on these controllers are changed. A procedure change implemented in BL7 has steps which eliminate the potential for this to occur. [How does the procedure accomplish this and why is this a better alternative that having the simulator model expected plant performance?] Updated controller setpoints will also eliminate it from being possible, even if the procedure was not followed. {When?] It is highly unlikely that an NRC exam scenario would be written which would require crews to perform the entire evolution of shutting down the turbine completely, including the automatic unloading of the MSRs as a normal or reactivity evolution. This would be an overly complex “Normal” plant evolution in an NRC exam scenario. [Is there anything in the guidance that precludes the scenario] **Staff conclusion**:(none offered yet) **Additional information available on 7/21/15:** Q#1: The procedure accomplishes this by taking the valves to manual and selecting them to “CLOSE” after the unloading sequence is complete, rather than relying on the valves to remain closed – but still in “AUTO”.

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				Q#2: The simulator is modeling the plant as currently configured. When the plant configuration is changed, then this will also be updated on the simulator. Q#3: Current expected delivery of new setpoints is tied to BL8 delivery. Q#4: NUREG 1021, rev 10, Appendix D provides some guidance for normal evolutions within the Operating exam. No specific guidance is provided to limit the duration of a normal evolution. Section 2. h., on page D-11 states that "A scenario should be designed to run approximately 60 to 90 minutes. However, this does not preclude scenarios taking more or less time". **Additional information available on 8/20/15 by Licensee** Fix scheduled for October 15, 2015 availability along with secondary plant tuning improvements.
11	VC-TO-134 Orig. list duplicates this deficiency #	When the Map and Migration Tools are set up so that each individual datalink has a unique entry in the configuration, the digital alarm points respond incorrectly when datalink failures are	Yes Changed to No based on better under-	**Initial screening**: Appears to limit the instructor's ability to input malfunctions or causes erroneous alarms. **Clarifying information from 5/28/15 RAI response:** VCS is currently using APP files to perform most malfunctions/overrides, which is an alternative way to get to the same results as using scripted malfunctions in the j-station.

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
		inserted. If a failure is inserted on the last datalink listed in the AsvDataLinks.xml file from the datalink package, all of digital alarm points will go into alarm. If a failure is inserted on any other datalink in that AsvDataLinks.xml file, none of the digital alarm points will go into alarm. The expected response is that only the digital alarm point associated with that datalink will go into alarm when a datalink failure is inserted.	standing of SDR	The use of APP files [verify "This" refers to APP files] is not impacted by this problem statement. This only impacts the ability of the simulator engineering organization to create and move new alarm points **Staff conclusion**: This simulator feature is not needed to support exams Q#1: This refers to "Map and Migration Tools".
12	VC-1410-09	RNS pump does not restart on DG Sequencer	No	**Initial screening**: This item has been fixed (cumm-effects lttr) **Clarifying information from 5/28/15 RAI response:** The SDR item is transparent to the students. This issue is currently being compensated by use of an APP file to start the RNS pump at the proper moment. **Staff Conclusion**: Reconcile difference in statements between letters. **Additional information available on 8/20/15 by Licensee**

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				This item has always been compensated for by the instructors using APP files. The earlier "Assessment of Aggregate affects of SDR list" document tracked the item as open in the individual item status, open while currently being modeled by use of APP files to compensate in the aggregate summary statement, then incorrectly stated it to be "fixed, and is tracking to closure" later in the same section. All later RAI responses correctly tracked the status as "open while being modeled by use of APP files".
13	VC-1411-03	Unexpected Main Turbine System alarm at [ ]$_{a,c}$ power	Yes	Could force exam scenario into undesired sequence **Clarifying information from 5/28/15 RAI response:** The unexpected Main Turbine System alarm is "LP Turbine Differential Expansion low 1". The alarm is repeatable. Receiving this alarm is not a simulator modeling issue, or a plant design issue. Currently, the setpoint is low enough that the alarm value is reached when performing a steady downpower from 100% to [ ]$_{a,c}$. The alarm value needs to be adjusted based on plant data. [Which data?] SCE&G training is currently defeating the alarm so that it does not impact operator training or examinations during normal anticipated turbine load changes. [what is the intended function of the alarm] **Staff conclusion**: (none offered yet) **Additional information available on 8/20/15 by Licensee** To be fixed as part of Aug 15th update.

Westinghouse Non-Proprietary Class 3

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				Q#1: Data for how much the turbine rotor actually expands during the start-up. Toshiba turbines [ ]a,c. Q#2: The alarm alerts the operators that the turbine rotor is expanding by a different amount that the turbine shell, which could result in turbine rubs or bearing challenges.
14	VC-1501-02	During performance of AP-MALF-01-2, LOCA Outside Containment, a decrease in CTMT pressure was noted. WR pressure went [ ]a,c. At the time this pressure decrease started, CTMT exhaust fans had started but had not aligned to VAS and VRS. During a RETEST it was noted that if radiation never gets high enough to align VAS/VRS to VFS but VAS flows lower enough to trip the fans. The situation with VAS ventilation continues to degrade ultimately leading to a start of VFS exhaust system aligned	Yes	**Initial screening**: Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario. **Clarifying information from 5/28/15 RAI response:** This is being tracked to determine if it is the correct plant system response if no operator intervention is taken. Currently, the simulator is responding as the plant is designed. If this condition were encountered in an exam scenario, then the crew will be expected to respond to these conditions. The exam validation process is used to. **Staff conclusion**: Response seems inconsistent. If issue is being tracked to determine if it is the correct system response how can one know that the simulator is responding as the **Additional information available on 7/21/15:** Q#1: The discussion of this item cited in Section 1 of this document stated that additional investigation was underway. This was because the current system configuration results in the fans running without a flowpath during this sequence until

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
		to CTMT. More investigation is needed to determine if this is proper system response.		the fans eventually trip, which the facility was questioning to be sure this was the case. After further discussion between SNC/WEC/VCS the simulator is verified to be functioning as the plant is designed. **Update as of 9/9/15**: Current simulator design is modeling the current plant design. WEC is correcting the implementation of the reference design to sequence flow path alignment with fan start in the Oct. 30 release
15	VC-1502-08	While training using IS-109, PZR Level went down in 2 of 3 training scenarios with the leak through the PZR safety. Actions prior to Failure - They had just started ramping down at [ ]a,c mw/min.	Yes	Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario. Indication is contrary to expected physical principles. **Clarifying information from 5/28/15 RAI response:** This SDR was written to investigate a one-time event which was observed during a training scenario that featured a Steam Space Pressurizer leak. For the one crew who had different response, they starting their downpower at a significantly different time than the other crews. For this scenario, the leak size starts small enough that the initial PZR level decrease due to RCS temperature decrease causes level to drop. As the steam leak size progresses in size, the surge line flooding phenomena becomes the larger affect, causing PZR level to rise. **Staff conclusion**: • The SDR indicates 2 of 3 scenarios contained the

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				deficiency. The clarifying information in the RAI response addresses only one. • Provide source document that describes PZR level, RCS temp response for small PZR safety leak. **Additional information available on 8/20/15 by Licensee** Q#1: The one scenario discussed is the only one that plant response was initially questioned. The plant, the simulator, and the crews responded as expected for the other 2 scenarios, so they were not discussed in the clarifying information provided on 5/28/15. The crew was expected to diagnose the problem, begin mitigation efforts, start a down power, and actuate Safeguards in response to a small Steam Space RCS leak before the plant degraded to the point that surge line flooding occurs. The one crew who saw the pzr level rise due to this phenomena were extremely delayed, so they were an outlier – not the other 2 crews. Q#2: There are currently no site specific studies to analyze the affects of a Pzr Safety leak on Pzr level. The site specific UFSAR discusses inadvertent opening of a Pressurizer Safety valve in section 15.6.1.1. The last sentence in the second paragraph in this section states that: “The average coolant temperature decreases slowly, but the pressurizer level increases until reactor trip”.
16	VC-1502-10	AO rods move inconsistently between tests.	Yes	Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario. **Clarifying information from 5/28/15 RAI response:** This SDR was written during the performance of the ANS/ANSI

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				3.5 test to perform a maximum possible upward plant ramp rate of 60mw/min. This maneuver is never expected to be performed in actual plant operation or in training settings. The normal plant power increases will be limited [ ]$_{a,c}$. The items are related to the previous items discussed in aggregate in this section (VC-TO-54, VC-TO-58, VC-TO-88, and VC-1502-11). As discussed there, the resulting interactions between the secondary plant and the primary plant during complex plant power changes are impacting test results.[specifically how? Do they cause the test to fail?] In other words, the aggregate impact of events which perturbate steady state conditions in the secondary plant affect the primary plant, as expected. [Then why is it impacting the test results?] This impact is in line with the differences between different license class crews performing the same exam scenario. [Again, why is it impacting the test results?] The plant is designed [ ]$_{a,c}$. If an exam scenario desired to add a malfunction to rod control so that motion was in the incorrect direction, or halted, or a rod was dropped, this can easily be accomplished by ensuring that a trigger for either AO rods or M bank rods would be met. Either case would exercise the same abnormal, and consider the same technical specifications. The SDR is written to track the eventual re-run of these tests when secondary plant tuning data becomes available which is expected to improve this condition.[re-running ansi 3.5 tests?

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				Doesn't this imply the initial tests were unsat?] **Staff conclusion** (none offered yet) **Additional information available on 8/20/15 by Licensee** Q#1: This SDR was initiated to document differences noted between performance of the repeated performances of initial performance of VC Summer Training Simulator Annual and Core Cycle Testing for unit 2A/B, IAW VCS-IST-001. The specific test run impacted was AP-OPS-T-007, Maximum Rate Power Ramp – designed to satisfy ANSI/ANS- 3.5-1998 section B.#.2.2, Transient Performance Test (7) – to perform a 60MWe / min power ramp decrease from 100% to 75% in 5 minutes – hold power at 75% for 4 minutes, then immediately ramp back up to 100% power at 60 MWe / min to 100% in the following 5 minutes. This rapid return to 100% power would never be performed in the plant. Because there are many plant controllers in the secondary and primary plant which need to respond to a plant transient of this magnitude, minor differences in the controller responses are sometimes allowing AO rods to respond before M bank rods. The test did not fail. It was passed with this SDR under discussion written as a discrepancy. Q#2: The impact of AO rods moving before and/or in series with M bank rods results in minor differences between the rate that RCS temperature is changed because the AO rods and the M bank rods do not have the same worth. This results in data that does not exactly match for duration of change, but do align for overall plant performance. Q#3: As stated in the response for question #2, the sequence of the movement of AO rods or M bank rods changes the rate of RCS temperature response to a transient. Q#4: No, this does not imply that the tests run were unsat.

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				When more secondary plant tuning is performed, then the response of the secondary to this transient is also expected to change, so this test will have to be re-run and Rod control response is expected to also need to be re-evaluated.
17	VC-1502-12	Pressurizer Water Level response during Safety valve malfunctions has variations in tests where a PZR Safety valve is opened, PZR Water level response is correct in direction and magnitude, but show inconsistencies in timing of maxima and minima.	Yes	Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario. **Clarifying information from 5/28/15 RAI response:** This SDR was written during SAT test VCS2-IST-0002, AP-MALF-01-5. This test checks plant response to a pressurizer safety failing open. During the performance of the test there are some variances in compensated Pzr level at the point in the event where the passive CMT injection overcomes the leak size so that pressurizer level recovers. There is a variance of ~ 60 seconds between the initiation of the full recovery of inventory, and there is a variance of ~ 5% between the highest observed Pzr level prior to level stabilizing. The minor differences in the timing of the inventory recovery and the highest observed Pzr level do not affect operator decision points during this accident sequence. **Staff conclusion**: • Without knowing cause how is it concluded that only minor differences can occur? ANSI 3.5 does not require a tolerance on plant parameters during malfunctions, just that parameters move in the same direction as those expected from the reference unit. The stated responses move in the direction expected and the variances do not introduce challenges to operational analysis, decision

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				making and action. **Additional information available on 8/20/15 by Licensee** Q#1: The differences in Pzr Level response have been tied directly to CMT injection flow. Given the passive nature of CMT "injection", the plant response is now concluded to be as expected. In all tests conducted, the station has only ever observed the repeatable, minor differences/oscillations as described in the SDR.
18	VC-1502-14	Following SG dryout, SG Wide Range level does not stay at zero. Level will oscillate between [ ]a,c eventually holding at 6%. This is unexpected as there is no mass being added to the SG. (NOTE --This [ ]a,c value is below the Normal CTMT conditions [ ]a,c used to state SG Wide Range level is "just on span").	Yes	**Initial screening**: Potentially disrupts operational analysis, decision making and action Could negatively impact the operating crew's ability to determine Secondary Heat Sink availability in FR-H.1, "Response To Loss of Heat Sink," and the decision whether or not to re-establish the SG as a heat sink in accordance with RNO step guidance, given that the direction is to NOT feed or steam any SG with wide range level less than or equal to [ ]a,c. The [ ]a,c value is close to the line. **Clarifying information from 5/28/15 RAI response:** Further analysis has been conducted on this SDR. During a Faulted SG condition, it was noted that SG levels initially decrease to between [ ]a,c where they oscillate in ~11 minutes. This level is below the lowest level that is used as any minimum level decision point in any EOP. At ~25 minutes, then levels then drop to 0% and remain steady. The SDR is tracking this item while checking with the vendor that this is expected. As noted in the deficiency description; [

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				]a,c so does not prevent execution of any EOP decision point. **Staff conclusion**: The RAI response has clarified that the duration of the oscillations. The staff remains concerned about the potential confusion introduced by the [a,c specified in the functional recovery procedure. Are there attributes of the indication displays that minimize this potential confusion? **Additional information available on 8/20/15 by Licensee** Q#1: The digital control room environment of the AP1000 control room makes this mistake less likely to occur. Unlike existing fleet control room designs where the crew would be looking at an analog meter face with a bouncing needle or at a chart recorder, the AP1000 crew will make this determination based on the digital value on the Ovation Control Screen, the digital value on the WPIS panel and the digital value fed directly into the Computerized Procedure System EOP step. In specific, CPS will indicate to the crew that they are [ ]a,c and direct them to the appropriate procedure flowpath. They would have to choose to deviate from the procedure guidance, the CPS recommendation and the data presented to determine that the level is actually greater than [ ]a,c. They also have only the small window of time between 11 minutes and 25 minutes in the accident to make this mistake – before the SG level drops to 0% and remains.
19	VC-1503-08 VC-1503-09 VC-1503-28	During ISV the crew had trouble determining CMTs Operating in both Recirc and Injection	Yes	**Initial screening**: Potentially disrupts operational analysis, decision making and action. Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
		modes due to indications observed. Manual DAS ADS Stage 1-3 & 4 actuation was not performed w/ [ ]a,c during a LBLOCA scenario where CMTs failed to actuate.		undesired complexity/distractions to the exam scenario.(pri 1 HED) **Clarifying information from 5/28/15 RAI response:** When a CMT is operating in the recirculation mode, and during the earliest stage of the injection mode, [ ]a,c. When this SDR was recorded there was no clear guidance for the crews to use to consistently differentiate between changes to CMT temperature instrumentation caused by changing Containment ambient conditions (such as during a LOCA environment), and the beginning of CMT operation. VCS has added an additional discussion to the background document for the EOP which evaluates this condition; E-0. What specifically was done and why was a procedure/training solution found to be better than an HFE design change? Additionally, when the SDR item was written [ ]a,c. [ ]a,c.

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				Staff conclusion: (none offered yet) **Additional information available on 8/20/15 by Licensee** In the circumstance where one ISV crew struggled with determining if any CMT was operating, they initially mistook a 0.1 degree F change in CMT upper temperature as evidence that the CMT was operating, without recognizing that a temperature change that small was more likely the effects of changing containment temperature on the indication. No other crew had this difficulty. IAW the conservative criteria that was set for early identifications of any hi level HED, this was given the status of HED 1 based on an isolated failure. Q#1: the background document for E-0, [

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				]a,c." Q#2: A procedure/training solution was initially chosen because only 1 ISV crew struggled with this, and in only 1 instance. This confusion has not been observed during any of the training or evaluation over the last 3 years which is ongoing at the station, so a change to CMT instrumentation did not appear to be warranted. Additionally, an improvement to the modeling of the CMT check valves has been implemented with the August 15th patch.
20	VC-1503-13	Placing RNS in service with RCS pressure greater than RNS design pressure. No interlock exists on RNS-V061 to prevent over pressurizing RNS and that Pressure and Temperature requirements shall be met prior to opening RNS-V061.	Yes	**Initial screening**: Listed as priority 1 HED which indicates WEC believes this is safety issue (pri-1 HED) **Clarifying information from 5/28/15 RAI response:** This item was identified during Westinghouse ISV activities. The valve identified, RNS-V061, is the CVS Purification Return Line Isolation. The simulator is currently configured as the BL7 Plant is designed. No final HED priorities have been assigned, however all potential priority 1 HEDs have been assessed for training needs analysis. [ ]a,c. Addition of an interlock here is a future plant enhancement which is under consideration. **Staff conclusion**: Found a V061A and V061B on DCD CVCS drawing but these were not CVS purification return isolations.

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				Does the current configuration of the simulator reflect the configuration approved in the Design Certification? **Additional information available on 8/20/15 by Licensee** Q#1: The valve in question is RNS-V061, which is found on Dwg APP-RNS-M6-001, rev 9 at location G-3. The valve is the CVS Return isolation valve. Q#2: Yes, the current configuration of the simulator is identical to the current plant design.
21	VC-1503-15	Failed to identify [ ]$_{a,c}$ which resulted in the CCS pumps running while cavitating due to low CCS surge tank level, resulting in frequent pump cycling, which would likely result in damage to the pumps.	Yes	**Initial screening**: Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario.(pri-1 HED) **Clarifying information from 5/28/15 RAI response:** This SDR is written to document 1 ISV crew who missed the alarm during a post reactor trip event. The other ISV crews successfully diagnosed and responded to the condition. The CCS low surge tank level alarm is currently a priority 3 alarm. This alarm priority is being increased to increase the visibility to the operators. **Staff conclusion**: ISV uses limited number of crews. Therefore stating that only 1 crew missed the alarm is not a persuasive argument. In any case the action to reprioritize the alarm addresses the issue and when this action is complete this issue will be considered not significant. **Additional information available on 8/20/15 by Licensee**

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				To be fixed as part of Aug 15th update.
22	VC-1503-16	Alarm response after certain events is difficult due to the number of alarms that are received, over 2 thousand in some scenarios.	Yes	Alarms place unplanned and probably unreasonable workload on the operators. Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario.(pri-1 HED) **Clarifying information from 5/28/15 RAI response:** While over 2,000 alarms are reached in some scenarios, not all of these alarms are of the same priority. In most cases, the number of significant priority 1 red alarms are equal to or less than that typically received in the control room of an existing fleet unit. Furthermore, the APS system provides much more ready information about any alarm than the standard existing fleet plant. [ ]a,c. None of these features are available at any existing fleet plant. Currently operators are trained and examined to [

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				]a,c. In addition, Operations rules of usage are established that set expectations for addressing alarms in order of priority: [ ]a,c. **Staff conclusion**: • Does not address the fact that operators had trouble managing alarms during the ISV even with alarm prioritization and information availability. **Additional information available on 8/20/15 by Licensee** To be improved as part of Aug 15th update.
23	VC-1503-21	When transferring to the RSR the left hand screen of the right station didn't work. This was a Westinghouse simulator issue. Though on simulator 2A it was noted that the Right hand station did not work when transferring to the RSR.	Yes	**Initial screening**: Supports Job Performance Measures **Clarifying information from 5/28/15 RAI response:** This SDR is written to evaluate an item identified during Westinghouse ISV activities. Transferring to the panel was not configured the same as the simulator. [What was the specific difference in configuration and why did it exist?] This item has been confirmed to not be occurring here and will be closed. **Staff conclusion**: • Is simulator 2A the Summer simulator? Of so then correct last sentence to reflect cause of failure and corrective action.

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				Additional information available on 8/20/15 by Licensee Q#1:The configuration only existed at the WEC simulator facilities because they do not have installed RSR panels like the stations do. Q#2: There was a mistake in this SDR entry. Although “2A” is the VS Simulator which can be transferred to the RSR, the problem never existed at the VCS simulator 2A. Every test to transfer control from the simulator to the RSR has worked successfully. This SDR is now closed after this performance was verified.
24	VC-1504-01 (Not on docketed list)	APS "Instrument Air" tile has no points assigned to it	Yes	**Initial screening**: Potentially disrupts operational analysis, decision making and action. It alarm points are established later then early exams require the student to apply more diagnostic skills than would be expected when plant design is finalized. **Clarifying information from 5/28/15 RAI response:** [ ]a,c. The SDR was written to track reassignment of some alarms to

The following SDRs require additional information (24 items: 23 new items + 1 repeated item)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				this tile. **Staff conclusion:** The clarification states that the larger tiles display status of important plant actuations. Therefore the tile for instrument air should be functional – particularly since alarm prioritization is part of the licensee's argument for why the alarm avalanche condition is acceptable. **Additional information available on 8/20/15 by Licensee** To be fixed as part of Aug 15th update.

The following SDRs had their significance changed during internal reviews that occurred subsequent to issuing the RAI. They need to be addressed by VC Summer. (6 items)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
1	VC-TO-52	DDS-PLM20-Y1 is cycling between Modes 2 and 3 when RX trip breakers are closed during startup	Yes	**Initial screening**: If this affects WPIS, then mode changes cause different components to be displayed on the WPIS. This would be quite distracting during a reactor startup. If WPIS is cycling between different displays, it adds distractions to an exam scenario. **Additional information available on 8/20/15 by Licensee** To be fixed as part of Aug 15th update.
2	VC-TO-131	Procedure MSS-101,	Yes	**Initial screening**: Simulator observations indicates that when

The following SDRs had their significance changed during internal reviews that occurred subsequent to issuing the RAI. They need to be addressed by VC Summer. (6 items)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
		Step 4.3.5 expected the crew to [ ]a,c. The same requirement is listed in the design document for GSS-M3-001. The system was only able to build pressure to a maximum of 2.1 psig. The plant seems to have all parameters stable except the procedure states to obtain the higher pressure than can be performed.		the DFT level dropped as part of a power change, this robbed auxiliary steam from the gland steam system (aux steam provides a steam blanked on the DFT), and condenser vacuum began to degrade. Evidently, this is due to the inability of the gland seal regulator to pass the required flow. In the observation, this was a significant distraction. **Additional information available on 8/20/15 by Licensee** To be fixed as part of Aug 15th update.
3	VC-1502-03	Unexplained SG Level rise during AP-OPS-T-004 test. During Audit of Simulator SAT performance, the Auditer found a previously unidentified issue. During APOPS-T-004, [	Yes	**Initial screening**: Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario. **Additional information available on 8/20/15 by Licensee** The SG indicated level rise occurs when the SG inventory shifts from the riser back to the downcomer. The SG downcomer level is usually lower than that in the rise. After the FW pumps stop, all water in the riser (due to reduction in natural circulation) flows back to the downcomer to balance out the level

The following SDRs had their significance changed during internal reviews that occurred subsequent to issuing the RAI. They need to be addressed by VC Summer. (6 items)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
		]a,c At this time all input and outputs from the SGs have been isolated for over 200 seconds. We suspect this is a model issue that has been previously worked on by WEC to address our VC-TO-49/50 and VNP 5633.		differences between the downcomer and the riser. [ ]a,c 1. [ ]a,c 2. [ ]a,c 3. [ ]a,c [

The following SDRs had their significance changed during internal reviews that occurred subsequent to issuing the RAI. They need to be addressed by VC Summer. (6 items)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
				]a,c [ ]a,c. [ ]a,c. The response is consistent with our understanding of the operating characteristics of recirculating steam generators. While the precise magnitude and timing of the mass redistribution in an isolated SG is uncertain, the simulator response is not reasonably expected to add undesired complexity/distractions to the conduct of exams.
4	VC-1502-15	During several runs of AP-MALF-20-1, "Main	Yes	**Initial screening**: Potentially disrupts operational analysis, decision making and action. Inaccurate SG process parameter

The following SDRs had their significance changed during internal reviews that occurred subsequent to issuing the RAI. They need to be addressed by VC Summer. (6 items)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
		Steamline Break Outside Containment" SG parameters show evidence of an unexplained damped oscillation approximately 1750 seconds elapsed time. This cannot be attributed to any control action.		indication (i.e., unexplained damped oscillations) could result in the mis-diagnosis of steps in the EOPs, with the potential to negatively impact an operating crew's ability to execute and properly transition between the EOPs. **Additional information available on 8/20/15 by Licensee** **Additional discussion provided by WEC: Consistent with plant design. Justification:** CMT injects cold water directly into the reactor vessel. ⌈]$_{a,c}$ GSE considers this transient a natural behavior as a result of the direct vessel injection.
5	VC-1504-02 (Not on docketed list)	PMS mimics in Ovation have several graphics that change division when using bottom links from a high level page.	Yes	**Initial screening**: Potentially disrupts operational analysis, decision making and action. **Additional information available on 8/20/15 by Licensee**

The following SDRs had their significance changed during internal reviews that occurred subsequent to issuing the RAI. They need to be addressed by VC Summer. (6 items)				
#	SDR #	Short Description	NRC Significant item? (Y/N)	Information
		CVS for example, When in PMSC or PMSD and select CVS, then Status, you will changed to PMSA.		To be fixed as part of Aug 15th update.
6	VC-1504-09 (Not on docketed list)	CVS-PT040 Control Logic functions listed in design documentation for BL7 that do not function as described.	Yes	**Initial screening**: Could force exam scenario into undesired sequence and trigger component failure assessment(s) and/or operator responses which would add undesired complexity/distractions to the exam scenario **Cumm-effects lttr** - concerns operation of a plant interlock during solid plant operation. At present, the students are presented a discussion of the conflicting information between vendor design documents concerning this operation. The current configuration does not allow demonstration of conditions which could trip a RCP during solid plant operation. **Additional information available on 8/20/15 by Licensee:** To be fixed as part of Aug 15th update.

Licensee response to items 40, 41, and 42 on the suspension of review letter:

NRC list #	VCS SDR #	Short Description

40		As the licensee notes in their RAI response, the computer support applications provided by (NAPs) would not be used for Job Performance Measures because they do not assess the applicant's knowledge. Calculations would be performed manually. This is why many of the discrepancies were considered to be not significant. However, NAPs provides data to the operator during event diagnosis and response. Given the number of NAPs discrepancies the staff concludes that they could impact operator workload in an inconsistent manner. The staff concludes that there needs to be a reduction in the number of NAPs related discrepancies including those already identified as significant.
NAPs and Graphics fixes to be implemented with the Aug 15th fix:		
1	VC-TO-09	Unidentified and Identified Leak rate always indicate BAD
2	VC-1411-06	Calorimetric Power Data points not displaying to at least 1 decimal point, as requested for by GOP-101
3	New	NAP RSA logic allows SR counts on WPIS to display high value even after failed channel is bypassed
4	New	Power Range B lwr detector failure not compensated for by RSA NAP
5	New	NAP for 1/M Intermediate Range does not work
6	New	Bank Sequence out of Sequence Alarm for 1 step during M1 and MD overlap
7	New	Mode 5/6 graphics Trend for Time to Boil: Units are provided in exponential minutes.
8	New	NAPs display issues: PST.TSM input screen inconsistent color coding

		Page 40004 has a typo – says PCS, but should be PLS Page 40005 PST page reads RX in, incorrect
	Additional Graphics fixes	
1	VC-TO-25	Graphic for RCS, 50308, shows outlet of RCS-V007C going to IRWST, but should go to RCDT
2	VC-TO-28	PMS Mimics on Ovation Screens
3	VC-TO-59	DRCS M bank rod control graphic
4	VC-1410-06	Pzr NR press does not indicate the bottom of scale indication (down triangle) on WPIS 2 for the mode 1-4 screens
5	VC-1504-03	Uncontrolled H/U or C/D light on Mode 5/6 CSFST WPIS Display does not indicate
6	VC-1410-2	DRPI Health Screen has alarms for Data Cabinet A and B crossed
7	VC-1410-3	DRPI Health Screen (1805) Incorrect Logic Cabinet Alarms
8	VC-1503-02	VWS-TE079 inlet temperature for VWS Low Capacity Chiller #2 is incorrectly identified as Low Cap Chiller 3 Inlet Temp
9	VC-1501-05	MB and MC rods are reversed on Graphic 1805
10	VC-1501-07	IDS Screens show inaccurate power supplies for Battery Charges and VRTs
11	New	Display 40023 units incorrect. The correction factors units should be % Power, vs. %.

12	New	WPIS downscale arrow on trend display for Tavg in mode 3/4 display missing
13	New	WPIS Tavg scale for primary trend starting scale is +/- 40F, but would be more discreet for operator use as +/- 0.5F
14	New	SSS Display 17600 shows all SSS effluents passing through SS0V20 or V021,
15	New	M Banks B & C Reversed on DRPI Health Screen
16	New	HSS Display does not include ESOP Discharge Pressure
17	New	CCS Screen issue
18	New	WRS graphic issue
19	New	Battery bank indications are mislabeled for EDS1, EDS2, and EDS4
20	New	screen 22101 needs indication of downstream and upstream voltage of the excitation transformer when synchronizing to the grid.
21	New	Safety Mimic Display for SGS-V255A and B indicates BAD following a SFW Isolation
22	New	Rod Withdrawal button un-highlights during continuous operation
23	New	HSS Display does not include ESOP Disch Pressure (SNC SCR-DR-6078)

41.	Provide documentation that the Westinghouse Electric Company's resolution of HED-1 discrepancies is consistent with the VCS conclusions provided in the Commission-approved simulator request and its supplements.			
HED Description (# trial failures of # trials performed)	**VCS SDR #**	**VCS Current Resolution Path**	**VCS CAS submittal discussion(s)**	**Westinghouse Recommended Resolution**
1. An issue placing RNS in	VC-1503-07	Revised attachment 2 of	Aggregate Assessment: Procedure	Westinghouse is revising RNS-101

41.	Provide documentation that the Westinghouse Electric Company's resolution of HED-1 discrepancies is consistent with the VCS conclusions provided in the Commission-approved simulator request and its supplements.			
HED Description (# trial failures of # trials performed)	**VCS SDR #**	**VCS Current Resolution Path**	**VCS CAS submittal discussion(s)**	**Westinghouse Recommended Resolution**
service during plant cooldown was experienced, which appears to be caused by the RNS 101 procedure attachments (i.e., which one to be used given the circumstances). (1 of 4)		RNS SOP (place RNS in standby) to include steps to re-open the DVI stop checks prior to placing RNS in service.	Change (pg 119)	"System Operating Procedure (SOP)". The procedures changes will add steps [ ]$_{a,c}$. The need for training on the revised procedure will be evaluated through the Training Needs Analysis (TNA) process. .
2. DAS-ADS-LOCA, "manual DAS ADS stage 1-3 and 4 actuation", was not performed [ ]$_{a,c}$. (1 of 4)	VC-1503-08	Enhance discussion of CMT operation in background document. Updated text for background document for E-0	Aggregate Assessment: Procedure Change (pg 120)	Westinghouse is revising the E-0, Reactor Trip Or Safeguards Actuation, Background Document to [ ]$_{a,c}$. This issue was also aggravated with simulator modeling of CMT check valves. The simulator model has been changed to enhance the circulation mode of the CMT
3. DAS-IRWST-INJ, "manual DAS IRWST injection actuation",	VC-1503-09	Tied to confusion with determining CMTs are operating. Fix is same as	Aggregate Assessment: Procedure Change (pg 120)	Westinghouse is revising the E-0, Reactor Trip Or Safeguards Actuation, Background Document

41.	Provide documentation that the Westinghouse Electric Company's resolution of HED-1 discrepancies is consistent with the VCS conclusions provided in the Commission-approved simulator request and its supplements.			
HED Description (# trial failures of # trials performed)	**VCS SDR #**	**VCS Current Resolution Path**	**VCS CAS submittal discussion(s)**	**Westinghouse Recommended Resolution**
was not performed [ ]a,c. (3 of 4)		item 2		to [ ]a,c. This issue was also aggravated with simulator modeling of CMT check valves. The simulator model has been changed to enhance the circulation mode of the CMT
4. The first attempt at actuating ADS Stage 4 from DAS was unsuccessful as the Operators did not properly operate the arm switch. (4'th trial, therefore 1 of 4)	VC-1503-10	Crews sometimes choose to actuate ADS stage 4 using skill of the operator vs. transitioning to the EOP, which resulted in some errors. Change the allowed list of skill of the operator tasks in OAP-103.4, EOP users guide	Aggregate Assessment: Procedure Change (pg 120) (note that this procedure change is specific to the VCS unit 2&3 conduct of Ops.	Train the operators on the I&C aspects of DAS and how to actuate squib components from DAS (per procedure).
5. REN-MAN03, "failure to recognize the need and failure to open recirculation valves to flood reactor cavity after core damage", was not performed within [	VC-1502-07	Revised OAP-103.4, EOP/AOP users guide to enter FR-C.1 and FR-C.2 (only) based on first indications CET are oscillating above 1200 – as opposed to waiting until sustained >1200, and revise F-0 background	Aggregate Assessment: Procedure Change (pg 35, 49, 115)	Westinghouse is revising the procedure background document to [ ]a,c. Provide training on this change to procedural guidance.

41.	Provide documentation that the Westinghouse Electric Company's resolution of HED-1 discrepancies is consistent with the VCS conclusions provided in the Commission-approved simulator request and its supplements.			
HED Description (# trial failures of # trials performed)	**VCS SDR #**	**VCS Current Resolution Path**	**VCS CAS submittal discussion(s)**	**Westinghouse Recommended Resolution**
]$_{a,c}$ (based on instantaneous CET > 1200 values). (2 of 4)		document similarly		
6. DAS-REN-MAN03, "failure to manually actuate DAS containment recirculation/IRWST drain for in-vessel retention (IVR) support", was not performed within [ ]$_{a,c}$ (based on instantaneous CET>1200 values). (2 of 4)	VC-1502-07	Revised OAP-103.4, EOP/AOP users guide to enter FR-C.1 and FR-C.2 (only) based on first indications CET are oscillating above 1200 – as opposed to waiting until sustained >1200, and revise F-0 background document similarly	Aggregate Assessment: Procedure Change (pg 35, 49, 115)	Westinghouse is revising the procedure background document to [ ]$_{a,c}$. Provide training on this change to procedural guidance.
7. VLN-MAN01, "Failure to recognize the need and failure to actuate the Containment Hydrogen Control System (VLS), given core damage following a LOCA", was not performed within the [	VC-1502-07	Revised OAP-103.4, EOP/AOP users guide to enter FR-C.1 and FR-C.2 (only) based on first indications CET are oscillating above 1200 – as opposed to waiting until sustained >1200, and revise F-0 background document similarly	Aggregate Assessment: Procedure Change (pg 35, 49, 115)	Westinghouse is revising the procedure background document to [ ]$_{a,c}$. Provide training on this change to procedural guidance.

41.	Provide documentation that the Westinghouse Electric Company's resolution of HED-1 discrepancies is consistent with the VCS conclusions provided in the Commission-approved simulator request and its supplements.			
HED Description (# trial failures of # trials performed)	**VCS SDR #**	**VCS Current Resolution Path**	**VCS CAS submittal discussion(s)**	**Westinghouse Recommended Resolution**
]$_{a,c}$. (4'th trial, therefore 1 of 4) [5]				
8. DAS-VLN-MAN01, "Failure to manually actuate the VLS using the DAS", was not performed within the [ ]$_{a,c}$. (4'th trial, therefore 1 of 4) [5]	VC-1502-07	Revised OAP-103.4, EOP/AOP users guide to enter FR-C.1 and FR-C.2 (only) based on first indications CET are oscillating above 1200 – as opposed to waiting until sustained >1200, and revise F-0 background document similarly	Aggregate Assessment: Procedure Change (pg 35, 49, 115)	Westinghouse is revising the procedure background document [ ]$_{a,c}$. Provide training on this change to procedural guidance.
9. RHN-MAN04, "Failure to recognize the need and failure to isolate the RNS system, given rupture of the RNS piping when the plant is at hot/cold shutdown conditions", was not performed within [ ]$_{a,c}$. (2 of 4)	VC-1503-11	Revised SDP-1 to move step 15 to step 4	Aggregate Assessment: Procedure Change (pg 120)	Westinghouse is revising procedure SDP-1 "Response to Shutdown LOCA" to evaluate a potential leak to the auxiliary building. These enhancements move the diagnostic step for a leak outside containment to an earlier step in the procedure.
10. Operator error (misdiagnosis) leading to ADS actuation when it was not needed. (1 of	VC-1503-12	Characterized as a 1 time HU error. Share OE with staff	Aggregate Assessment: Training (pg 120)	Train operators on faulted/ruptured SG indications, use of diverse indications, and desensitize to feel time pressures.

41.	Provide documentation that the Westinghouse Electric Company's resolution of HED-1 discrepancies is consistent with the VCS conclusions provided in the Commission-approved simulator request and its supplements.			
HED Description (# trial failures of # trials performed)	**VCS SDR #**	**VCS Current Resolution Path**	**VCS CAS submittal discussion(s)**	**Westinghouse Recommended Resolution**
4)				
11. Operator error: the crew attempted to place RNS in service with RCS pressure greater than RNS design pressure. (1 of 4)	VC-1503-13	Characterized as a 1 time HU error. Share OE with staff	Aggregate Assessment: Training, Possible future design change request (pg 121)	Train crews on system limitations and procedural guidelines.
12. Operator error: the crew failed to perform AOP-321 step to secure CVS pumps and RNS pumps with inadequate CCS cooling (3 of 4).	VC-1503-14	Enhance direction in procedures to provide more cueing that loss of SW AOP should continue to be processed while addressing CCS and affected loads	Aggregate Assessment: Procedure Change (pg 121)	Westinghouse is revising AOP-345, Loss of SWS to [$]_{a,c}$. Branching to other procedures is minimized in the early stages of diagnosis and in response, will reduce crew workload and also ensure equipment is protected.
13. Operator error where they failed to identify a [$]_{a,c}$ which resulted in the pumps running under cavitation conditions and cycling on and off many times, which would likely result in	VC-1503-15	Considering changing the priority of CCS Head tank low level from pri 3 to pri 1. Requires WEC support, so becomes a commercial issue.	Aggregate Assessment: Alarm Priority Change (pg 121)	For the CCS surge tank level alarm, Westinghouse increased priority of the CCS Surge tank level alarm from priority 3 to priority 1. A prioritization and rationalization effort has been applied to the Alarm Presentation System to decrease operator workload and continues to provide the notification of abnormal plant

41.	Provide documentation that the Westinghouse Electric Company's resolution of HED-1 discrepancies is consistent with the VCS conclusions provided in the Commission-approved simulator request and its supplements.			
HED Description (# trial failures of # trials performed)	**VCS SDR #**	**VCS Current Resolution Path**	**VCS CAS submittal discussion(s)**	**Westinghouse Recommended Resolution**
damage to the pumps (a defense in depth system). (1 of 4)				conditions to the operators. .
14. The quantity of alarms that occur during a plant transient (such as heatup, Rx startup, Rx trip, turbine trip) and potentially mis-assigned alarm priorities have resulted in delays or missed recognition of alarms requiring operator action. (missed or delayed recognition of alarms in 2 trials, 2 of 79)	VC-1503-16	Current EOP/AOP/ARP [ ]$_{a,c}$. An APOG/VCS/SNC alarm workload team is currently working this issue	Aggregate Assessment: Implementation of Alarm Re-prioritization and consequencing (pg 4, 45, 121)	A prioritization and rationalization effort has been applied to the Alarm Presentation System to decrease operator workload and continues to provide the notification of abnormal plant conditions to the operators.
15. Rx was manually tripped following indication that shutdown bank 3 (SD3) indicated [ ]$_{a,c}$. This prevented the scenario from being completed and objectives from being met (thus P/F criteria).	VC-1503-17	Procedure change in progress to provide directions in this event.	Aggregate Assessment: Procedure Change (pg 121)	Westinghouse has revised GOP-108, "Reactor Startup Mode 3 to 2." [

41.	Provide documentation that the Westinghouse Electric Company's resolution of HED-1 discrepancies is consistent with the VCS conclusions provided in the Commission-approved simulator request and its supplements.			
HED Description (# trial failures of # trials performed)	**VCS SDR #**	**VCS Current Resolution Path**	**VCS CAS submittal discussion(s)**	**Westinghouse Recommended Resolution**
(1 of 4)				]a,c.

42	Include all open discrepancy reports when the docketed list of simulator discrepancies is submitted.

Current SDR list, as of xx/xx/2015:

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			STATUS OPEN						
VC-1505-01	5/8/2015	VBS-MY-Y01 Soft Control Feedback does not work.	VBS-MY-Y01 (MCR Operator Work Area Elec Htr) Soft Control Feedback does not work. When ENABLE is selected the action does occur, but the feedback to the softconrol does not change to [ ]$_{a,c}$ as expected. [ ]$_{a,c}$ light in upper left corner of display box does illuminate as expected.	VBS	Open	5/8/2015			Screened out - see table in Agg Assemnt study
VC-1505-02	5/22/2015	LAN LEFT WPIS erratic	LAN LEFT WPIS on 2B sim was swapped from WPIS-9 and Paul P replaced xxxxxxx cards. Initally operation appeared satisfactory, then a different failure mode appeared (dark blue sections). More cards are on order.	OCS	Open	5/22/2015			Screened out - see table in Agg Assemnt study
VC-1505-03	5/29/2015	Spurious ADS Stage 4 actuation does not respond as expected	CTMT Pressure rise on spurioius actuation of ADS-4 squib valve is excessive. Both loops tested, loop 1 RCS-V004A opened at one minute in 100% power IC produced a peak CTMT pressure of [ ]$_{a,c}$ psig and was still over 50# at one hour point. (Note ADS 1-3 CMT level point was reached) Loop 2 test of RCS-V004B caused CTMT pressure of go out of bonnds at [ ]$_{a,c}$ psig before ADS-1-3 actuation reached.	PXS	Open	5/29/2015			VNP #6272

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
VC-1505-04	5/29/2015	Trend screen plots wrong	Some Navigation Trend Group displays show the wrong trends. TR-Loop Delta T is displaying Tcolds and TR-RCS Temp is displaying Pressurizer steam and liquid temps.	OCS	Open	5/29/2015			Screened out - see table in Agg Assemnt study VNP #6189
VC-1505-05	5/29/2015	ECS penetration temperature reading off scale low	ECS Penetration Temperature reading off scale low on display 22503. This is for the penetration to containment for the power cables for the RCPs as indicated on ECS-TE001A/B and TE002A/B which currently show the electrical penetration temperature as 0 deg F "V". The temperature should be reading something slightly higher than the ambient conditions.	ECS	Open	6/23/2015		Date TBD	VNP CAS Enc 9-IN AG To be FIXED w/ later release VNP #6103
VC-1505-06	5/29/2015	WRS-V008 not connected to model	WRS-V008 is shut in the current 100% IC. With this valve shut WRS-MP-01A and WRS-MP-012 should not operate. Opened and closed V008 with no effect on WRS-MP-01A discharge pressure of check valve indication(in model)	WRS	Open	5/29/2015			Screened out - see table in Agg Assemnt study VNP #6098

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
VC-1505-07	5/29/2015	RCP stator temperature indication off scale low at lower speeds	RCP Stator Temperature indication is off scale low at lower speeds. With RCPs at 50% speed, the stator temperature (RCS-TE271, 272, 273, 274) indicate off scale low of 50F 'V'. This does not appear to be a vaild temperature as the CCS temperture is 72F, SG cubicle temperture is 72F, and bearing temperture is 82F.	RCS	Open	6/23/2015		Date TBD	VNP CAS Enc 9-IN AG To be FIXED w/ later release VNP #6071
VC-1506-01	6/4/2015	Rod Withdrawal button un-highlights during continuous operation	Description - During extended rod withdrawals during startups it was observed that while holding the rod withdrawal button (UP) down that the button would un-highlight and momentarily [ ]$_{a,c}$ even though the button was still depressed. The UP ARROW would [ ]$_{a,c}$ the entire duration. Rod motion was still occurring. SOS Comments - validated 6/4/15 mgs Duplicate to WEC T/O item - VC-TO-103 - which will be closed and we will track this item.	PLS	Open	6/23/2015		8/14/2015 (41)	VNP CAS Enc 7-41 VNP CAS Enc 9-IN AG To be fixed VNP #5584

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
VC-1506-02	6/4/2015	CMT WR Level Indications go Bad Quality	WR CMT indications shift to Bad Quality once ADS 1-3 Actuate. Prior to this they would toggle BadQ intermittently, but after ADS 1-3 they stayed BadQ. The BadQ status is on indications PXS-LT009A/B & -LT010A/B (on PXS Supplemental Ind. Screen) and DDS-RSA11-L1 & DDS-RSA13-L1 (on WPIS screen 60017). [ ]a,c SOS comments - validated the BAD Q for CMT WR Calc points during a HL LOCA (RCS06C) after ADS-1-3 actuation. Verified the non-CALC points stayed GOOD during the event. 6/4/15 mgs	PLS	Open	6/23/2015			VNP CAS Enc 9-IN AG VNP #6217

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
VC-1506-04	6/18/2015	DHC Summary - Assembly Move NAP Function - Not Functional	DHC Summary - Assembly Move NAP Function - Not Functional -- DDS-AP-DHC-STATUS is INACTIVE when MOVE buttons are available. When STATUS is ACTIVE the MOVE buttons are grayed out. (unusable)	PLS	Open	6/23/2015			VNP CAS Enc 9-IN AG VNP #6022
VC-1506-05	6/18/2015	WLS-MP-08C will not pump monitor tank C	WLS-MP-08C will not pump monitor tank C - Tank does not pump down below 37 inches.	PLS	Open	6/23/2015		Date TBD	VNP CAS Enc 9-IN AG To be FIXED w/ later release VNP #6068
VC-1506-12	6/24/2015	Erroneous NAP RSA behavior	Description - The SR counts on the WPIS displays (main, trends, and safety functions) was still showing an abnormally high value even after we placed the failed Channel B detector in bypass. This is because the [ ]$_{a,c}$ SOS Comment - we concur with this statement. The NAP RSA function	NAP	Open	7/7/2015		8/14/2015 (8)	VNP CAS Enc 7-8 VNP CAS Enc 9-IN AG To be fixed VNP #6169

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			does not "toss out" an instrument that does not agree with the other inputs as PMS and Ovation does. mgs 7/7/15						
VC-1506-15	6/24/2015	PR B lower detector failure is not compensated for by the RSA NAP	A PR B lower detector was failed high and the NAP RSA for Power Range Power did not eliminate this input causing an erroneous PR PWR reading on the WPIS. SOS Comment - we concur with this statement. The NAP RSA function does not "toss out" an instrument that does not agree with the other inputs as PMS and Ovation does. mgs 7/7/15	NAP	Open	7/7/2015		8/14/2015 (10)	VNP CAS Enc 7-10 VNP CAS Enc 9-IN AG To be fixed VNP #6621
VC-1506-16	6/24/2015	NAP for 1/M Intermediate Range does not work	The intermediate range 1/M plot in the NAP does not work. Once P-6 was blocked and source range de-energized, the operator no longer had a 1/M plot generated. SOS comment - performed Rx Startup and found slightly different results. IR ICCR NAP did function in a limited fashion. All divisions	NAP	Open	7/7/2015		8/14/2015 (11)	VNP CAS Enc 7-11 VNP CAS Enc 9-IN AG To be fixed VNP #6089

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			calculated correctly, but only Div C had good quality output. The others were POOR quality. Does need some work. mgs 7/7/15						
VC-1506-18	6/24/2015	SSS Display # 17600 incorrect	Display 17600 indicates that all SSS effluents pass through either SSS-V920 or SSS-V921. This is incorrect. The sample effluents from the DST and FW Heater connect downstream of these valves prior to entering the Sample Recovery Tank SSS-MT-01. This was verified against the P&ID. SOS comment - we agreee - mgs 7/8/15	DDS	Open	7/8/2015		8/14/2015 (20)	Screened out - see table in Agg Assemnt study To be fixed VNP #5644
VC-1506-25	6/24/2015	CCS Screen issue	Screen 17101: CCS header flow given in scientific notation. Its desired to have standard units. SOS comment - verified CCS-FT-101-1 has wrong display units. Should be standard display gpm. CCS-FT101-2 display correctly but is not used on main CCS graphic. mgs 7/7/15	DDS	Open	7/7/2015		8/14/2015 (28)	Screened out - see table in Agg Assemnt study To be fixed VNP #6160

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
VC-1506-33	6/24/2015	WPIS display for VARs	WPIS display has VARS rather than MVARS on Generator Output. SOS Comment - verifed the above statement true. The point used for this graphic is ZAS-MG-01-VAR which also had VAR designated at its EU field in Point Info. This also needs to be changed. mgs 7/7/15	DDS	Open	7/7/2015			VNP CAS Enc 9-IN AG VNP #6190
VC-1506-39	6/24/2015	Tracking issue for rod step sound problems	During outward rod motion, the audible step counter randomly had an extra second pause in it with rod motion continuing. Additionally, rods were stopped at SD3 bank was stopped at 130 steps to ensure plant response. When attempting to restart rod motion, outward rod motion happened for two clicks prior to rods responding graphically. SOS Comments - verified this does occur infrequently by talking to OPS. mgs 7/8/15	PLS	Open	7/8/2015			VNP CAS Enc 9-IN AG VNP #6186

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
VC-1506-40	6/24/2015	Received Bank Sequence Out of Sequence Alarm	During plant shutdown IAW GOP-102 received Bank Sequence Out of Sequence (DDS-RSU01-X0) alarm. Alarm came in just after rod bank M1 started stepping in while in Auto control. The only oddity was that MD demanded position was -1 step vice 0 steps. Unable to pull a signal diagram or open Application Monitor form this point. Motion for bank M1 began once the proper 12 step overlap had occured from MD to M1; before MD stops moving the out of sequence alarm comes in. SOS Comment -- Bank Out of Sequence alarm did come in when M1 started stepping. M1 and MD did appear to have proper overlap. Application Monitor was able to be pulled up from the point information. The alarm cleared when MD reached 0 steps. Suspect alarm to be due to a small time delay in rod stepping. mgs 7/9/15	PLS	Open	7/9/2015		8/14/2015 (19)	VNP CAS Enc 7-19 VNP CAS Enc 9-IN AG VNP #6259

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
VC-1506-41	6/24/2015	Urgent Alarm during Case 2 CRE at 90% Power	During validation of JPM AP-LT-JP-SOP-101-001, we set the plant at 90% (IC 102) and performed a Case 2 CRE per the SOP. MA is stepping out and MD is stepping in, as TAVE [ ]a,c stepping in for TAVE control, an Urgent alarm is generated. I believe this is because the moment the "Adjusting TAVE" light illuminates on Screen 11183, there is still a momentary demand for MBank movement. Multiplexing failure is when there are multiple rod banks that have movement demand, and this generates an Urgent alarm. SOS Comment - we were able to recreate this event here. mgs 7/9/15	PLS	Open	7/9/2015			VNP CAS Enc 9-IN AG VNP #6267
VC-1507-07	7/9/2015	After VES actuation, MCA pressure never builds up as designed	VES maintains a small positive pressure inside the Main Control Area (MCA) and is regulated via VES-D001A/B which cycle to maintain a minimum of [ ]a,c WG. Both the SDS and 3B maintained [ ]a,c WG after VES actuation, with some spikes in pressure to 0.005" WG. In either case this is not per design of VES-	VES	Open	7/14/2015		Date TBD	To be fixed VNP #5945

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			M3-001 to meets is safety related function. --Normally VBS maintains [ ]a,c WG as read between the MCR and the corridor as read on the VES-PDT-004A/B which is the nominal pressure. Low alarm is [ ]a,c and a high alarm is [ ]a,c WG. SOS Comment - saw the same response here. Pressure on VES-PDT004A/B after MCR isolation varied from [ ]a,c. wg. This is below the [ ]a,c limit stated in APP-VES-M3-001, Rev. 3. mgs 7/14/15						
VC-1507-09	7/9/2015	Insufficient PCS flow through single drain line	PCS provides sufficient flow when all drain paths are available. However, the model only provides [ ]a,c of the required flow when only one drain line is available (per safety analysis). FT003 provides [ ]a,c gpm, FT004 provides [ ]a,c gpm, FT002 provides [ ]a,c gpm, and FT001 provides [ ]a,c gpm when the only flow path available is through V001A. At this condition, the calculation note states we should be observing [ ]a,c gpm vice the [ ]a,c gpm	PCS	Open	7/9/2015		Date TBD	To be fixed VNP #6013

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			we are getting. The flows are nearly identical for V001B and V001C. The starting condition is with the PCCWST at 98.9% and at 68.1 deg-F. SOS Comment - our PCS flowrate matchs VNP - mgs 7/9/15						
VC-1507-10	7/9/2015	Investigate reason IDSA/B/C/D-DU-1-VAC reads 205Vac	Ovation screen 22703 conflicts with the volts from the inverter. The screen identifies the IDS inverters as 120VAC yet instrument IDSA/B/C/D-DU-1-VAC reads 205VAC. Investigate to determine proper voltage across IDS inverter. SOS Comment - APP-DU01-Z0-001 Rev 4 states the APP voltage at [ ]$_{a,c}$ The China plants hace [ ]$_{a,c}$ Vac. mgs 7/14/15	IDS	Open	7/14/2015		Date TBD	To be fixed VNP #6024
VC-1507-11	7/9/2015	VBS-D201 does not fail close upon a loss of power	Upon a loss of power to VBS-D201 the damper does not reposition. Per APP-GW-E0X-001, Rev 1, the power supply is [ ]$_{a,c}$ When this bus is de-energized, by removing all power from [ ]$_{a,c}$ as stated in APP-VBS-M3-001, Rev D, Section 7.2.6. When ES-1 is de-energized	ECS	Open	7/9/2015		Date TBD	To be fixed VNP #6042

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			intially D201's component status box (left of indication) will flash but the damper will not move; after this it will not respond to commands. SOS comment - same results as VNP mgs 7/9/15						
VC-1507-12	7/9/2015	DWS-LT006 has insufficient range	DWS-LT006 is the level indication for the CST. This spans [ ]a,c per APP-DWS-M3C-101. However, the calc note for DWS (APP-DWS-M3C-002) has the high 2 alarm at [ ]a,c. This is a vital alarm because it is designed to give operators time to determine why the CST is so full before it overflows to a drain. Overflow will occur at [ ]a,c. mgs comment - concur with additional info - control setpoint should be [ ]a,c, on SIM [ ]a,c. No HI-2 alarm on SIM, stated value is [ ]a,c. SIM has Hi-1 alarm at [ ]a,c.	DWS	Open	8/20/2015			VNP CAS Enc 9-IN AG
VC-1507-13	7/9/2015	VFS Containment Purge and Exhaust Valves do not	While attempting to identify system level surveillances that could be used as part of integrated scenarios, VFS-801 Rev. A was reviewed to determine if it was	VFS	Open	7/9/2015		Date TBD	To be fixed VNP #6110

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
		close in required time	capable of being performed. Contrary to other system surveillances that performed valve stroke tests the data sheet actually had the TS time limit filled in. Upon review of the TS basis for LCO 3.6.3 it was identified that VFS-V003/004/009/010 must close within [ ]$_{a,c}$ seconds. Currently all valves take a minimum of [ ]$_{a,c}$ seconds to close. SOS comment - same results as VNP mgs 7/9/15						
VC-1507-16	7/9/2015	No change in current indication on ECS-EA-1333	During V&V for 6242, the current variable ECSIECSEA1333_42IA was at 0 amps whether the feeder breaker was open or shut. The loads were dropping as expected, but the current point was at 0A. SOS Comment - verified this point never changes from 0 AMP - no change from 100% to LOOP. mgs 7/15/15	ECS	Open	7/15/2015		Date TBD	To be fixed VNP #6276
VC-1507-18	7/9/2015	Inadequate indication on IDS_-DT-1-VAC	The voltage regulating transformer (IDS_-DT-1) should take 480V and step-down to 120V. The indication (IDS_-DT-1-VAC) reflects a value of approximately 253V, instead of ~120V per APP-IDS-E0C-002, Rev. 0.	IDS	Open	7/10/2015		Date TBD	To be fixed VNP #6401

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			SOS Comments - verifed same issue here. Mgs 7/10/15						
VC-1507-20	7/9/2015	EDS Static Transfer Switch Operation	During a loss of All AC casualty the EDS batteries begin to discharge, when the inverters output reaches [ ]$_{a,c}$ of their nominal value the EDS static switch transfers to its alternate position which in this case is a de-energized AC bus. Based on discussions with multiple SMEs the consensus is that during the mentioned condition the static switch should not reposition. SOS comment - we found the same things here. mgs 7/10/15	EDS	Open	7/10/2015		Date TBD	To be fixed VNP #6639
VC-1507-25	7/10/2015	WPIS RCS inventory screen issues	The WPIS RCS Inventory screen has reference level lines for HL top and bottom which appear incorrect. They are only [ ]$_{a,c}$ apart. It is, however a faithful reproduction of the chart in GOP-114. The procedure and display both need to be looked at. Issues found in calc notes, procedure and display. DCP 4842 reserved to correct documents and graphics. SOS Comment - we concur. mgs 7/16/15	DDS	Open	7/16/2015			VNP CAS Enc 9-IN AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
VC-1507-26	7/10/2015	Demineralized Water Feed Pump A and B (DWS-MP-01A/B) Issues	"According to the DWS SSD (APP-DWS-M3-001, Rev D) these pumps should [ ]a,c. However, this is not the case in the simulator since there is no poke available for the operator to use and the local method is not modeled correctly. SOS Comments - According to APP-DWS-M3C-100, Rev. 5, Table 5.1.1-2-3, DWS-MP-01A(B) [ ]a,c and this is the note: "Electrical interface scheme will be developed after information received from vendor. Vendor to provide motor MP-01A/B fed from contractor or Breaker." [ ]a,c, Change status to OPEN based on SIM model. mgs 8/21/15	DWS	Open	8/21/2015			VNP CAS Enc 9-OUT AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
VC-1507-38	7/10/2015	CNMT Recirc Actuation for Div C and D not visible on PMS ESF Screen	While validating Integrated scenario 12, it was noticed that once CNMT Recirc was actuated the actuations for Divisions C and D did not have the white box with an X on the ESF Act Status Screen for PMS or the Non-Safety Operational Overview screen (33020). The individual PMS division screen for CNMT Recirc actuation (IRWST/INJT Recirc) did show that it had been actuated on all 4 divisions. SOS Comment - same response at VCS - mgs 7/14/15	PMS	Open	7/14/2015			VNP CAS Enc 9-IN AG
VC-1507-39	7/10/2015	CVS-V094 Power Failure	CVS-V094 does not [ ]a,c upon a loss of power to [ ]a,c as expected. Based upon information in APP-PMS-J3-379 and AOP-336 this AOV should [ ]a,c upon a loss of power to the solenoid. SOS comment - same here. Mgs 7/16/15	PMS	Open	7/16/2015			VNP CAS Enc 9-IN AG
VC-1507-41	7/10/2015	Letdown Tuning	[ ]a,c	CVS	Open	8/22/2015			VNP CAS Enc 9-OUT AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			SOS comments- VCS machine operates in similar manner if letdown is initiated without makeup flow in progress, [ ]$_{a,c}$ which is the current design. This will be considered as an enhancement. 8/22/15 aw						
VC-1507-42	7/10/2015	Tuning of VBS required	During MCR Purge, the VBS AHUs 2A and 2B started tripping out and swapping trains repeatedly. The system does not seem balanced as flows never stabilize. SOS comment - same results here mgs 7/16/15	VBS	Open	7/16/2015			VNP CAS Enc 9-IN AG
VC-1507-43	7/10/2015	Polisher Bypass valve control	CPS-V001 (CDS Polisher Bypass Valve) Setpoint controls are confusing. The procedure (CPS-101) directs placing the controller in auto and never has a setpoint to control to. The current setpoint is set at the high end of the scale, so the bypass valve will never modulate closed. The calc note states that signals will be set the	CPS	Open	7/15/2015			VNP CAS Enc 9-IN AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			flow based on CDS header and polisher flow. No setpoint is determined. SOS comment - concur with statement but this is a procedure issue. Controller does not appear to have anything unique. mgs 7/15/15						
VC-1507-45	7/10/2015	Primary trend screen rendering	Primary Trend Screens: when a second screen was rendered by RO B, the trends indicated different values between the two for Loop Tcold and RNS flow. When selecting a WPIS to print screen, selected trends may or may not spike and possibly also experience a loss of the historical data. SOS Comment - could not reproduce the 2nd trend issue, however when Print is selected from a WPIS trend there is an issue. IF you print WPIS trends when the Mode you are IN does not match trends, then data is lost. This does not happen if Trends are aligned to current mode. mgs 7/15/15	DDS	Open	7/15/2015			VNP CAS Enc 9-OUT AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
VC-1507-46	7/10/2015	Default trend screen color	Trend screen. The yellow popup background makes some of the resident text unreadable. This occurs when you hold the cursor on the trend and the parameters are displayed in a popup box. The background color of the box is off white, so lighter colored text is hard to read. SOS comment - this is true and also makes it necessary to change the color of #1 point before you print a chart with out black background. mgs 7/13/15	DDS	Open	7/13/2015			VNP CAS Enc 9-OUT AG
VC-1507-48	7/10/2015	During Turbine Trips, Pri 4 controller faults for Drop 21 and 34 are received	While performing Alarm Avalanche evaluation, noted Priority 4 alarm for Controller 34 (Drop 34) was occuring for Turbine Trips from 100%, 75% and 50% power. A Controller 21 (Drop 21) alarm occured after the Turbine trip from 100% power. During Reactor Trip scenarios, Drop 34 alarmed at all powers and Drop 21 never alarmed. SOS Comment - agree with all statements except last sentence. During RX Trips, we got alarms on both Drop 21 and Drop 34. Drop 34 alarms were listed in WEC TO	TCPS	Open	7/13/2015			VNP CAS Enc 5 VNP CAS Enc 9-IN AG Aug patch

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			items(VC-TO-129) and Drop 21 alarms appear to be related. Each card that alarms has a MW input to TCPS which goes to [-3]$_{a,c}$ after the Turbine Trip. OPEN just in case WEC has a timing or scaling resolution but the current response could be correct. mgs 7/13/15						
VC-1507-52	7/10/2015	PCS Indications – Inconsistent naming	The indications for containment pressure are named differently on various screens and do not match the naming scheme of the APP-PCS-GJX-400, PCS Component Nomenclature List. On the Critical Safety Function Screens (60030, 60031) the two ranges of containment pressure indication are shown as "ExtR" and "NormR"; I'm assuming this means Extended Range and Normal Range. On the PCS graphics screen, 12800, the same indications are shown as "NARROW RANGE" and "WIDE RANGE". On these nomenclature lists they are shown as "Ctmt Press" and "WR Ctmt Press". Recommend using "NR Ctmt Press" and "WR Ctmt Press" on both graphics screens. Also recommend finding the controlling document for the	DDS	Open	7/15/2015			VNP CAS Enc 9-OUT AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			creation of those graphics screens to determine if the verbiage is specified there. SOS comments - above statements are confirmed. mgs 7/15/15						
VC-1507-53	7/10/2015	Any Rods at Bottom Alarm	The "Any Rods at Bottom" alarm is actuating anytime rods are being driven through [ ]$_{a,c}$ steps. Based on APP-PLS-J1-023 Rev 2 3.1.2 R16 [ ]$_{a,c}$. The WEC ARP for this alarm, RM-ANYRODSBTTM-ALM, also has verbiage to this effect (APP-PLS-GJP-401 pg. 611) SOS Comment – ARP [ ]$_{a,c}$. mgs 7/15/15	PLS	Open	7/15/2015			VNP CAS Enc 9-IN AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
VC-1507-54	7/10/2015	Potential issue with DG Sequencer	According to APP-ZOS-E0C-001 (Onsite Standby Power System Diesel Generator Sizing Calculation) Rev 1, the following busses should get re-energized by the sequencer at Load [ ]a,c Recommend investigating this issue and fix if appropriate. SOS comment - above statements true. Observed loss of ES-1 and 2. Logic not complete for ECS-ET-xxxx control, Also [ ]a,c.	ECS	Open	8/22/2015			VNP CAS Enc 9-IN AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			mgs 8/22/15						
VC-1507-55	7/10/2015	Possible modeling and/or Ovation issues with WGS Sample Package MS-01 AT-032 (AE032)	"Per drawing APP-MS27-E5-001, APP-MS27-M6-001, APP-MS27-VMM-004 pages 20 & 354, APP-WGS-MC3-101 page 16, H2 monitor AT032 (AE032) provides only a [ ]a,c. Ovation drawing 16100 shows WGS-AT032 as having [ ]a,c. This [ ]a,c is inferred when looking at APP-MS27-M6-001, APP-WGS-M3C-101 page 23, and APP-WGS-M6-001. However per APP-MS27-VMM-004 page 354, AE032 provides only a [ ]a,c. SOS Comment - concur with above statements. Conflicting documentation exists. Currently exists as [ ]a,c.mgs 7/15/15	WGS	Open	7/15/2015			VNP CAS Enc 9-IN AG
VC-1507-58	7/10/2015	Units for Division D RCS Tavg has wrong units	PMS Screen 000005 for RCS variables has incorrect units for Division D RCS Average Coolant Temperature for l cold leg 2B. Indication is in % Span, should be in degrees F. This is also seen on the PMS mimic displays in PLS. Point: PMSD-RCTA (2B)	PMS	Open	7/13/2015			Screened out - see table in Agg Assemnt study VNP #6752

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			SOS Comment - our PMS screens are correct however the mimics are wrong as described above. mgs 7/13/15						
VC-1507-61	7/10/2015	OPDMS AFD Screen (32400) does not update	OPDMS AFD Screen (32400) does not update correctly. The point used to indicate Current AFD does not move and always indicates AFD is in the middle of the band at 100% power SOS Comment - target AFT setpoint value does not change off from 7 currently. The "blue dot" does move with actual AFD. mgs 7/13/15	NAP	Open	7/13/2015			Screened out - see table in Agg Assemnt study VNP #6791
VC-1507-67	7/14/2015	Unexpected response from SWS-PY-S06A on loss of power	During ANSI ANS-3.5 test AP-MALF-03-13, ECS-EK-12 experienced a ground fault and all loads off the bus lose power. Part of the test is to cycle those components which are off and in automatic to recieve the no feedback status verifying loss of power. The [$]_{a,c}$ When cycled, the strainer started. This is an unexpected	ECS	Open	7/17/2015		Date TBD	To be fixed VNP #5661

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			response since its power supply was lost. Investigate power supply of SWS-PY-S06A. SOS comment - verified SWS-PY-S06A does not lose the ability to stroke when power lost [ ]$_{a,c}$ -- VNP has fixed this issue. mgs 7/17/15						
VC-1507-69	7/31/2015	GCF for WGS-AIT031 and 032 do not work.	Global Component Failures for WGS-AIT031 and 032 do not work. All 3 options were tried for both channels with no effect.	WGS	Open	7/31/2015			Screened out - see table in Agg Assemnt study
VC-1508-11	8/3/2015	WRS sump pump B does not indicate proper discharge pressure	"WRS sump pump WRS-MP-01B indicates a low pressure when pumping with an automatic start signal. This is evident when a leak is inputed that fills the WRS sump (such as a RNS leak). The ""A"" pump has proper discharge pressure, but ""B"" does not indicating low pressure in alarm. If the ""A"" pump is taken to manual and secured, the ""B"" pump still does not develop proper pressure. (Note: this has been seen in the past on other sump pumps, and noted it was always the ""B"" / alternate pump that indicated low	WRS	Open	8/31/2015			VNP CAS Enc 9-IN AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			pressure, so this may be a global issue with the air driven pump configuration. More investigation is needed to determine extent of sump pumps affected.)" SOS comment- Agree with discrepancy. If started in manual discharge pressure does equalize after 30 to 45 seconds. aw 8/27/15						
VC-1508-13	8/3/2015	SGS MSL drain pot erratic indication	SGS MSL drain pots became erratic and were flashing on both main steam-lines at 53% Rx Power. By 90%, both pots filled with water, even with the drains open. SOS Comment - this has not happened during ramp ups from a cold shutdown condition but we have seen it on Trip recovery. Changed status. 8/24/15 mgs	SGS	Open	8/24/2015			VNP CAS Enc 9-IN AG
VC-1508-14	8/3/2015	Plant Mode NAP Temperature Input	The Automatic Plant Mode calculation uses [ ]$_{a,c}$ for determining the plant mode. The issue appears to be due to inconsistent documentation; APP-DDS-J4-126 section 7.4 states that the [ ]$_{a,c}$ should be calculated by the DDS-AP-BAP	NAP	Open	8/22/2015			VNP CAS Enc 9-OUT AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			application while section 3 properly identifies the [ ]a,c, APP-DDS-GMP-012 also identifies the [ ]a,c. --The correct temperature is the [ ]a,c as that is the temperature indication specified in the AP1000 Technical Specifications to be used; see Table 1.1-1 and the definition for MODE in section 1.1. For this calculation recommend using a Redundant Selection Algorithm (RSA) selected output from PMSA-RCTA, PMSB-RCTA, PMSC-RCTA and PMSD-RCTA. SOS comment - same at VCS. mgs 8/22/15						
VC-1508-42	8/10/2015	Simulator MCR missing Rad Monitoring Panel	Simulator MCR does not have a radiation monitoring panel on the back wall depicted in the design reference. SOS comment - verfied above statement. APP-JC01-v1-001,Rev 4, shows a radiation monitoring panel on the back wall, note 6. (By Others)	STS	Open	8/24/2015			VNP CAS Enc 9-IN AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
VC-1508-46	8/10/2015	Diesel Fuel oil day tank level transmitters not operating correctly	Reference documentation differs from actual control in the PRS. DOS level transmitters 016A/017A or 016B/017B on the day tank control the refilling of the day tank based on level. The refilling should start when day tank level reaches low level [ ]$_{a,c}$ and stop at high level [ ]$_{a,c}$ The refilling of the day tank actually begins at 44.67% and stops at 100%, which would most likely cause overfill of the tank. Additionally as level rises at ~ 85% the level indication jumps to 100%. SOS Comments- VCS specific data somewhat different, but agree problem with setpoints and system response exist. VCS data, per signal diagram and testing pumps start at 81.7%. At 89.4%, repeatable on both tanks, received level spike to 100% which secured associated makeup pump. This is above the reference document setpoint of [ ]$_{a,c}$ but below the signal diagram setpoint for securing the pump of [ ]$_{a,c}$ 8/22/15 aw	ZOS	Open	8/10/2015			VNP CAS Enc 9-IN AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
VC-1508-47	8/10/2015	UAT Bkr Line Undervoltage Priorities are Wrong	While performing alarm avalanche data evaluation for LOOP with Fast Bus Transfer to RAT, noted the UAT Bkr Line Undervoltage Alarms for ES-2, 3 and 6 come in as [ ]a,c alarms. ES-4, 5, and 7 come in as [ ]a,c alarms. These should be consistent (probably all [ ]a,c Point numbers are: ECS-ES-2M1(52)-27S, ECS-ES-3M1(52)-27S, ECS-ES-6M1(52)-27S, ECS-ES-4M1(52)-27S, ECS-ES-5M1(52)-27S and ECS-ES-7M(52)-27S SOS comment- VCS has same alarm priorities as above. Bus ES-1 is a [ ]a,c alarm also. aw 8/31/15	APS	Open	8/31/2015			VNP CAS Enc 9-IN AG
VC-1508-48	8/10/2015	VES Supply Header Pressure not modeled correctly for a change in temperature w/o a change in mass	When VAS ventilation is secured to the VES Air Storage Area (Rm 12555), room temperature will rise as expected as indicated on VAS-TE080A and B. This rise in temperature should cause VES Supply Header Pressure (VES-PT001A and B) to rise, since the volume of air in the VES tanks is not changing (Pâ†'=(nRTâ†')/V). As depicted in the attached trend, this does not happen in the current	VES	Open	8/22/2015			VNP CAS Enc 9-IN AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			model. Since VES air storage tank pressure does not change in the model, this causes the calculated air quantity (VES-QIY008A and B) to lower which should not be the case. The VES air quantity should only change if you are filling VES or depressurizing it. Recommend investigating the modeling of VES Supply Header Pressure for a change in temperature without a mass change. SOS ccomments- VCS machine operates in same manner. aw 8/22/15						
VC-1508-50	8/11/2015	Possible modeling and/or Ovation issues with WGS Sample Package MS-01 PS-001	Per drawing APP-MS27-E5-001 & APP-MS27-M6-001, PS-001 for monitoring N2 pressure to the WGS Sample Package should be modeled to give an Ovation alarm when pressure decreases [ ]$_{a,c}$. PS-001 does not seem to be monitored in Ovation or the WGS model. Per the listed references, PS-001 will generate an Ovation alarm on low pressure or loss of power by de-energizing relay CR-3. SOS comment - verifed there is no	WGS	Open	8/25/2015			VNP CAS Enc 9-IN AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			Ovation point monitoring WGS N2 pressure. Also nothing on WGS drawing or GCF list. mgs 8/25/14						
VC-1508-51	8/11/2015	VZS-D014A/B and VZS-D015A/B do not fail as-is after loss of power.	During the testing of this DR it was noted that the following dampers (Fail As-Is) were not failing the right way: VZS-D014A/B and VZS-D015A/B. These dampers will have to be modified in CMS by taking away the control scheme assigned and incorporated the calls to the control scheme from manual code svzsd01 and add a parameter to identify these as fail As-Is and do the right logic. SOS comment - we concur that all above listed dampers fail closed on loss of power. Verfified damper position via GCF feedback going to 0% on loss of power. mgs 8/22/15	VZS	Open	8/22/2015			VNP CAS Enc 9-IN AG
VC-1508-52	8/11/2015	The Turbine Bypass Control Valve control scheme does not support multiple power supplies	The turbine bypass control valves MSS-PL-V001, MSS-PL-V002,MSS-PL-V003,MSS-PL-V004,MSS-PL-V005,MSS-PL-V006 have 4 solenoid valves that share two different power supplies. The current assigned control scheme AIRV9 uses one power supply for all 4 solenoids. [	SDCS	Open	8/24/2015			VNP CAS Enc 9-IN AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			]a,c. SOS Comments – [ ]a,c Tested an EDS power failure on SIM and it appears that only one power supply is modeled to all 4 SV. mgs 8/24/15						
VC-1508-53	8/11/2015	Battery Temperature does not trend during battery operations	During a loss of all AC sources discharge test it was identified that the battery temperature did not change during the 15 hour run. SOS comments - same at VCS - checked both IDS and EDS - temps stay at 77.0F mgs 8/21/15	EDS	Open	8/22/2015			VNP CAS Enc 9-IN AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
VC-1508-54	8/11/2015	Fire Protection System is not modeled in Containment	While attempting to create a FR-Z.2 (Response to High CNMT Level) scenario, it was discovered that a leak from the FPS header in CNMT had no effect on any CNMT parameters (ex. CNMT Sump Level, CNMT Humidity). FPS CNMT Spray also had no effect on any CNMT parameters. SOS comments- During investigation aligned FPS for containment spray. System pressure, supply tank drain down, and system response during valve manipulations all indicated flow into containment. Nodal evaluation indicated flow and pressure up to "EP" node pass through to containment. This node indicated no flow or increase in pressure and was consistent with both spray headers and the relief valve flowpath. Actual containment indications indicated no change in pressure, humidity, or sump level. Agree with problem statement. Status updated to Open 8/21/15 aw.	FPS	Open	8/21/2015			VNP CAS Enc 9-IN AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
VC-1508-55	8/11/2015	Simulator MCR missing cooling fins	Simulator MCR is missing cooling fins as designated by the Unit 3 design documentation. SOS comment - verified above statement. APP-1242-EL-001, Rev 0, shows MCR lighting fixtures hanging from chains and having the lighting hanger connected to "steel fin member" (APP-1250-SS-125) which is not in Simulator Design Database allowing for more details at this time. mgs 8/24/15	STS	Open	8/24/2015			VNP CAS Enc 9-OUT AG
VC-1508-56	8/11/2015	Simulator MCR lights not hanging from chains	Simulator MCR lights are not hanging from chains as designated by the Unit 3 design documentation listed below. SOS comment - verified above statement. APP-1242-EL-001, Rev 0, shows MCR lighting fixtures hanging from chains.	STS	Open	8/24/2015			VNP CAS Enc 9-OUT AG
VC-1508-60	8/12/2015	Kirk Key interlock not operable on spare battery LOAs	The Fused Transfer Switch Box Spare Battery Manual Switches on sim diagrams APP-EDS-E3-001, APP-EDS-E3-002, APP-EDS-E3-007, APP-EDS-E3-009, and APP-EDS-E3-010 can be closed simultaneously using the following LOAs: EDS1DF1_C	STS	Open	8/22/2015			VNP CAS Enc 9-OUT AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			EDS1DF2_C EDS1DF5_C EDS1DF3_C EDS1DF4_C, [ ]a,c SOS comment – [ ]a,c These are all LOA that students will not be affected by. This will be an enhancement to the ISS interface and is not considered a SIM discrepancy. Changed status to OPEN and ENHANCEMENT. mgs 8/22/15						
VC-1508-61	8/12/2015	EDSS-DF-1 nomenclature and switch operability issue	On APP-EDS-E3-007, the switches inside the Spare Fused Transfer Switch Box EDSS-DF-1 are labeled with "K1". Per the corresponding one-line, the two leftmost switches should be labeled with "K3" and the two rightmost switches should be labeled with "K4". Additionally, the LOAs for these switches seem to be incorrectly	STS	Open	8/25/2015			VNP CAS Enc 9-OUT AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			tied to the "K1" switches in the Fused Transfer Switch Box EDS5-DF-1 of the same sim diagram. [ ]a,c. SOS comment - verified APP-EDS-E3-015, Rev 0, supports the above statements. Also verified LOAs and wrong. mgs 8/25/15						
VC-1508-62	8/12/2015	SMS Detector ranges not consistent with design statements	SMS detectors currently have a maximum indication range of [ ]a,c. Design documents discuss peak impact indications of [ ]a,c and [ ]a,c but do not give an actual range of the detector anywhere. The PRS currently only has UDAs for all these detectors and the alarms are set at [ ]a,c which is outside the allowed range of the detector and therefore will result in never receiving an alarm based on the settings. In addition, the fault range for these detectors	SMS	Open	8/21/2015			VNP CAS Enc 9-OUT AG

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			is [ ]a,c above the maximum indicating range). SOS comments- Agree, VCS machine has same conditions as reported above. aw 8/21/15.						
VC-1508-69	8/12/2015	D/G power demand point not being driven	Diesel Generator Power demand (ZOS-MG-02A/B(52)-KWD is not driven in Ovation properly on the Load Sequencer page (22403). They always display 0 k. SOS comments - the above statement is true. These points to not respond as DG loan increases. - changed status to OPEN mgs 8/21/15	ZOS	Open	8/21/2015			VNP CAS Enc 9-OUT AG VNP FIXED
VC-1508-108	8/31/2015	Simulator Random Failures.	Unexplained simulator failures have occurred for which the cause is not clear. These have not been traced to any one STS component or subsystem. Most involve Jstation commands not being executed (such as FREEZE) or APS indicated FROZEN with the SIM still in RUN. They have happen as early as one day after complete system reboots.	STS	Open	8/31/2015			

Westinghouse Non-Proprietary Class 3

Simulator Discrepancy Report
Items added between 4/24/15 and 9/1/15

Tracking #	Event Date	Summary	Detailed Description	System	Status	Status Date	RITs #	Patch-Set-Target	Other NOTES
			More information is needed as to the best way to reduce this instances.						

Westinghouse Non-Proprietary Class 3

Document Control Desk
NND-15-0467

South Carolina Electric and Gas Company
Virgil C. Summer Nuclear Station (VCSNS) Units 2 and 3

NND-15-0467

Enclosure 4

Assessment of New SDR List Items Related to CAS

Redacted Version (Non-Proprietary)

(This enclosure contains 78 pages, including this cover sheet.)

Assessment of new Simulator Discrepancy Report List Items Related to Commission Approved Simulator

Simulator Discrepancy Report Impact on 10 CFR 55.45(a) Compliance

Commission Approved Simulator

Aggregate Study Addendum of SDRs added between

April 28th 2015 and September 1st 2015

Westinghouse Non-Proprietary Class 3

Assessment of effects of Simulator Discrepancy Report items added between 4/28/15 and 9/1/15 for impact to License Operator Training

Executive Summary:

An evaluation was performed to assess the impact of Simulator Discrepancies currently documented against the AP1000 Simulation Facility in use at V.C. Summer Units 2 and 3.

In support of approval of a Commission Approved Simulator to conduct initial license operator simulator training and examination an assessment was performed on 4/28/15 of 150 discrete Simulator Discrepancy Report items (SDRs) for impact to the 13 items specified in 10 CFR 55.45(a).

Since that assessment was conducted, 66 new SDRs have been identified at the V.C. Summer Units 2 and 3 Simulators. A new assessment has been conducted on those items to evaluate their potential impact on the ability of the simulator to function as a Commission Approved Simulator. The evaluation considered each item individually, and as an aggregate. In a similar fashion as the assessment conducted on 4/28/15, the Simulator discrepancies were grouped by the 13 items referenced in 10 CFR 55.45(a) for conducting an operating test and also by system. Evaluators assessed the cumulative effect of multiple discrepancies which could challenge the ability to train and evaluate licensed operator candidates.

The result of this cumulative effect evaluation, which is documented in Limited Scope Simulator Review Group meeting minutes dated 10/28/15, concluded that the performance of the V.C. Summer Units 2 and 3 AP1000 simulators supports effective training and evaluation of licensed operator candidates. Additionally, the capabilities of the V.C. Summer Units 2 and 3 simulators provide an adequate sampling of the 13 items specified in 10 CFR 55.45(a).

Background:

There were 66 SDRs added to the VCS Unit 2 and 3 Simulator Discrepancy Report (SDR) database between 4/28/15 and 9/1/15. An individual, and aggregate assessment of the impact of the 33 newly identified Simulator Discrepancy items was conducted to determine if any of the issues, by themselves or in aggregate, constituted a challenge to any of the 13 criteria of 10 CFR 55.45(a).

In order to facilitate an assessment of the new SDRs, items were first screened to determine if they potentially impact the 13 criteria. Out of the 66 discrepancies, 47 were determined to be relevant to the 13 criteria listed under 10 CFR 55.45(a). A table of the 19 items not impacting 10 CFR 55.45(a) is provided at the end of this assessment, starting on page 64. The table includes an evaluation bases for why each item screened out as not impactful.

The remaining 47 items were then grouped two ways; first by potential impact to the 13 attributes of a Licensed Operator NRC Operating test, as described in 10 CFR55.45(a)(1-13); and then by plant system. Note that some items were determined to potentially impact more than one attribute. Affected attributes are discussed in each section as appropriate. Both an individual assessment of each new SDR and an aggregate assessment is provided in the section discussing impact to the 13 criteria. Because the assessment of each item is already provided as just described, the section documenting the impact to individual plant systems only discusses aggregate impacts of multiple SDRs affecting any one plant system.

Westinghouse Non-Proprietary Class 3

Assessment of effects of Simulator Discrepancy Report items added between 4/28/15 and 9/1/15 for impact to License Operator Training

The following sections, document a cumulative effect assessment of the newly identified SDR items to support the VCS Unit 2 and 3 Commission Approved Simulator (CAS) request.

Aggregate Study Evaluation Results

Section 1

Assessment of new SDR items, as compared to the NRC Operating test attributes described in 10CFR 55.45(a)(1-13)

1) **Perform pre-startup procedures for the facility, including operating of those controls associated with plant equipment that could affect reactivity**.

New SDR(s) potentially impacting this attribute:

VC-1506-01; Rod Withdrawal button deselects During Continuous Operation (Corresponds to Vogtle SCR-DR-5584)
Description
While performing extended rod withdrawals during startups while depressing the rod withdrawal button (UP ARROW), the UP ARROW button may un-highlight and momentarily flash gray even though still depressed. Rod motion will still occur.

VC-1506-04; Decay Heat Calculation (DHC) Summary - Assembly Move NAP Function Not Functional (Corresponds to Vogtle SCR-DR-6022)
Description
When attempting to simulate fuel assemblies being moved from the core to the Spent Fuel Pool (SFP), it was noted that the Decay Heat Calculation (DHC) NAP to maintain the administrative location of fuel does not work correctly. On display 40203 the assembly move buttons on the lower right portion indicate they are only available when the light DDS-AP-DHC Status indicates it is ACTIVE. This light is driven off of the automatic mode selector and is INACTIVE when in MODES 1&2 and ACTIVE in MODES 3-6. However, when the light indicates INACTIVE the buttons for moving are raised and available. When the light changes status to ACTIVE the buttons for moving are grayed out and no longer available. The light being active or inactive is currently driven by the auto mode selector and becomes active in MODES 3-6. However, fuel cannot be moved from the core into the SFP in any MODE other than MODE 6. The light should be driven by the manual input of the Rx vessel head being removed or installed or upper internals position on display 40004.

VC-1506-12; Redundant Sensors Algorithm (RSA) Application NAP Does Not Process Failed Channels Correctly (Corresponds to Vogtle SCR-DR-6169)
Description
The Redundant Sensors Algorithm Application (RSA) driven source range counts on the WPIS displays (main, trends, and safety functions) will [

]$_{a,c}$.

ASSESSMENT:

a. Three (3) new SDR items, VC-1506-01, Rod Withdrawal button deselects During Continuous Operation, VC-1506-04; Decay Heat Calculation (DHC) Summary - Assembly Move NAP Function Not Functional**,** and VC-1506-12; Redundant Sensors Algorithm Application NAP Does Not Process Failed Channels Correctly, have been written based on potential impact to the ability to operate control systems during plant start-up operations.

   Of these, two (2) are being corrected as part of Westinghouse update releases. These are;

   VC-1506-01, Rod Withdrawal button deselects During Continuous Operation,

VC-1506-12, Redundant Sensor Algorithm (RSA) behavior
The remaining SDR is discussed below.

SDR VC-1506-04 documents a problem with one feature of a NAP which will [

]$_{a,c}$ Currently, the enable function is incorrectly tied to MODES 1 thru 3, instead of MODE 6. Using this feature in the simulator for training or examination is beyond the scope of licensed operator training.

b. There is no additional aggregate impact of these SDRs, given that two of three of them are being corrected.

c. There is one (1) SDR affecting this criterion which was evaluated as part of the initial Aggregate assessment study, and has been identified as potentially significant during further review.

   SDR item VC-1506-01 was originally identified as SDR item VC-TO-103, and was evaluated as part of the initial Aggregate assessment study. These two SDRs are now being combined and tracked using the new SDR item VC-1506-01. There is no additional aggregate impact of the new SDR when considered with the previously assessed SDR, based on this duplication. There are no other SDRs affecting this criterion which were evaluated as part of the initial Aggregate assessment study, and have been identified as potentially significant during further review.

   In conclusion, there is no increase in aggregate affect(s) of open SDRs to this criteria caused by the addition of new open SDRs considered in section (a.).

d. In conclusion, there are no SDRs, affecting this attribute individually or in aggregate, which prevent achieving the program learning objectives or prevent conducting valid examinations which can discern competent operators.

Westinghouse Non-Proprietary Class 3

2) **Manipulate the console controls as required to operate the facility between shutdown and designated power levels**.

New SDR(s) potentially impacting this attribute:

VC-1506-16; NAP for 1/M Intermediate Range Not Functional (Corresponds to Vogtle SCR-DR-6089)
Description
The intermediate range input to the automated 1/M plot Nuclear Application (NAP) does not work. Once P-6 (Permissive 6) was blocked and source range de-energized, the operator no longer had a 1/M plot generated.

VC-1506-39; Rod Step sound problems (Corresponds to Vogtle SCR-DR-6186)
Description
During outward rod motion, the audible step counter randomly can have a one second pause in it with rod motion continuing. The step counter indication does not update at the same rate as the audible cue occurs.

ASSESSMENT:

a. Two (2) new SDR items, VC-1506-16; NAP for 1/M Intermediate Range Not Functional, and VC-1506-39; Rod Step sound problems, have been written based on potential impact to the ability to manipulate the console controls during plant operations.

   Of these, one (1) is being corrected as part of Westinghouse update releases. This is;

   VC-1506-16; NAP for 1/M Intermediate Range Not Functional,

   The one (1) other SDR is discussed below.

   SDR VC-1506-39 concerns a pause or delay which affects the [

   ]$_{a,c}$ This item is included in the “Affects Training list” which is provided to the crews. Although this can be distracting to the crew, [

   ]$_{a,c}$ provide other redundant and diverse methods to determine rod movement.

b. There is no aggregate impact of these SDRs, given that one is being corrected, and there is only one other SDR.

c. There is one (1) SDR affecting this criterion which was evaluated as part of the initial Aggregate assessment study, and has been identified as potentially significant during further review.

   SDR item VC-1506-01 was originally identified as SDR item VC-TO-103, and. was evaluated as part of the initial Aggregate assessment study. These two SDRs are

now being combined and tracked using the new SDR item VC-1506-01. There is also no additional aggregate impact of the new SDR when considered with the previously assessed SDR, based on this duplication. There are no other SDRs affecting this criterion which were evaluated as part of the initial Aggregate assessment study, and that have been identified as potentially significant during further review.

In conclusion, there is no increase in aggregate affect(s) of open SDRs to this criteria caused by the addition of new open SDRs considered in section (a.).

d. In conclusion, there are no SDRs, affecting this attribute individually or in aggregate, which prevent achieving the program learning objectives or prevent conducting valid examinations which can discern competent operators.

3) **Identify annunciators and condition-indicating signals and perform appropriate remedial actions where appropriate.**

New SDR(s) potentially impacting this attribute:

VC-1505-05; ECS Penetration Temperature off Scale Low (This item corresponds to Vogtle SCR-DR-6103)
Description
ECS penetration temperature reading is off scale low on display 22503. This is for the penetration to containment for the power cables for the RCPs as indicated on ECS-TE001A/B and TE002A/B which currently show the electrical penetration temperature as 0 deg F. The temperature should be reading something slightly higher than the ambient conditions.

VC-1506-02; CMT WR Level Indications go Bad Quality (Corresponds to Vogtle SCR-DR-6217)
Description
The Wide Range (WR) Core Makeup Tank (CMT) level indications shift to Bad Quality once Automatic Depressurization System 1-3 (ADS 1-3) Actuate. Prior to this event, they would toggle to Bad Quality intermittently. The Bad Quality status is on indications PXS-LT009A/B & -LT010A/B (on Passive Core Cooling System (PXS) Supplemental Ind. Screen) and DDS-RSA11-L1 & DDS-RSA13-L1 (on WPIS screen 60017). [

]a,c.
Note that the non-calc (non-compensated) instrumentation in the CMT is not affected similarly.

VC-1506-04; Decay Heat Calculation (DHC) Summary - Assembly Move NAP Function Not Functional (Corresponds to Vogtle SCR-DR-6022)
Description
When attempting to simulate fuel assemblies being moved from the core to the Spent Fuel Pool (SFP), it was noted that the Decay Heat Calculation (DHC) NAP to maintain the administrative location of fuel does not work correctly. On display 40203 the assembly move buttons on the lower right portion indicate they are only available when the light DDS-AP-DHC Status indicates it is ACTIVE. This light is driven off of the automatic mode selector and is INACTIVE when in MODES 1&2 and ACTIVE in MODES 3-6. However, when the light indicates INACTIVE the buttons for moving are raised and available. When the light changes status to ACTIVE the buttons for moving are grayed out and no longer available. The light being active or inactive is currently driven by the auto mode selector and becomes active in MODES 3-6. However, fuel cannot be moved from the core into the SFP in any MODE other than MODE 6. The light should be driven by the manual input of the Rx vessel head being removed or installed or upper internals position on display 40004.

VC-1506-12; Redundant Sensors Algorithm Application NAP Does Not Process Failed Channels Correctly (Corresponds to Vogtle SCR-DR-6169)
Description
The Redundant Sensors Algorithm Application (RSA) driven source range counts on the WPIS displays (main, trends, and safety functions) [

]a,c.

VC-1506-15; RSA NAP for Power Range Power does not Eliminate Erroneous Input (Corresponds to Vogtle SCR-DR-6621)

Description

[

]a,c. This causes an erroneous PR power reading on the WPIS.

VC-1506-16; NAP for 1/M Intermediate Range Not Functional (Corresponds to Vogtle SCR-DR-6089)

Description

The intermediate range input to the automated 1/M plot Nuclear Application (NAP) does not work. Once P-6 (Permissive 6) was blocked and source range de-energized, the operator no longer had a 1/M plot generated.

VC-1506-33; WPIS Display VARs (Corresponds to Vogtle SCR-DR-6190)

Description

The Wall Panel Information System (WPIS) display has VARS indicated rather than Mega Volt-Amps Reactive (MVARS) for Generator Output.

VC-1506-39; Rod Step sound problems (Corresponds to Vogtle SCR-DR-6186)

Description

During outward rod motion, the audible step counter randomly can have a one second pause in it with rod motion continuing. The step counter indication does not update at the same rate as the audible cue occurs.

VC-1506-40; Received Bank Sequence Out of Sequence Alarm (Corresponds to Vogtle SCR-DR-6259)

Description

A Bank Sequence Out of Sequence (DDS-RSU01-X0) [

.]a,c

The only oddity was that MD demanded position was -1 step vice 0 steps. Motion for bank M1 began once the proper [ ]a,c step overlap had occurred from MD to M1; before MD stops moving the out of sequence alarm comes in. VCS verified M1 and MD did have proper overlap, and that the Application Monitor was able to be pulled up from the point information. The alarm immediately cleared when MD reached 0 steps. Suspect alarm to be due to a small time delay in rod stepping.

VC-1506-41; Urgent Alarm during Case 2 Control Rod Exchange (CRE) at 90% Power (Corresponds to Vogtle SCR-DR-6267)

Description

The Urgent Failure Alarm (UA) [

]a,c

The UA appears to be a timing issue that occurs only when MA and MD banks are both in motion when the Tavg-Tref deviation occurs. Basically, the Ovation controllers briefly generate a RODS IN and a RODS OUT signal to the MA bank and a RODS IN and a RODS OUT signal to the MD bank which results in a UA from the Power Cabinets.

VC-1507-38; CNMT Recirc Actuation for Div C and D not visible on PMS ESF Screen (Corresponds to Vogtle SCR-DR-5972)

Description

Once containment recirculation is actuated, the actuation indication for Divisions C and D did not have the white box with an X on the ESF Act Status Screen for the divisional PDSPs or the Non-Safety Operational Overview screen (33020). The individual PMS division screen for CNMT Recirc actuation (IRWST/INJT Recirc) did show that it had been actuated on all 4 divisions.

VC-1507-53; Any Rods at Bottom Alarm (corresponds to Vogtle SCR-DR-6532*)*

Description

The "Any Rods at Bottom" alarm is actuating anytime rods are being driven through [ ]$_{a,c}$ steps. Based on APP-PLS-J1-023 Rev 2 3.1.2 Rev. 16 [

]$_{a,c}$

VC-1507-48; During Turbine Trips, Pri 4 controller faults for Drop 21 and 34 are received (corresponds to VogtleSCR-DR-6366*)*

Description

The [ ]$_{a,c}$ alarms for Controller 34 (Drop 34) occur for Turbine Trips from 100%, 75% and 50% power. A Controller 21 (Drop 21) alarm occurs after the Turbine trip from 100% power.

VC-1507-55: Possible modeling and/or Ovation issues with WGS Sample Package MS-01 AT-032 (AEO32) (Corresponds to VogtleSCR-DR-6613*)*

Description

Per drawing APP-MS27-E5-001, APP-MS27-M6-001, APP-MS27-VMM-004 pages 20 & 354, APP-WGS- MC3-101 page 16, H2 monitor AT032 (AE032) provides [

]$_{a,c}$

Ovation drawing 16100 shows WGS-AT032 as having [ ]$_{a,c}$. This [ ]$_{a,c}$ is inferred when looking at APP-MS27-M6-001, APP-WGS-M3C-101 page 23, and APP-WGS-M6-001. However per APP-MS27-VMM-004 page 354, AE032 provides only [ ]$_{a,c}$.

VC-1508-46; Level Transmitter Operation (Corresponds to VogtleSCR-DR-6491*)*

Description

Diesel Fuel Oil System (DOS) level transmitters DOS-LT016A/017A and 016B/017B on the day tank control the refilling of the day tank based on level. The refilling should start when day tank level reaches low level [ ]$_{a,c}$ and stop at high level [ ]$_{a,c}$ The refilling of the day tank actually begins at 44.67% and stops at 100%. Additionally as level rises at ~85% the level indication jumps to 100%.

VC-1508-47; Inconsistent UAT Line Voltage Alarm Priorities (Corresponds to VogtleSCR-DR-6492*)*

Description

While performing a LOOP with Fast Bus Transfer to Reserve Auxiliary Transformer (RAT), it was noted that the Unit Auxiliary Transformer (UAT) Breaker Line Undervoltage

Alarms for ES-2, 3 and 6 come in as [ ]a,c. Alarms for ES-4, 5, and 7 come in as [ ]a,c These should be consistent.

VC-1508-50; Possible modeling and/or Ovation issues with WGS Sample Package MS-01 PS-001 (Corresponds to VogtleSCR-DR-6612*)*

Description

Per drawing APP-MS27-E5-001 & APP-MS27-M6-001, PS-001 for monitoring N2 pressure to the Gaseous Radwaste System (WGS) Sample Package should be modeled to give an Ovation alarm when pressure decreases [ ]a,c. PS-001 does not seem to be monitored in Ovation or the WGS model. Per the listed references, PS-001 will generate an Ovation alarm [

]a,c

ASSESSMENT:

a. Seventeen (17) new SDR items have been written which identify alarm conditions which either has not been assigned yet, or questions are pending about alarm setpoints and/or indications.

   Of these, eight (8) are being corrected as part of Westinghouse update releases. These are;

   VC-1505-05; ECS Penetration temperature reading off scale low,
   VC-1506-12: Redundant Sensors Algorithm (RSA) Application NAP Does Not Process Failed Channels Correctly,
   VC-1506-15; RSA NAP for Power Range Power does not Eliminate Erroneous Input
   VC-1506-16; NAP for 1/M Intermediate Range Not Functional
   VC-1507-48: During Turbine Trips, Pri 4 controller faults for Drop 21 and 34 are received,
   VC-1507-53; Any Rods at Bottom Alarm,
   VC-1507-55: Possible modeling and/or Ovation issues with WGS Sample Package MS-01 AT-032 (AEO32), and
   VC-1508-47; Inconsistent UAT Line Voltage Alarm Priorities

   The remaining nine (9) SDRs are unrelated to each other directly, and are discussed below.

   SDR VC-1506-02 addresses Core Make-up Tank (CMT) Wide Range (WR) Level Indications which change to “Bad Quality” after Automatic Depressurization System (ADS) stages 1-3 actuate. This is a density compensated reading, which is currently adversely affected when the CMT water level drops below the upper instrument. There are no actuations which use this instrumentation, and no EOP decisions related to CMT level which relies on the use of this instrument only. Additionally, the CMT upper and lower narrow range instruments and the CMT top temperature instruments always [

   ]a,c

SDR VC-1506-04 documents a problem with one feature of a NAP [

]a,c Currently, the enable function is incorrectly tied to MODES 1 thru 3, instead of MODE 6. Using this feature in the simulator for training or examination is beyond the scope of licensed operator training.

SDR VC-1506-33 concerns the WPIS Display point for Main Generator VAR load being provided in VARs, as opposed to MVARs. This information is also available on the Ovation screen which provides a “live” curser that tracks Main Generator Load vs. the plant electrical load capability curve. In that display, which would be the best display to use when an operator was comparing VAR loading to plant limits, the parameter is given in MVARs.

SDR VC-1506-39 concerns a pause or delay which affects the [

]a,c This item is included in the “Affects Training list” which is provided to the crews. Although this can be distracting to the crew, [

]a,c provide other redundant and diverse methods to determine rod movement.

SDR VC-1506-40 concerns a [
]a,c during the start of Bank M1 inward rod motion during that banks’ overlap with bank MD. The rod banks do have proper overlap, and the [
]a,c This has been added to the “Affects Training list” so that is can be discussed when the event occurs. Plant maneuvers through this rod height only occur during plant start ups, so this is not seen commonly.

SDR VC-1506-41 documents a rod control “Urgent Alarm” which occurs during a Case 2 Control Rod Exchange (CRE). The rod control system [

]a,c In order for a Case 2 exchange to take place, there can be no demand signal for movement of the AO banks or M banks. The current logic sequence which processes and prioritizes rod exchange and temperature control, along with AO rod logic and M bank logic is incorrectly

allowing demand signals to attempt to process simultaneously. This causes [ ]a,c This occurs ~ 1 in every 10 performances of the evolution. The condition is added to the “Affects Training” list. This is an infrequently performed evolution, which can be repeated successfully if desired for training or examination.

SDR VC-1507-38 has been written to document an indication incompleteness issue associated with some indications for Containment Recirculation actuation for divisions C and D. The actuation always works as designed, and verification of correct component repositioning is always a primary indicator of actuation success. There is also [

]a,c

SDR VC-1508-46 tracks a delta between the controller setpoints in design documentation vs. current simulator operation for level control in the Standby Diesel Generator Day tank. The simulator does model day tank level lowering as the DG is run, and models the Fuel Oil system providing makeup to the tank. The setpoints for the level that the tank starts and stops filling are inconsistent with the reference document. Tracking system performance to this detail is well beyond what is normally undertaken in License Operator training. [

]a,c before the inventory makeup function would actuate.

SDR VC-1508-50 concerns a Nitrogen pressure instrument in the Waste Gas System on the WG sample skid which is not currently modeled. The use of this point during simulator training for license operators is also well beyond what is normally used during the normal course of training.

These issues were dispositioned individually as acceptable due to minimal impact on training, which can be mitigated where appropriate.

b. The aggregate impacts of these nine (9) remaining new SDRs that potentially impact this criterion do not preclude the ability of the simulator to conduct operator training or examination. Each of the SDRs is related to a different system, and do not impact each other in any sort of inter-related system response, as described below.

SDR VC-1506-02 is indication which is not used as a sole primary decision making tool in the emergency operating procedures, and the plant provides other indication which also gives CMT level instrumentation.

SDR VC-1506-04 documents a problem with one feature of a NAP which will [ ]a,c, which is beyond the scope of licensed operator training.

SDR VC-1506-33 concerns the WPIS Display point for Main Generator VAR load, which is also provided in units more familiar to operators in another location.

SDR VC-1506-39 concerns a pause in the additional audible feedback feature of Rod Control system.

SDR VC-1506-40 concerns a momentary “Bank Sequence Out of Sequence Alarm” during Bank M1 overlap with bank MD, which clears immediately as bank M1 moves from 0 steps to 1 step.

SDR VC-1506-41 concerns the Automated Control Rod Exchange feature of the Rod Control system

SDR VC-1507-38 has multiple redundant ways to validate the actuation status, all of which are already addressed by normal Conduct of Operation.

The remaining two (2) open SDRs, VC-1508-46 and VC-TO-1508-50, are both associated with plant equipment which is not routinely monitored in the control room, or during simulator training or examination.

c. There are three (3) SDRs affecting this criterion which were evaluated as part of the initial Aggregate assessment study, and have been identified as potentially significant during further review.

These original SDR(s) that potentially impacting this attribute, and are still considered potentially significant are:

VC-1411-03, Unexpected Main Turbine (differential expansion) Alarm at 75% power;
VC-1501-08, Rod Control Urgent failure on loss of EK-12; and
VC-1503-16, Alarm Response after certain events is difficult due to the number of alarms received.

VC-1411-03 is being corrected by the Westinghouse patch released August 15th, 2015. VC-1501-08 is being corrected by the Westinghouse patch released October 30th, 2015. VC-1503-16 is being corrected by the Westinghouse patch released August 15th, 2015.

A more detailed discussion of each of these items is provided the RAI response section titled “Summary of significant SDRs 060315 – VCS responses”. There is no additional aggregate impact of these three (3) SDRs with the three new SDRs discussed in section “b” above because all of these “060315 significant SDRs” are now being closed.

d. In conclusion, there are no SDRs, affecting this attribute individually or in aggregate, which prevent achieving the program learning objectives or prevent conducting valid examinations which can discern competent operators.

4) **Identify the instrumentation systems and the significance of facility instrument readings**.

New SDR(s) potentially impacting this attribute:

VC-1505-05; ECS Penetration Temperature off Scale Low (This item corresponds to Vogtle SCR-DR-6103)
Description

ECS penetration temperature reading is off scale low on display 22503. This is for the penetration to containment for the power cables for the RCPs as indicated on ECS-TE001A/B and TE002A/B which currently show the electrical penetration temperature as 0 deg F. The temperature should be reading something slightly higher than the ambient conditions

VC-1505-07; Reactor Coolant Pump (RCP) Stator Temperature Indication off Scale Low at Lower Speeds (Corresponds to Vogtle SCR-DR-6071)
Description
RCP Stator Temperature indication is off scale low at lower speeds. With RCPs at 50% speed, the stator temperature (RCS-TE271, 272, 273, 274) indicates off scale low of 50F 'V'. This does not appear to be a valid temperature reading as the CCS temperature is 72F, SG cubicle temperature is 72F, and bearing temperature is 82F. With the ambient temperature above 50 degrees, it would be expected to have the motor at the same or slightly higher temperature.

VC-1506-02; CMT WR Level Indications go Bad Quality (Corresponds to Vogtle SCR-DR-6217)
Description
The Wide Range (WR) Core Makeup Tank (CMT) level indications shift to Bad Quality once Automatic Depressurization System 1-3 (ADS 1-3) Actuate. Prior to this event, they would toggle to Bad Quality intermittently. The Bad Quality status is on indications PXS-LT009A/B & -LT010A/B (on Passive Core Cooling System (PXS) Supplemental Ind. Screen) and DDS-RSA11-L1 & DDS-RSA13-L1 (on WPIS screen 60017). [

]$_{a,c}$
Note that the non-calc (non-compensated) instrumentation in the CMT is not affected similarly.

VC-1506-15; RSA NAP for Power Range Power does not Eliminate Erroneous Input (Corresponds to Vogtle SCR-DR-6621)
Description
[

]$_{a,c}$ This causes an erroneous PR power reading on the WPIS.

VC-1507-10; Investigate reason IDSA/B/C/D-DU-1-VAC reads 205Vac (Corresponds to Vogtle SCR-DR-6024)
Description
Ovation screen 22703 conflicts with the volts from the inverter. The screen identifies the IDS inverters as 120VAC yet instrument IDSA/B/C/D-DU-1-VAC reads 205VAC. Investigate to determine proper voltage across IDS inverter. - APP-DU01-Z0-001 Rev 4 states the APP voltage at 208Y/120 Vac +- 2%.

VC-1507-12; DWS-LT006 has Insufficient Range (Corresponds to Vogtle SCR-DR-6099)

Description

Demineralized Water Transfer and Storage System (DWS) DWS-LT006 is the level indication for the Condensate Storage Tank (CST). This level [ ]$_{a,c}$ per APP-DWS-M3C-101. However, the calculation note for DWS (APP-DWS-M3C-002) has the high 2 alarm at [ ]$_{a,c}$. This is an important alarm because it is designed to give operators time to determine why the CST is full before it overflows to a drain. Overflow will occur at 660".

VC-1507-16; No change in current indication on ECS-EA-1333 (Corresponds to Vogtle SCR-DR-6276)

Description

The current variable ECSIECSEA1333_42IA was at 0 amps whether the feeder breaker was open or shut. The loads were dropping as expected, but the current point was at 0A.

VC-1507-18; Inadequate indication on IDS-DT-1-VAC (Corresponds to Vogtle SCR-DR-6401)

Description

The voltage regulating transformer (IDS_-DT-1) should take 480V and step-down to 120V. The indication (IDS_-DT-1-VAC) reflects a value of approximately 253V, instead of ~120V per APP-IDS-E0C-002, Rev. 0.

VC-1507-25; WPIS RCS Inventory Issues (Corresponds to Vogtle SCR-DR-6154)

Description

The WPIS RCS Inventory screen has reference level lines for hot leg top and bottom which appear incorrect. They are only [ ]$_{a,c}$ apart. It is, however a faithful reproduction of the chart in GOP-114. The procedure and display both need to be looked at. Issues found in calculation notes, procedure and display.

VC-1507-42; Tuning of VBS Required (Corresponds to Vogtle SCR-DR-6168)

Description

During Main Control Room (MCR) purge operations, Nuclear Island Nonradioactive Ventilation System (VBS) air handling unit trains cannot maintain stable flow and as a result, enter an indefinite cycling between two trains. The current tuning does not allow enough time to establish stable flow.

VC-1507-43; Condensate Polisher Bypass Valve Control (Corresponds to Vogtle SCR-DR-6172)

Description

CPS-V001 (CDS Polisher Bypass Valve) Setpoint controls are confusing. The procedure directs placing the controller in auto and never has a setpoint to control to. The current setpoint is set at the high end of the scale, so the bypass valve will never modulate closed. The calc note states that signals will be set based on CDS header and polisher flow. No setpoint is yet determined.

Westinghouse Non-Proprietary Class 3

VC-1507-55; Possible modeling and/or Ovation issues with WGS Sample Package MS-01 AT-032 (AEO32) (Corresponds to Vogtle SCR-DR-6613)

Description

Per drawing APP-MS27-E5-001, APP-MS27-M6-001, APP-MS27-VMM-004 pages 20 & 354, APP-WGS- MC3-101 page 16, H2 monitor AT032 (AE032) provides only a digital output.

Ovation drawing 16100 shows WGS-AT032 as having continuous indication. This continuous indication is inferred when looking at APP-MS27-M6-001, APP-WGS-M3C-101 page 23, and APP-WGS-M6-001. However per APP-MS27-VMM-004 page 354, AE032 provides only a digital output via a normally closed contact.

VC-1508-46; Diesel Fuel Oil Day Tank Level Transmitter Operation (Corresponds to Vogtle SCR-DR-6491)

Description

Diesel Fuel Oil System (DOS) level transmitters DOS-LT016A/017A and 016B/017B on the day tank control the refilling of the day tank based on level. The refilling should start when day tank level reaches low level [ ]$_{a,c}$ and stop at high level [ ]$_{a,c}$. The refilling of the day tank actually begins at 44.67% and stops at 100%. Additionally as level rises at ~85% the level indication jumps to 100%.

ASSESSMENT:

a. Thirteen (13) new SDR items have been written which identify instrumentation related issues.

   Of these, seven (7) are being corrected as part of Westinghouse update releases. These are;

   VC-1505-05; ECS Penetration temperature reading off scale low,
   VC-1505-07; Reactor Coolant Pump (RCP) Stator Temperature Indication off Scale Low at Lower Speeds,
   VC-1506-15; RSA NAP for Power Range Power does not Eliminate Erroneous Input,
   VC-1507-10; Investigate reason IDSA/B/C/D-DU-1-VAC reads 205Vac
   VC-1507-16; No change in current indication on ECS-EA-1333,
   VC-1507-18; Inadequate indication on IDS-DT-1-VAC, and
   VC-1507-55; possible modeling and/or Ovation issues with WGS Sample Package MS-01 AT-032.

   The remaining six (6) SDRs are each tied to a different plant system, are unrelated to each other directly, and are discussed below.

   SDR VC-1506-02 addresses Core Make-up Tank (CMT) Wide Range (WR) Level Indications which change to “Bad Quality” after Automatic Depressurization System (ADS) stages 1-3 actuate. This is a density compensated reading, which is currently adversely affected when the CMT water level drops below the upper instrument. There are no actuations which use this instrumentation, and no EOP decisions related to CMT level which relies on the use of this instrument only.

Additionally, the CMT upper and lower narrow range instruments and the CMT top temperature instruments always [

]a,c

SDR VC-1507-42 is related to an instrumentation plant control loop which currently requires design changes to correct/improve the plant performance. It has been written to document a need to improve the tuning of the Nuclear Island Nonradioactive Ventilation system, so that there is sufficient time to allow the establishment of a stable flowrate when beginning a Main Control Room Purge evolution. The cycling has been determined to be caused by a present design issue, not a simulator modeling issue. The current tuning results in cycling between the two redundant ventilation supply units in this system, and will be corrected in a later baseline. The item has been added to the “Affects Training” list so that the instructors and students will be aware of this if it is demonstrated.

SDR 1507-12 is related to an instrumentation alarm setpoint which has conflicting design information. The instrument is the level indication for the Condensate Storage Tank (CST) (DWS-LT006). It has two design reference documents which contain a conflict between the instrument range and an alarm setpoint. The instrumentation level spans [ ]a,c per APP-DWS-M3C-101. However, the calculation note for DWS (APP-DWS-M3C-002) has the high 2 alarm at [ ]a,c. Overflow will occur at [ ]a,c. The simulator is modeling the plant as currently designed; once the design has been updated the simulator model will be updated as well. This issue was dispositioned as acceptable due to minimal impact on training.

SDR VC-1507-25 is related to a graphical display delta between a mid-loop instrumentation display and two different enclosures in the RCS fill and vent General Operating Procedure. This is categorized as an enhancement. There is an Ovation graphic, and two enclosures in the GOP which provide demarcations across the level instruments for various important landmarks, such as Minimum Refueling Cavity level, Vessel Flange level, and the Hot Leg (HL) top and bottom. The Ovation graphic also provides “live” indication of level across all the various important level instruments; Pzr wide range, Pzr narrow range, IRWST, Refueling cavity level, etc. The HL bottom demarcation is correct on the ovation graphic, and agrees with the information on each enclosure in the GOP. The HL top demarcation on the graphic and one of the enclosures is incorrect. There is adequate information available on the other enclosure to correctly determine the correct value for HL top, and the instrument graphic accurately provides level information to allow operate within the guidance of the GOP, however the graphic and other procedure enclosure need be corrected.

SDR VC-1507-43 is tied to an instrumentation plant control loop for the Condensate Polisher Bypass Valve, but is tracking the lack of any current procedural guidance (which will be provided by the on-site chemistry department)

Westinghouse Non-Proprietary Class 3

to determine and set a system flowrate prior to placing the system in service. The system is fully functional in the simulator and can successfully control system flow when a setpoint is provided.

SDR VC-1508-46 tracks a delta between the controller setpoints in design documentation vs. current simulator operation for level control in the Standby Diesel Generator Day tank. The simulator does model day tank level lowering as the DG is run, and models the Fuel Oil system providing makeup to the tank. The setpoints for the level that the tank starts and stops filling are inconsistent with the reference document. Tracking system performance to this detail is well beyond what is normally undertaken in License Operator training. [

]$_{a,c}$ before the inventory makeup function would actuate.

These issues were dispositioned individually as acceptable due to minimal impact on training, which can be mitigated where appropriate.

b. The aggregate impact of the six (6) new SDRs which are not being fixed and that potentially impact this criterion do not preclude the ability of the simulator to conduct operator training or examination. Each of the SDRs is related to a different system, and do not impact each other in any sort of inter-related system response, as described below.

SDR-1506-02 impacts the Wide Range CMT level indication. This level is also obtained by use of the two narrow range instruments, and is not used as a sole primary decision tool for any EOP action.

SDR-1507-42 impacts the demonstration of a ventilation system alignment to purge the Main Control Room. The simulator, which is reflecting the current plant design, can be configured to demonstrate starting the system actuation/alignment.

SDR 1507-12 documents a design issue which will resolve a conflict between alarm setpoint and instrument range of the Condensate Storage Tank level indication.

Two SDRs, VC-1507-25 and VC-1507-43 are associated with information needed in order to complete procedures used during plant/simulator operation, one in the Condensate Polisher subsystem, and another concerning level indication used during midloop conditions.

The remaining open SDR, VC-1508-46, is associated with Diesel Fuel Oil transfer equipment which is not routinely monitored in the control room, or during simulator training or examination.

Westinghouse Non-Proprietary Class 3

c. There are two (2) SDRs affecting this criterion which were evaluated as part of the initial Aggregate assessment study, and have been identified as potentially significant during further review.

These original SDR(s) that potentially impacting this attribute, and are still considered potentially significant are:

VC-TO-75/76, VRS monitor and VHS monitor go up by [ ]$_{a,c}$ on a loss of process flow; and

VC-TO-102, Westinghouse RITS to evaluate adding additional ways to allow the simulator to cause the BEACON calculated status to become INOPERABLE.

VC-TO-75/76 is being corrected by the Westinghouse patch released August 15th, 2015. VC-TO-102 is now closed, after a determination by SCE&G that the current availability of Simulator functions which already allow the instructors to make BEACON change to INOPERABLE are sufficient for training and examination purposes.

A more detailed discussion of each of these items is provided the RAI response section titled “Summary of significant SDRs 060315 – VCS responses”. There is no additional aggregate impact of these two (2) SDRs with the five (5) new SDRs discussed in section “b’ above because all of the 060315 significant SDRs are now being closed.

d. In conclusion, there are no SDRs, affecting this attribute individually or in aggregate, which prevent achieving the program learning objectives or prevent conducting valid examinations which can discern competent operators.

5) Observe and safely control the operating behavior characteristics of the facility.

New SDR(s) potentially impacting this attribute:

VC-1505-03; Spurious ADS Stage 4 actuation response (Corresponds to Vogtle SCR-DR-6272)
Description
The Containment Pressure rise following a spurious actuation of ADS-4 squib valve from 100% power produced a peak Containment pressure [
]$_{a,c}$. (Note ADS 1-3 CMT actuation level point was reached).

VC-1506-02; CMT WR Level Indications go Bad Quality (Corresponds to Vogtle SCR-DR-6217)
Description
The Wide Range (WR) Core Makeup Tank (CMT) level indications shift to Bad Quality once Automatic Depressurization System 1-3 (ADS 1-3) Actuate. Prior to this event, they would toggle to Bad Quality intermittently. The Bad Quality status is on indications PXS-LT009A/B & -LT010A/B (on Passive Core Cooling System (PXS) Supplemental Ind. Screen) and DDS-RSA11-L1 & DDS-RSA13-L1 (on WPIS screen 60017). [
]$_{a,c}$
Note that the non-calc (non-compensated) instrumentation in the CMT is not affected similarly.

VC-1506-04; Decay Heat Calculation (DHC) Summary - Assembly Move NAP Function Not Functional (Corresponds to Vogtle SCR-DR-6022)
Description
When attempting to simulate fuel assemblies being moved from the core to the Spent Fuel Pool (SFP), it was noted that the Decay Heat Calculation (DHC) NAP to maintain the administrative location of fuel does not work correctly. On display 40203 the assembly move buttons on the lower right portion indicate they are only available when the light DDS-AP-DHC Status indicates it is ACTIVE. This light is driven off of the automatic mode selector and is INACTIVE when in MODES 1&2 and ACTIVE in MODES 3-6. However, when the light indicates INACTIVE the buttons for moving are raised and available. When the light changes status to ACTIVE the buttons for moving are grayed out and no longer available. The light being active or inactive is currently driven by the auto mode selector and becomes active in MODES 3-6. However, fuel cannot be moved from the core into the SFP in any MODE other than MODE 6. The light should be driven by the manual input of the Rx vessel head being removed or installed or upper internals position on display 40004.

VC-1506-12; Redundant Sensors Algorithm Application NAP Does Not Process Failed Channels Correctly (Corresponds to Vogtle SCR-DR-6169)
Description
The Redundant Sensors Algorithm Application (RSA) driven source range counts on the WPIS displays (main, trends, and safety functions) will still reflect an abnormally high value for source range power after a source range channel failure. The RSA NAP should account for the failure and remove it from the calculation.

VC-1506-15; RSA NAP for Power Range Power does not Eliminate Erroneous Input (Corresponds to Vogtle SCR-DR-6621)
Description

[

]a,c. This causes an erroneous PR power reading on the WPIS.

VC-1506-39; Rod Step sound problems (Corresponds to Vogtle SCR-DR-6186)
Description
During outward rod motion, the audible step counter randomly can have a one second pause in it with rod motion continuing. [

]a,c

VC-1506-41; Urgent Alarm during Case 2 Control Rod Exchange (CRE) at 90% Power (Corresponds to Vogtle SCR-DR-6267)
Description
The Urgent Failure Alarm (UA) occurs [

]a,c.
The UA appears to be a timing issue that occurs only when MA and MD banks are both in motion when the Tavg-Tref deviation occurs. Basically, the Ovation controllers briefly generate a RODS IN and a RODS OUT signal to the MA bank and a RODS IN and a RODS OUT signal to the MD bank which results in a UA from the Power Cabinets.

VC-1507-07; After VES actuation, MCA pressure never builds up as designed (Corresponds to Vogtle SCR-DR-5945)
Description
VES maintains a small positive pressure inside the Main Control Area (MCA) and is regulated via VES-D001A/B which cycle to maintain a minimum of [ ]a,c. Both the SDS and 3B maintained [ ]a,c after VES actuation, with some spikes in pressure to [ ]a,c. In either case this is not per design of VES-M3-001. Normally VBS maintains [ ]a,c as read between the MCR and the corridor as read on the VES-PDT-004A/B which is the nominal pressure. Low alarm is [ ]a,c and a high alarm is [ ]a,c.

VC-1507-09; Insufficient PCS flow through single drain line (Corresponds to Vogtle SCR-DR-6013)
Description
PCS provides sufficient flow when all drain paths are available. However, the model only provides 73% of the required flow when only one drain line is available (per safety analysis). FT003 provides 177.5 gpm, FT004 provides 38.9 gpm, FT002 provides 23.39 gpm, and FT001 provides 109.4 gpm when the only flow path available is through V001A. At this condition, [

]a,c vice the 349 gpm we are getting. The flows are nearly identical for V001B and V001C. The starting condition is with the PCCWST at 98.9% and at 68.1 deg-F

VC-1507-11; VBS-D201 does not fail close upon a loss of power (Corresponds to Vogtle SCR-DR-6042)

Description

Upon a loss of power to VBS-D201 the damper does not reposition. Per APP-GW-E0X-001, Rev 1, the power supply is ECS-EA-1121A. When this bus is de-energized, by removing all power from ES-1, the damper does not close as stated in APP-VBS-M3-001, Rev D, Section 7.2.6. When ES-1 is de-energized initially D201's component status box (left of indication) will flash but the damper will not move; after this it will not respond to commands.

VC-1507-12; DWS-LT006 has Insufficient Range (Corresponds to Vogtle SCR-DR-6099)

Description

Demineralized Water Transfer and Storage System (DWS) DWS-LT006 is the level indication for the Condensate Storage Tank (CST). This level spans [ ]$_{a,c}$ per APP-DWS-M3C-101. However, the calculation note for DWS (APP-DWS-M3C-002) has the high 2 alarm at [ ]$_{a,c}$. This is an important alarm because it is designed to give operators time to determine why the CST is full before it overflows to a drain. Overflow will occur at [.]$_{a,c}$

VC-1507-20; EDS Static Transfer Switch Operation (Corresponds to Vogtle SCR-DR-6639)

Description

During a loss of All AC casualty the EDS batteries begin to discharge, when [ ]$_{a,c}$ the EDS static switch transfers to its alternate position which in this case is a de-energized AC bus. Based on discussions with multiple SMEs the consensus is that during the mentioned condition the static switch should not reposition.

VC-1507-38; Containment Recirculation Actuation for Div C and D not visible on PMS ESF Screen (Corresponds to Vogtle SCR-DR-5972)

Description

Once containment recirculation is actuated, the actuation indication for Divisions C and D did not have the white box with an X on the ESF Act Status Screen for the divisional PDSPs or the Non-Safety Operational Overview screen (33020). The individual PMS division screen for CNMT Recirc actuation (IRWST/INJT Recirc) did show that it had been actuated on all 4 divisions.

VC-1507-39; CVS-V094 Power Failure (Corresponds to Vogtle SCR-DR-6019)

Description

CVS-V094, Zinc/Hydrogen Containment Isolation Valve, does not close upon a loss of power to ILCA02 as expected. It did close on loss of power to ILCA03, which is not in accordance with design documentation. [ ]$_{a,c}$.

VC-1507-42; Tuning of VBS Required (Corresponds to Vogtle SCR-DR-6168)
Description
During Main Control Room (MCR) purge operations, Nuclear Island Nonradioactive Ventilation System (VBS) air handling unit trains cannot maintain stable flow and as a result, enter an indefinite cycling between two trains. The current tuning does not allow enough time to establish stable flow.

VC-1507-54; Potential issue with D/G Sequencer (Corresponds to Vogtle SCR-DR-6610)
Description
According to APP-ZOS-E0C-001 (Onsite Standby Power System Diesel Generator Sizing Calculation) Rev 1, the following busses should get re-energized by the sequencer at Load Step 0 when its associated bus loses power:
[ ]a,c
[
]a,c
[
]a,c
These busses are not currently sequenced once ECS-ES-1/2 gets re-energized from its respective DG.

VC-1508-13; SGS MSL drain pot erratic indication (Corresponds to Vogtle SCR-DR-6157)
Description
SGS MSL drain pots became erratic and were flashing on both main steam lines at 53% Rx Power. By 90%, both pots filled with water, even with the drains open.

VC-1508-46; Diesel Fuel Oil Day Tank Level Transmitter Operation (Corresponds to Vogtle SCR-DR-6491)
Description
Diesel Fuel Oil System (DOS) level transmitters DOS-LT016A/017A and 016B/017B on the day tank [
]a,c Additionally as level rises at ~85% the level indication jumps to 100%.

VCS-1508-48; VES Supply Header Pressure not modeled correctly for a change in temperature w/o a change in mass (Corresponds to Vogtle SCR-DR-6547)
Description
When the Radiological Controlled Area Ventilation System (VAS) ventilation is secured to the Main Control Room Emergency Habitability System (VES) Air Storage Area (Rm 12555), room temperature will rise as expected, as indicated on VAS-TE080A/B. This rise in temperature should cause VES Supply Header Pressure (VES-PT001A and B) to rise, since the volume of air in the VES tanks is not changing. As depicted in the attached trend, this does not happen in the current model. Since VES air storage tank pressure does not change in the model, this causes the calculated air quantity (VES-

QIY008A and B) to lower, which should not be the case. The VES air quantity should only change if you are filling VES or depressurizing it.

VC-1508-51; VZS Dampers do not Fail As-Is after Loss of Power (Corresponds to Vogtle SCR-DR-6623)

Description

Diesel Generator Building Heating and Ventilation dampers VZS-D014A/B and VZS-D015A/B do not fail as is on loss of power.

VC-1508-52; Turbine Bypass Control Valve Control Logic cannot Support Design Power Supplies (Corresponds to Vogtle SCR-DR-6634)

Description

The turbine bypass control valves (MSS-PL-V001, MSS-PL-V002, MSS-PL-V003, MSS-PL-V004, MSS-PL- V005, MSS-PL-V006) have [

]a,c

VC-1508-53; Battery Temperature does not change (Corresponds to Vogtle SCR-DR-6645)

Description

During a loss of all AC sources discharge test it was identified that the battery temperature did not change during the 15 hour run. Further research showed the battery room temperature does not change during loss of ventilation

VC-1508-54; Fire Protection System is not modeled in Containment (Corresponds to Vogtle SCR-DR-6657)

Description

While attempting to create a FR-Z.2 (Response to High Containment Level) scenario, it was discovered that a leak from the Fire Protection System (FPS) header in containment had no effect on any containment parameters (ex. Containment Sump Level, Containment Humidity). FPS Containment Spray also had no effect on any containment parameters.

VC-1508-108; Simulator Random Failures.

Description

There have been some recent simulator failures which have occurred for which the cause is not clear. This has happened ~ 3 times over a 6 week period, when the simulator has been used to support both Day shift and Second shift training. These have not been traced to any one STS component or subsystem. Most involve Jstation commands not being executed (such as FREEZE) or APS indicated FROZEN with the SIM still in RUN. They have happened as early as one day after complete system reboots. More information is needed to determine if more frequent reboots are required during heavy usage periods to reduce these instances.

Assessment of effects of Simulator Discrepancy Report items added between 4/28/15 and 9/1/15 for impact to License Operator Training

ASSESSMENT:

a. Twenty-four (24) new SDR items have been written which potentially impact the ability to observe and safely control the operating behavior characteristics of the facility.

Of these, ten (10) are being corrected as part of Westinghouse update releases. These are;

VC-1505-03; Spurious ADS Stage 4 actuation response
VC-1506-12: Redundant Sensors Algorithm (RSA) Application NAP Does Not Process Failed Channels Correctly,
VC-1506-15; RSA NAP for Power Range Power does not Eliminate Erroneous Input
VC-1507-07; After VES actuation, MCA pressure never builds up as designed
VC-1507-09; Insufficient PCS flow through single drain line
VC-1507-11; VBS-D201 does not fail close upon a loss of power
VC-1507-20; EDS Static Transfer Switch Operation
VCS-1508-48; VES Supply Header Pressure not modeled correctly for a change in temperature w/o a change in mass;
VC-1508-52; Turbine Bypass Control Valve Control Logic cannot Support Design Power Supplies and
VC-1508-53; Battery Temperature does not change.

The remaining fourteen (14) SDRs are unrelated to each other directly, and are discussed below.

SDR VC-1506-02 addresses Core Make-up Tank (CMT) Wide Range (WR) Level Indications which change to “Bad Quality” after Automatic Depressurization System (ADS) stages 1-3 actuate. This is a density compensated reading, which is currently adversely affected when the CMT water level drops below the upper instrument. There are no actuations which use this instrumentation, and no EOP decisions related to CMT level which relies on the use of this instrument only. Additionally, the CMT upper and lower narrow range instruments and the CMT top temperature instruments always [

]$_{a,c}$

SDR VC-1506-04 documents a problem with one feature of a NAP [

]$_{a,c}$ Currently, the enable function is incorrectly tied to MODES 1 thru 3, instead of MODE 6. Using this feature in the simulator for training or examination is beyond the scope of licensed operator training.

Westinghouse Non-Proprietary Class 3

Assessment of effects of Simulator Discrepancy Report items added between 4/28/15 and 9/1/15 for impact to License Operator Training

SDR VC-1506-39 concerns a pause or delay which affects the [

]a,c This item is included in the “Affects Training list” which is provided to the crews. Although this can be distracting to the crew, [

]a,c provide other redundant and diverse methods to determine rod movement.

SDR VC-1506-41 documents a rod control “Urgent Alarm” which occurs during a Case 2 Control Rod Exchange (CRE). This occurs ~ 1 in every 10 performances of the evolution. The condition is added to the “Affects Training” list. This is an infrequently performed evolution, which can be repeated successfully if desired for training or examination.

SDR 1507-12 is related to an instrumentation alarm setpoint which has conflicting design information. The instrument is the level indication for the Condensate Storage Tank (CST) (DWS-LT006). It has two design reference documents which contain a conflict between the instrument range and an alarm setpoint. The instrumentation level spans [ ]a,c per APP-DWS-M3C-101. However, the calculation note for DWS (APP-DWS-M3C-002) has the high 2 alarm at [ ]a,c. Overflow will occur at [ ]a,c. The simulator is modeling the plant as currently designed; once the design has been updated the simulator model will be updated as well. This issue was dispositioned as acceptable due to minimal impact on training.

SDR VC-1507-38 has been written to document an indication incompleteness issue associated with some indications for Containment Recirculation actuation for divisions C and D. The actuation always works as designed, and verification of correct component repositioning is always a primary indicator of actuation success. [

]a,c

SDR VC-1507-39 has been written to document a delta between the power supply documented in the reference documents and how the simulator is configured for the instrument air solenoid valve on the Air Operated Valve CVS-V094. This valve is a relatively minor valve in the system flowpath, and it’s operation - open or closed – does not impede the ability of the CVS system to perform its defense in depth functions. The item has been added to the “Affects Training” list so that the instructors and students will be aware of this if it is demonstrated. A simulator over-ride can be easily used to accomplish demonstration of this valve’s fail position.

SDR VC-1507-42 has been written to document a need to improve the tuning of the Nuclear Island Nonradioactive Ventilation system, so that there is sufficient time to allow the establishment of a stable flowrate when beginning a Main Control Room Purge evolution. The cycling has been determined to be caused

Westinghouse Non-Proprietary Class 3

by a present design issue, not a simulator modeling issue. The current tuning results in cycling between the two redundant ventilation supply units in this system, and will be corrected in a later baseline. The item has been added to the "Affects Training" list so that the instructors and students will be aware of this if it is demonstrated.

SDR VC-1507-54 tracks a problem with 3 power distribution power transformers which do not get re-energized by the Standby Power System Diesel Generator sequencer when the associated bus loses power. The impact of the loss of these panels is minimal to operator training, because the loads are all building lighting or non-safety heat tracing. As currently configured, an APP file can be used to reload these busses if desired, or the scenario guide can be prompted to treat these as an equipment failure which will be addressed by appropriate manual actions.

SDR VC-1508-13 tracks a problem with Main Steam Line drain pot level response. The erratic response above 53% power reported at Vogtle has not repeated, however some erratic level response has been noted during post reactor trip recovery. The operators are able to respond with the procedurally directed actions in the Alarm Response Procedure. The erratic indications do not alter the course of post reactor trip plant maneuvers, either for normal conditions or for more complicated reactor trips as normally exercised during License Operator training.

SDR VC-1508-46 tracks a delta between the controller setpoints in design documentation vs. current simulator operation for level control in the Standby Diesel Generator Day tank. The simulator does model day tank level lowering as the DG is run, and models the Fuel Oil system providing makeup to the tank. The setpoints for the level that the tank starts and stops filling are inconsistent with the reference document. Tracking system performance to this detail is well beyond what is normally undertaken in License Operator training. [

]$_{a,c}$ before the inventory makeup function would actuate.

SDR VC-1508-51, tracks a problem with two Diesel Generator Building Heating and Ventilation dampers which [
]$_{a,c}$. This issue will be transparent to the operators so it has no impact on operator actions. The damper position is only verified if the DG is in operation. When the DG is in operation, then the dampers will be energized.

SDR VC-1508-54 tracks a problem with the lack of response by Containment parameters from the Fire Protection system. The use of Fire Protection systems for Containment Spray is contained in the Severe Accident Management procedures, so is beyond the scope of Initial License Operator training. For those instances when Fire Protection system is used, the affects can be modeled using

APP files. The item has been added to the “Affects Training” list so that the instructors and students will be aware of this if it is demonstrated.

SDR VC-1508-108 is determining if more frequent simulator reboots are required to prevent simulator instructor station failures during heavy usage periods.

These issues were dispositioned individually as acceptable due to minimal impact on training, which can be mitigated where appropriate.

b. The aggregate impacts of these fourteen (14) remaining new SDRs that potentially impact this criterion do not preclude the ability of the simulator to conduct operator training or examination. Each of the SDRs is related to a different system, and do not impact each other in any sort of inter-related system response, as described below.

SDR-VC-1506-02 impacts the Wide Range CMT level indication. This level is also obtained by use of the two narrow range instruments, and is not used as a sole primary decision tool for any EOP action.

SDR VC-1506-04 documents a problem with one feature of a NAP [ ]$_{a,c}$, which is beyond the scope of licensed operator training.

SDR VC-1506-39 concerns a pause in the additional [ ]$_{a,c}$ of Rod Control system.

SDR VC-1506-41 concerns the Automated Control Rod Exchange feature of Rod Control system.

SDR-VC-1507-12 is associated with the CST level instrumentation range conflicting with the high level alarm setpoint information

SDR-VC-1507-38 concerns status indication for two divisions of Containment recirculation actuation, which can also be determined successful by use of other redundant means.

SDR-VC-1507-39 affects the power supply to a CVS Air Operated valve, which does not currently fail in the correct position on loss of power without instructor actions.

SDR-VC-1507-42 is a control loop tuning issue concerning the purge function of the control room ventilation system after it has actuated.

SDR-VC-1507-54 concerns building lighting and heat trace loads on the Standby Power System Diesel.

SDR-VC-1508-13 concerns level response in the Main Steam line drain pots during normal post trip recovery.

SDR-VC-1508-46 concerns the Standby Diesel Day tank level control loop tank fill start and stop points.

SDR-VC-1508-51 tracks a damper in the DG building heating and ventilation subsystem which fail closed, rather than as is on loss of power

SDR-VC-1508-54 concerns the Fire Protection system within the containment building.

SDR VC-1508-108 is determining if more frequent simulator reboots are required to prevent simulator instructor station failures during heavy usage periods.

c. There are eleven (11) SDRs affecting this criterion which were evaluated as part of the initial Aggregate assessment study, and have been identified as potentially significant during further review.

These original SDR(s) that potentially impacting this attribute, and are still considered potentially significant are:

VC-TO-102, Westinghouse RITS to evaluate adding additional ways to allow the simulator to cause the BEACON calculated status to become INOPERABLE;
VC-TO-122, PMS displays for division C and D has a 3rd Stage ADS actuation status box which will never change state to “X” because these divisions are not designed to have an actuation logic;
VC-1502-08, different Pzr level response in 1 of 3 Pzr steam space LOCA training scenarios,
VC-1502-09, Overpower rod control permissive setpoints not reached before trip setpoints,
VC-1502-10, inconsistent AO Rod movement between tests;
VC-1502-12, Pzr water level response during safety valve malfunction testing has minor variations in parameter timing from maxima and minima;
VC-1502-13, Power Load Unbalance response potentially causing inconsistent LP Turbine Intercept valve response;
VC-1503-03, RCS wide range pressure dropped from 1400 to 700# with no action taken;
VC-1503-16, Alarm response after certain events is difficult due to number of alarms;
VC-1503-33, TCS Heat transfer characteristics through H2 coolers, and VC-1504-01 APS “Instrument Air” tile has no alarm points assigned.

Five (5) of these SDRs are being closed with Westinghouse patches: VC-1502-09, VC-1502-13, VC-1503-16, and VC-1504-01 are being fixed with the patch

delivered on August 15th, 2015. VC-1503-33 is being fixed with the patch delivered on October 30th, 2015.

Four (4) of these SDRs are being closed based on further investigation and review of the plant/simulator response.

VC-TO-102 is now closed, after a determination by SCE&G that the current availability of Simulator functions which already allow the instructors to make BEACON change to INOPERABLE are sufficient for training and examination purposes.

VC-1502-08 is now being closed based on a more detailed review of the event which concluded that the one instance of differing plant response to the same training scenario was cause by extremely delayed response by one training crew. The same training event was successfully repeated by 5 other crews as well as the Instructional staff without event.

VC-1502-12 is being closed based on further research which has directly tied the small oscillations to minor flow variances occurring during the passive CMT injection phase.

VC-1503-03/04 is being closed based on a combination of the understanding that the pressure drop is caused by a void collapse in the Reactor Vessel head, and a smoothing of the transitional event resulting from the simulator attenuation/frame balance tuning released with the August 15th, 2015 patch.

A more detailed discussion of each of these items is provided the RAI response section titled “Summary of significant SDRs 060315 – VCS responses”.

The remaining two (2) SDRs, VC-TO-122 (ADS stage 3 division C&D display improvement) and VC-1502-10 (AO rod movement inconsistent between tests), are unrelated to each other.

VC-1502-10 is not related to any of the newly opened SDRs, so does not in increase the aggregate affect(s) of open SDRs to this criterion.

VC-TO-122 is similar to SDR VC-1507-38, in that both are associated with an actuation status display for divisions C and D which is under consideration for improvements in human factoring. In both cases the actuation always works as designed, and verification of correct component repositioning is always a primary indicator of actuation success. [

]a,c

In conclusion, there is no increase in aggregate affect(s) of open SDRs to this criteria caused by the addition of new open SDRs considered in section (a.).

d. In conclusion, there are no SDRs, affecting this attribute individually or in aggregate, which prevent achieving the program learning objectives or prevent conducting valid examinations which can discern competent operators.

6) **Perform control manipulations required to obtain desired operating results during normal abnormal, and emergency situations**.

New SDR(s) potentially impacting this attribute:

VC-1506-01; Rod Withdrawal button deselects During Continuous Operation (Corresponds to Vogtle SCR-DR-5584)
Description
During extended rod withdrawals during startups while depressing the rod withdrawal button (UP ARROW), the UP ARROW button may un-highlight and momentarily flash gray even though still depressed. Rod motion will still occur.

VC-1506-05; Liquid Radwaste System WLS-MP-08C will not pump Monitor Tank C below 37" (Corresponds to Vogtle SCR-DR-6068)
Description
While performing a startup from Mode 6 it was discovered that the Liquid Waste System (WLS) WLS-MP-08C will not pump Monitor tank C around [ ]a,c. The pump will turn on and occasionally the downstream check valve will throttle open and shut but there is little or no evidence of flow. Also, discharge pressure never goes above [ ]a,c. Normal discharge pressure for the other monitor tank pumps is around [ ]a,c. Note that it does pump when level is above [ ]a,c as the tank has been pumped down to [ ]a,c successfully. It appears to exhibit strange behavior at [ ]a,c and below.

VC-1506-41; Urgent Alarm during Case 2 Control Rod Exchange (CRE) at 90% Power (Corresponds to Vogtle SCR-DR-6267)
Description
The Urgent Failure Alarm (UA) occurs [

]a,c.
The UA appears to be a timing issue that occurs only when MA and MD banks are both in motion when the Tavg-Tref deviation occurs. Basically, the Ovation controllers briefly generate a RODS IN and a RODS OUT signal to the MA bank and a RODS IN and a RODS OUT signal to the MD bank which results in a UA from the Power Cabinets.

VC-1507-39; CVS-V094 Power Failure (Corresponds to Vogtle SCR-DR-6019)
Description
CVS-V094, Zinc/Hydrogen Containment Isolation Valve, does not close upon a loss of power to ILCA02 as expected. It did close on loss of power to ILCA03, which is not in accordance with design documentation. [ ]a,c

VC-1507-42; Tuning of VBS Required (Corresponds to Vogtle SCR-DR-6168)
Description
During Main Control Room (MCR) purge operations, Nuclear Island Nonradioactive Ventilation System (VBS) air handling unit trains cannot maintain stable flow and as a result, enter an indefinite cycling between two trains. The current tuning does not allow enough time to establish stable flow.

VC-1507-43; Condensate Polisher Bypass Valve Control (Corresponds to Vogtle SCR-DR-6172)

Description

CPS-V001 (CDS Polisher Bypass Valve) Setpoint controls are confusing. The procedure directs placing the controller in auto and never has a setpoint to control to. The current setpoint is set at the high end of the scale, so the bypass valve will never modulate closed. The calc note states that signals will be set based on CDS header and polisher flow. No setpoint is yet determined.

VC-1507-54; Potential issue with D/G Sequencer (Corresponds to Vogtle SCR-DR-6610)

Description

According to APP-ZOS-E0C-001 (Onsite Standby Power System Diesel Generator Sizing Calculation) Rev 1, the following busses should get re-energized by the sequencer at Load Step 0 when its associated bus loses power:

[ ]a,c

[

]a,c

[

]a,c

These busses are not currently sequenced once ECS-ES-1/2 gets re-energized from its respective DG.

VC-1507-67; Unexpected response from SWS-PY-S06A on loss of power (Corresponds to Vogtle SCR-DR-5661)

Description

Noted that when ECS-EK-12 experienced a ground fault and all loads off the bus lose power a component was able to operate which was not expected. The "A" service water strainer is SWS-PY-S06A. SWS-PY-S06A is powered from ECS-EC-122 whose feeder bus is ECS-EK-12. When cycled, the strainer started. This is an unexpected response since its power supply was lost. Investigate power supply of SWS-PY-S06A

VC-1508-11; WRS Sump Pump B does not indicate proper Discharge Pressure (Corresponds to Vogtle SCR-DR-6126)

Description

Radioactive Waste Drain System (WRS) sump pump WRS-MP-01B indicates a low pressure when pumping with an automatic start signal. This is evident when a leak is inserted that fills the WRS sump (such as a RNS leak). The "A" pump has proper discharge pressure, but "B" does not indicating low pressure in alarm. If the "A" pump is taken to manual and secured, the "B" pump still does not develop proper pressure.

VC-1508-52; Turbine Bypass Control Valve Control Logic cannot Support Design Power Supplies (Corresponds to Vogtle SCR-DR-6634)

Description

The turbine bypass control valves (MSS-PL-V001, MSS-PL-V002, MSS-PL-V003, MSS-PL-V004, MSS-PL- V005, MSS-PL-V006) have [

]a,c.

ASSESSMENT:

a. Ten (10) new SDR items have been written which potentially impact the ability to perform control manipulations required to obtain desired operating results during normal, abnormal and emergency situations. Of these, five (5) are being corrected as part of Westinghouse update releases.

These are;

VC-1506-01, Rod Withdrawal button deselects During Continuous Operation
VC-1506-05; Liquid Radwaste System WLS-MP-08C will not pump Monitor Tank C below 37”
VC-1507-67; Unexpected response from SWS-PY-S06A on loss of power
VC-1508-11; WRS Sump Pump does not indicate proper Discharge Pressure; and
VC-1508-52; Turbine Bypass Control Valve Control Logic cannot Support Design Power Supplies.

The remaining five (5) SDRs are unrelated to each other directly, and are discussed below.

SDR VC-1506-41 documents a rod control “Urgent Alarm” which occurs during a Case 2 Control Rod Exchange (CRE). This occurs ~ 1 in every 10 performances of the evolution. The condition is added to the “Affects Training” list. This is an infrequently performed evolution, which can be repeated successfully if desired for training or examination.

SDR VC-1507-39 has been written to document a delta between the power supply documented in the reference documents and how the simulator is configured for the instrument air solenoid valve on the Air Operated Valve CVS-V094. This valve is a relatively minor valve in the system flowpath, and it’s operation - open or closed – does not impede the ability of the CVS system to perform its defense in depth functions. The item has been added to the “Affects Training” list so that the instructors and students will be aware of this if it is demonstrated. A simulator over-ride can be easily used to accomplish demonstration of this valve’s fail position.

SDR VC-1507-42 has been written to document a need to improve the tuning of the Nuclear Island Nonradioactive Ventilation system, so that there is sufficient time to allow the establishment of a stable flowrate when beginning a Main Control Room Purge evolution. The cycling has been determined to be caused by a present design issue, not a simulator modeling issue. The current tuning results in cycling between the two redundant ventilation supply units in this system, and will be corrected in a later baseline. The item has been added to the

"Affects Training" list so that the instructors and students will be aware of this if it is demonstrated.

SDR VC-1507-43 is tied to an instrumentation plant control loop for the Condensate Polisher Bypass Valve, but is tracking the lack of any current procedural guidance (which will be provided by the on-site chemistry department) to determine and set a system flowrate prior to placing the system in service. The system is fully functional in the simulator and can successfully control system flow when a setpoint is provided.

SDR VC-1507-54, tracks a problem with 3 power distribution power transformers which do not get re-energized by the Standby Power System Diesel Generator sequencer when the associated but loses power. The impact of the loss of these panels is minimal to operator training, because the loads are all building lighting or non-safety heat tracing. As currently configured, an APP file can be used to reload these busses if desired, or the scenario guide can be prompted to treat these as an equipment failure which will be addressed by appropriate manual actions.

These issues were dispositioned individually as acceptable due to minimal impact on training, which can be mitigated where appropriate.

b. The aggregate impacts of these five (5) remaining new SDRs that potentially impact this criterion do not preclude the ability of the simulator to conduct operator training or examination. Each of the SDRs is related to a different system, and do not impact each other in any sort of inter-related system response, as described below.

   SDR VC-1506-41 concerns the Automated Control Rod Exchange feature of the Rod Control system.

   SDR-VC-1507-39 affects the power supply to a CVS Air Operated valve, which does not currently fail in the correct position on loss of power without instructor actions.

   SDR-1507-42 impacts the demonstration of a ventilation system alignment to purge the Main Control Room. The simulator, which is reflecting the current plant design, can be configured to demonstrate starting the system actuation/alignment.

   SDR VC-1507-43 is associated with information needed in order to complete procedures used during plant/simulator operation in the Condensate Polisher subsystem

   SDR-VC-1507-54 concerns building lighting and heat trace loads on the Standby Power System Diesel.

Westinghouse Non-Proprietary Class 3

c. There are nine (9) SDRs affecting this criterion which were evaluated as part of the initial Aggregate assessment study, and have been identified as potentially significant during further review.

These original SDR(s) that potentially impacting this attribute, and are still considered potentially significant are:

VC-TO-47, Inconsistency of rods rejecting to MANUAL based on Hi Auct Tave MERE signal during ATWAS scenario;
VC-TO-128, MSR valve response during shutdown causes undesired RCS temperature transient;
VC-1410-07, steam dump capacity appears to be larger than expected;
VC-1501-02, VAS/VRS system response to LOCA outside containment;
VC-1502-13, Power Load Unbalance response inconstancies' cause by LP Turbine Combined Intercept valve response inconsistencies;
VC-1502-14, SG Wide Range level response during SG dryout;
VC-1503-08/09, During ISV the crew(s) had trouble determining CMT operating – which affected success of PRA manual actuation time windows;
VC-1503-16, Alarm response after certain events is difficult based on the number of alarms; and
VC-1503-21, problem with one screen of one work station during transfer of the simulator to the Remote Shutdown Room

Six (6) of these SDRs are being closed with Westinghouse patches: VC-TO-47, VC-1410-07, VC-1502-13, and VC-1503-16 are being fixed with the patch delivered on August 15th, 2015. VC-TO-128 and VC-1501-02 are being fixed with the patch delivered on October 30th, 2015.

Three (3) of these SDRs are being closed based on further investigation and review of the plant/simulator response. VC-1502-14 is being closed based on further review provided by the vendor to validate that the minor oscillations in Wide range level noted for that short duration of time are as expected for plant response to this event. VC-1503-08/09 is being closed based on a combination of procedure changes to standardize crew actions for this event, and an improvement in the modeling of the CMT check valve which results in a more gradual development of flow has been delivered with the August 15th, 2015 patch. VC-1503-21 is being closed after being unable to repeat the problem originally noted at Westinghouse, Cranberry. This was successfully performed five (5) times at VCS without a repeat problem. A more detailed discussion of each of these items is provided the RAI response section titled "Summary of significant SDRs 060315 – VCS responses".

In conclusion, there is no increase in aggregate affect(s) of open SDRs to this criteria caused by the addition of new open SDRs considered in section (a.).

d. In conclusion, there are no SDRs, affecting this attribute individually or in aggregate, which prevent achieving the program learning objectives or prevent conducting valid examinations which can discern competent operators.

7) **Safely operate the facility's heat removal systems, including primary coolant, emergency coolant, and decay heat removal systems, and identify the relations of the proper operation of these systems to the operation of the facility.**

New SDR(s) potentially impacting this attribute:

VC-1506-02; CMT WR Level Indications go Bad Quality (Corresponds to Vogtle SCR-DR-6217)
Description
The Wide Range (WR) Core Makeup Tank (CMT) level indications shift to Bad Quality once Automatic Depressurization System 1-3 (ADS 1-3) Actuate. Prior to this event, they would toggle to Bad Quality intermittently. The Bad Quality status is on indications PXS-LT009A/B & -LT010A/B (on Passive Core Cooling System (PXS) Supplemental Ind. Screen) and DDS-RSA11-L1 & DDS-RSA13-L1 (on WPIS screen 60017). [

]a,c

Note that the non-calc (non-compensated) instrumentation in the CMT is not affected similarly.

VC-1508-52; Turbine Bypass Control Valve Control Logic cannot Support Design Power Supplies (Corresponds to Vogtle SCR-DR-6634)
Description
The turbine bypass control valves (MSS-PL-V001, MSS-PL-V002, MSS-PL-V003, MSS-PL-V004, MSS-PL- V005, MSS-PL-V006) [

]a,c

ASSESSMENT:

a. Two (2) new SDR items, VC-1506-02; CMT WR Level Indications go Bad Quality, and VC-1508-52; Turbine Bypass Control Valve Control Logic cannot Support Design Power Supplies, has been written based on potential impact to the ability to operate the facility's heat removal systems.

   Of these, one (1) is being corrected as part of Westinghouse update releases.

   This is;

   VC-1508-52; Turbine Bypass Control Valve Control Logic cannot Support Design Power Supplies.

   The other remaining SDR is discussed below.

   SDR VC-1506-02 addresses Core Make-up Tank (CMT) Wide Range (WR) Level Indications which change to "Bad Quality" after Automatic Depressurization System (ADS) stages 1-3 actuate. This is a density compensated reading, which is currently adversely affected when the CMT water level drops below the upper instrument. There are no actuations which use this instrumentation, and no EOP decisions related to CMT level which relies on the use of this instrument only. Additionally, the CMT upper and lower narrow range instruments and the CMT

top temperature instruments always [
]a,c

b. There is no aggregate impact of these SDRs, given that one is being corrected, and there is only one other SDR.
c. There are three (3) SDRs affecting this criterion which were evaluated as part of the initial Aggregate assessment study, and have been identified as potentially significant during further review.

   These original SDR(s) that potentially impacting this attribute, and are still considered potentially significant are:

   VC-1503-13, No interlock exists on RNS-V061 when aligning RNS to supply the CVS purification return flowpath;
   VC-1503-15, failed to identify a CCS leak which resulted in the CCS pumps running while cavitating; and
   VC-1410-09, RNS pump does not restart on DG sequencer.

   One (1) of these SDRs is being closed with Westinghouse patches: VC-1503-15 is being fixed with the patch delivered on August 15th, 2015.

   The remaining two originally discussed SDRs are not related to this newly identified SDR, and would not contribute to any additional aggregate impact beyond what is already discussed concerning them directly because the newly identified SDR is being closed as stated in “b.” above. A more detailed discussion of each of these previously discussed items is provided the RAI response section titled “Summary of significant SDRs 060315 – VCS responses”.

d. In conclusion, there are no SDRs, affecting this attribute individually or in aggregate, which prevent achieving the program learning objectives or prevent conducting valid examinations which can discern competent operators.

8) **Safely operate the facility's auxiliary and emergency systems, including operation of those controls associated with plant equipment that could affect reactivity or the release of radioactive materials to the environment.**

New SDR(s) potentially impacting this attribute:

VC-1506-02; CMT WR Level Indications go Bad Quality (Corresponds to Vogtle SCR-DR-6217)
Description
The Wide Range (WR) Core Makeup Tank (CMT) level indications shift to Bad Quality once Automatic Depressurization System 1-3 (ADS 1-3) Actuate. Prior to this event, they would toggle to Bad Quality intermittently. The Bad Quality status is on indications PXS-LT009A/B & -LT010A/B (on Passive Core Cooling System (PXS) Supplemental Ind. Screen) and DDS-RSA11-L1 & DDS-RSA13-L1 (on WPIS screen 60017). [

]$_{a,c}$
Note that the non-calc (non-compensated) instrumentation in the CMT is not affected similarly.

VC-1507-09; Insufficient PCS flow through single drain line (Corresponds to Vogtle SCR-DR-6013)
Description
PCS provides sufficient flow when all drain paths are available. However, the model only provides 73% of the required flow when only one drain line is available (per safety analysis). FT003 provides 177.5 gpm, FT004 provides 38.9 gpm, FT002 provides 23.39 gpm, and FT001 provides 109.4 gpm when the only flow path available is through V001A. At this condition, [
]$_{a,c}$ vice the 349 gpm we are getting. The flows are nearly identical for V001B and V001C. The starting condition is with the PCCWST at 98.9% and at 68.1 deg-F

VC-1507-11; VBS-D201 does not fail close upon a loss of power (Corresponds to Vogtle SCR-DR-6042)
Description
Upon a loss of power to VBS-D201 the damper does not reposition. Per APP-GW-E0X-001, Rev 1, the power supply is ECS-EA-1121A. When this bus is de-energized, by removing all power from ES-1, the damper does not close as stated in APP-VBS-M3-001, Rev D, Section 7.2.6. When ES-1 is de-energized intially D201's component status box (left of indication) will flash but the damper will not move; after this it will not respond to commands.

VC-1507-13; VFS Containment Purge and Exhaust Valves do not close in required time (Corresponds to Vogtle SCR-DR-6110)
Description
While attempting to identify system level surveillances that could be used as part of integrated scenarios, VFS-801 Rev. A was reviewed to determine if it was capable of being performed. Contrary to other system surveillances that performed valve stroke tests the data sheet actually had the TS time limit filled in. Upon review of the TS basis

for LCO 3.6.3 it was identified that VFS-V003/004/009/010 must close within 10 seconds. Currently all valves take a minimum of 15 seconds to close

VC-1507-20; EDS Static Transfer Switch Operation (Corresponds to Vogtle SCR-DR-6639)

Description

During a loss of All AC casualty the EDS batteries begin to discharge, [ ]$_{a,c}$ the EDS static switch transfers to its alternate position which in this case is a de-energized AC bus. Based on discussions with multiple SMEs the consensus is that during the mentioned condition the static switch should not reposition.

VC-1507-39; CVS-V094 Power Failure (Corresponds to Vogtle SCR-DR-6019)

Description

CVS-V094 does not close upon a loss of power to ILCA02 as expected. It did close on loss of power to ILCA03, which is not in accordance with design documentation.

VC-1508-54; Fire Protection System is not modeled in Containment (Corresponds to Vogtle SCR-DR-6657)

Description

While attempting to create a FR-Z.2 (Response to High Containment Level) scenario, it was discovered that a leak from the Fire Protection System (FPS) header in containment had no effect on any containment parameters (ex. Containment Sump Level, Containment Humidity). FPS Containment Spray also had no effect on any containment parameters.

ASSESSMENT:

a. Seven (7) new SDR items have been written which potentially impact the ability to operate the facility's auxiliary and emergency equipment.

   Of these, four (4) are being corrected as part of Westinghouse update releases. These are;

   VC-1507-09; Insufficient PCS flow through single drain line, and
   VC-1507-11; VBS-D201 does not fail close upon a loss of power
   VC-1507-13; VFS Containment Purge and Exhaust Valves do not close in required time, and
   VC-1507-20; EDS Static Transfer Switch Operation

   The remaining three (3) SDRs are unrelated to each other directly, and are discussed below.

   SDR VC-1506-02 addresses Core Make-up Tank (CMT) Wide Range (WR) Level Indications which change to "Bad Quality" after Automatic Depressurization System (ADS) stages 1-3 actuate. This is a density compensated reading, which is currently adversely affected when the CMT water level drops below the upper instrument. There are no actuations which use this instrumentation, and no EOP

decisions related to CMT level which relies on the use of this instrument only. Additionally, the CMT upper and lower narrow range instruments and the CMT top temperature instruments always [

]a,c

SDR VC-1507-39 has been written to document a delta between the power supply documented in the reference documents and how the simulator is configured for the instrument air solenoid valve on the Air Operated Valve CVS-V094. This valve is a relatively minor valve in the system flowpath, and its operation - open or closed – does not impede the ability of the CVS system to perform its defense in depth functions. A Training Needs Assessment has been performed on this item. The item has been added to the “Affects Training” list so that the instructors and students will be aware of this if it is demonstrated. A simulator over-ride can be easily used to accomplish demonstration of this valve’s fail position.

SDR VC-1508-54 tracks a problem with the lack of response by Containment parameters from the Fire Protection system. The use of Fire Protection systems for Containment Spray is contained in the Severe Accident Management procedures, so is beyond the scope of Initial License Operator training. For those instances when Fire Protection system is used, the affects can be modeled using APP files. The item has been added to the “Affects Training” list so that the instructors and students will be aware of this if it is demonstrated.

These issues were dispositioned individually as acceptable due to minimal impact on training, which can be mitigated where appropriate.

b. The aggregate impact of the three (3) new SDRs that potentially impact this criterion do not preclude the ability of the simulator to conduct operator training or examination. They do not affect a common system or integrated system response between them, as described below.

   SDR VC-1506-02 is indication which is not used solely as a primary decision making tool in the emergency operating procedures, and the plant provides other indication which also gives CMT level instrumentation.

   SDR-VC-1507-39 affects the power supply to a CVS Air Operated valve, which does not currently fail in the correct position on loss of power without instructor actions.

   SDR-VC-1508-54 concerns the Fire Protection system within the containment building.

c. There are six (6) SDRs affecting this criterion which were evaluated as part of the initial Aggregate assessment study, and have been identified as potentially significant during further review.

Westinghouse Non-Proprietary Class 3

These original SDR(s) that potentially impacting this attribute, and are still considered potentially significant are:

VC-TO-04, EDS batteries last over 5 ½ hours and the ABT does not work correctly after the batteries are depleted;
VC-TO-10, MS Rad monitors do not respond during SGTR;
VC-TO-47, Inconsistency of rods rejecting to MANUAL based on Hi Auct Tave MERE signal during ATWAS scenario;
VC-1410-09, RNS pump does not restart on DG Sequencer;
VC-1501-02, VAS/VRS system response to LOCA outside containment; and
VC-1503-08/09/28, During ISV the crew(s) had trouble determining CMT operating – which affected success of PRA manual actuation time windows.

Three (3) of these SDRs are being closed with Westinghouse patches: VC-TO-04, and VC-TO-47, are being fixed with the patch delivered on August 15th, 2015. VC-1501-02 is being fixed with the patch delivered on October 30th, 2015

Two (2) of the remaining SDRs are being closed based on further investigation and review of the plant/simulator response. VC-TO-10 is being closed based on further understanding of the different roles played by the low range and high range MS rad monitors during accidents. VC-1503-08/09 is being closed based on a combination of procedure changes to standardize crew actions for this event, and an improvement in the modeling of the CMT check valve which results in a more gradual development of flow has been delivered with the August 15th, 2015 patch.

The other remaining SDR, VC-1410-09 (RNS pump isn't modeled to restart on the sequencer) is transparent to the students/operators because an APP file is used to re-load this component at the appropriate sequence. A more detailed discussion of each of these items is provided the RAI response section titled "Summary of significant SDRs 060315 – VCS responses"

In conclusion, the two newly identified SDRs are not related to common systems or functions of any of the previously identified SDRs which are still considered significant. Based on this, there is no increase in aggregate affect(s) of open SDRs to this criteria caused by the addition of new open SDRs considered in section (a.).

d. In conclusion, there are no SDRs, affecting this attribute individually or in aggregate, which prevent achieving the program learning objectives or prevent conducting valid examinations which can discern competent operators.

9) **Demonstrate or describe the use and function of the facility's radiation monitoring systems, including fixed radiation monitors and alarms, portable survey instruments, and personnel monitoring equipment**.

New SDR(s) potentially impacting this attribute:

VC-1508-42; Simulator MCR missing Rad Monitoring Panel (Corresponds to Vogtle SCR-DR-237)
Description
Simulator MCR does not have the radiation monitoring panel on the back wall as depicted in the design reference.

ASSESSMENT:

a. One (1) new SDR item, VC-1508-42; Simulator MCR missing Rad Monitoring Panel, has been written in consideration of the potential impact of the ability to demonstrate the use and function of the facility's radiation monitoring systems. There is little training value with this panel at this time. The indications that would otherwise be provided by this panel are available in Ovation. Operator actions are not impacted by the lack of this panel and it does not impact the suitability of the simulator for the conduct of operating tests

b. There is no aggregate impact of this SDR with other SDRs potentially impacting this criterion, given that it is the only one.

c. There are three (3) SDRs affecting this criterion which were evaluated as part of the initial Aggregate assessment study, and have been identified as potentially significant during further review.

   These original SDR(s) that potentially impacting this attribute, and are still considered potentially significant are:

   VC-TO-10, MS Rad monitors do not respond during SGTR,
   VC-TO-75/76, VRS monitor and VHS monitor go up by [
   ]$_{a,c}$ on a loss of process flow; and
   VC-1503-25, VFS-RY102 alarms on high Iodine when Containment Air Filtration system had no flow.

   Two (2) of these SDRs are being corrected with Westinghouse patches: VC-TO-75/76 and VC-1503-25 are being corrected by the Westinghouse patch released August 15th, 2015.

   The remaining SDR, VC-TO-10, is being closed based on further understanding of the different roles played by the low range and high range MS radiation monitors during accidents.

   A more detailed discussion of each of these items is provided the RAI response section titled "Summary of significant SDRs 060315 – VCS responses"

In conclusion, the one newly identified SDR is not related to common systems or functions of any of the previously identified SDRs which are still considered significant. Based on this, there is no increase in aggregate affect(s) of open SDRs to this criterion caused by the addition of new open SDRs considered in section (a.).

d. In conclusion, there are no SDRs, affecting this attribute individually or in aggregate, which prevent achieving the program learning objectives or prevent conducting valid examinations which can discern competent operators.

10) Demonstrate knowledge of significant radiation hazards, including permissible levels in excess of those authorized, and ability to perform other procedures to reduce excessive levels of radiation and to guard against personnel exposure.

a. No specific SDR items have been written which directly bin to this attribute.

11) Demonstrate knowledge of the emergency plan for the facility, including, as appropriate, the operator's or senior operator's responsibility to decide whether the plan should be executed and the duties under the plan assigned.

a. No specific SDR items have been written which directly bin to this attribute.

12) **Demonstrate the knowledge and ability as appropriate to the assigned position to assume the responsibilities associated with the safe operation of the facility**.

a. No specific SDR items have been written which directly bin to this attribute.

13) **Demonstrate the applicant's ability to function within the control room team as appropriate to the assigned position, in such a way that the facility licensee's procedures are adhered to and that the limitations in its license and amendments are not violated**.

a. No specific SDR items have been written which directly bin to this attribute.

Aggregate Study Evaluation Results

Section 2

Assessment of new SDR items by Plant System

Considering the aggregate effect of the Plant Systems categorization:

The 66 items are grouped into the following Plant Systems:

- APS (Alarm Presentation System), 1 item
- CPS (Condensate Polishing System), 1 item
- CVS (Chemical Volume Control System), 1 item
- DDS (Data Display System), 5 items
- DWS (Demineralized Water System), 2 items
- ECS (Main AC Power System), 5 items
- EDS (Non Class 1E DC and UPS System), 2 items
- FPS (Fire Protection System), 1 item
- IDS (Class 1E DC and UPS System), 2 items
- NAP (Nuclear Application Process), 3 items
- PCS (Passive Containment Cooling System), 1 item
- PLS (Plant Control System), 8 items
- PMS (Protection and Safety Monitoring System), 2 items
- PXS (Passive Core Cooling System) 1 item
- RCS (Reactor Coolant System, 1 item
- SDCS (Steam Dump Control System), 1 item
- SGS (Steam Generator System), 1 item
- SMS (Seismic Monitoring System), 1 item
- STS (Simulator Training System), 6 items
- TCPS (Turbine Control and Protection System) (TOS), 1 item
- VBS Nuclear Island Non-Radioactive Ventilation System), 1 item
- VES (Main Control Room Emergency Habitability System), 2 items
- VZS (Diesel Generator Building Heating and Ventilation System) , 1 item
- WGS (Waste Gas System) , 2 item
- WRS (Radioactive Waste Drain System) , 1 item
- ZOS (Onsite Standby Power System), 2 items

An individual assessment of each SDR item is provided in the preceding section. A discussion of the potential aggregate impact to system operation of the twelve (12) plant systems having multiple SDRs is now provided below:

- DDS (Data Display System), 5 items
    - The items are:
        1) SDR VC-1506-33 concerns the WPIS Display point for Main Generator VAR load being provided in VARs, as opposed to MVARs. This information is also available on the Ovation screen which provides a “live” cursor that tracks Main Generator Load vs. the plant electrical load capability curve. In that display, which would be the best display to use when an operator was comparing VAR loading to plant limits, the parameter is given in MVARs

        2) VC-1507-25; WPIS RCS inventory screen issues; The WPIS RCS Inventory screen has reference level lines for HL top and bottom which appear incorrect. They are only 18 inches apart. It is, however a faithful reproduction of the chart in GOP-114. The procedure and display both need to be looked at. Issues found in calc notes, procedure and display. DCP 4842 reserved to correct documents and graphics.

        3) VC-1507-45; Primary trend screen rendering; Primary Trend Screens: when a second screen was rendered by RO B, the trends indicated different values between the two for Loop Tcold and RNS flow. When selecting a WPIS to print screen, selected trends may or may not spike and possibly also experience a loss of the historical data. Condition identified at SNC, but VCS Units 2 and 3 could not reproduce the 2nd trend issue, however when Print is selected from a WPIS trend there is an issue. If you print WPIS trends when the Mode you are in does not match trends, then data is lost. This does not happen if Trends are aligned to current mode.

        4) VC-1507-46; Trend screen. The yellow popup background makes some of the resident text unreadable. This occurs when you hold the cursor on the trend and the parameters are displayed in a popup box. The background color of the box is off white, so lighter colored text is hard to read. VCS units 2&3 also noted that this makes it necessary to change the color of #1 point before you print a chart without black background.

        5) VC-1507-52; PCS Indications – Inconsistent naming. The indications for containment pressure are named differently on various screens and do not match the naming scheme of the APP-PCS-GJX-400, PCS Component Nomenclature List. On the Critical Safety Function Screens (60030, 60031) the two ranges of containment pressure indication are shown as "ExtR" and "NormR"; I'm assuming this means Extended Range and Normal Range. On the PCS graphics screen, 12800, the same indications are shown as "NARROW RANGE" and "WIDE RANGE". On these nomenclature lists they are shown as "Ctmt Press" and "WR Ctmt Press". Recommend using "NR Ctmt Press" and "WR Ctmt Press"

Westinghouse Non-Proprietary Class 3

on both graphics screens. Also recommend finding the controlling document for the creation of those graphics screens to determine if the verbiage is specified there.

- There is no additional aggregate affect caused to the DDS system by these five (5) items. Although they are commonly tied to a display, each of them is associated with the display of an independent system.

- DWS (Demineralized Water System), 2 items
  - The items are:
    1) VC-1507-12: DWS-LT006 has insufficient range. DWS-LT006 is the level indication for the CST. This spans [ ]a,c per APP-DWS-M3C-101. However, the calc note for DWS (APP-DWS-M3C-002) has the high 2 alarm at [ ]a,c This is a vital alarm because it is designed to give operators time to determine why the CST is so full before it overflows to a drain. Overflow will occur at [ ]a,c. Additionally noted that control setpoint should be [ ]a,c. No HI-2 alarm on SIM, stated value is [ ]a,c. SIM has Hi-1 alarm at [ ]a,c.
    2) VC-1507-26: Water Feed Pump A and B (DWS-MP-01A/B) Issues. According to the DWS SSD (APP-DWS-M3-001, Rev D) these pumps should [ ]a,c. However, this is not the case in the simulator since there is no poke available for the operator to use and the local method is not modeled correctly. According to APP-DWS-M3C-100, Rev. 5, Table 5.1.1-2-3, DWS-MP-01A(B) [ ]a,c and this is the note: "Electrical interface scheme will be developed after information received from vendor. Vendor to provide motor MP-01A/B fed from contractor or Breaker." [ ]a,c
  - There is no additional aggregate affect caused to the DWS system by these 2 items. The DWS system operated as a support system to other, more important plant systems necessary for integrated plant operation activities conducted on the simulator. The overall functionality of the system to act as an inventory source for makeup water is unaffected by these SDRs.

- ECS (Main AC Power System), 5 items
  - The items are:
    1) VC-1505-05; ECS Penetration Temperature off Scale Low. ECS penetration temperature reading is off scale low on display 22503. This is for the penetration to containment for the power cables for the RCPs as indicated on ECS-TE001A/B and TE002A/B which currently show the

electrical penetration temperature as 0 deg F. The temperature should be reading something slightly higher than the ambient conditions.

2) VC-1507-11; VBS-D201 does not fail close upon a loss of power**.** Upon a loss of power to VBS-D201 the damper does not reposition. Per APP-GW-E0X-001, Rev 1, the power supply is ECS-EA-1121A. When this bus is de-energized, by removing all power from ES-1, the damper does not close as stated in APP-VBS-M3-001, Rev D, Section 7.2.6. When ES-1 is de-energized initially D201's component status box (left of indication) will flash but the damper will not move; after this it will not respond to commands. VC-1507-12: DWS-LT006 has insufficient range.

3) VC-1507-16; No change in current indication on ECS-EA-1333. The current variable ECSIECSEA1333_42IA was at 0 amps whether the feeder breaker was open or shut. The loads were dropping as expected, but the current point was at 0A.

4) VC-1507-54: Potential issue with DG Sequencer: According to APP-ZOS-E0C-001 (Onsite Standby Power System Diesel Generator Sizing Calculation) Rev 1, the following busses should get re-energized by the sequencer at [ ]a,c when its associated bus loses power:
[ ]a,c
[ ]a,c
[ ]a,c
[ ]a,c
[ ]a,c
[ ]a,c
These busses do not get re-energized in the simulator once ES-1/2 gets re-energized from its respective DG. The affected loads are plant lighting and heat tracing.

5) VC-1507-67; Unexpected response from SWS-PY-S06A on loss of power. Noted that when ECS-EK-12 experienced a ground fault and all loads off the bus lose power a component was able to operate which was not expected. The "A" service water strainer is SWS-PY-S06A. SWS-PY-S06A is powered from ECS-EC-122 whose feeder bus is ECS-EK-12. When cycled, the strainer started. This is an unexpected response since its power supply was lost. Investigate power supply of SWS-PY-S06A

- There is no additional aggregate affect caused to the DWS system by these five (5) items.

  Of these items, four (4) are being corrected as part of Westinghouse update releases. These are Items VC-1505-05, VC-1507-11, VC-1507-16, and 1507-67.

  The remaining item, VC-1507-54, is transparent to students because the only affected loads are plant lighting and heat tracing. In conclusion, the overall

functionality of the system to provide non-safety related AC power is unaffected by these SDRs.

- EDS (Non Class 1E DC and UPS System), 2 items
  - The items are:
    1) VC-1507-20; EDS Static Transfer Switch Operation During a loss of All AC casualty the EDS batteries begin to discharge, when [ ]$_{a,c}$ the EDS static switch transfers to its alternate position which in this case is a de-energized AC bus. Based on discussions with multiple SMEs the consensus is that during the mentioned condition the static switch should not reposition.
    2) VC-1508-53: Battery Temperature does not trend during battery operations. During a loss of all AC sources discharge test it was identified that the battery temperature did not change during the 15 hour run.
  - There is no additional aggregate affect caused to the EDS system by these two (2) items.
    Both SDR VC-1507-20 and VC-1508-53 are being corrected as part of Westinghouse update releases.

- IDS (Class 1E DC and UPS System), 2 items
  - The items are:

    1) VC-1507-10: Investigate reason IDSA/B/C/D-DU-1-VAC reads 205Vac. Ovation screen 22703 conflicts with the volts from the inverter. The screen identifies the IDS inverters as 120VAC yet instrument IDSA/B/C/D-DU-1-VAC reads 205VAC. Investigate to determine proper voltage across IDS inverter. - APP-DU01-Z0-001 Rev 4 states the APP voltage at 208Y/120 Vac +- 2%.

    2) VC-1507-18: Inadequate indication on IDS-DT-1-VAC. The voltage regulating transformer (IDS_-DT-1) should take 480V and step-down to 120V. The indication (IDS_-DT-1-VAC) reflects a value of approximately 253V, instead of ~120V per APP-IDS-E0C-002, Rev. 0.

  - There is no additional aggregate affect caused to the IDS system by these two (2) items.
    Both SDR VC-1507-10 and VC-1507-18 are being corrected as part of Westinghouse update releases.

- NAP (Nuclear Application Process), 3 items
  - The items are:

    1) VC-1506-12: Redundant Sensors Algorithm (RSA) Application NAP Does Not Process Failed Channels Correctly. The Redundant Sensors Algorithm Application (RSA) driven source range counts on the WPIS displays (main, trends, and safety functions) will still reflect an abnormally high value for source range power after a source range channel failure.

The RSA NAP should account for the failure and remove it from the calculation.

2) VC-1506-15: RSA [

]a,c This causes an erroneous PR power reading on the WPIS.

3) VC-1506-16: NAP for 1/M Intermediate Range Not Functional. The intermediate range input to the automated 1/M plot Nuclear Application (NAP) does not work. Once P-6 (Permissive 6) was blocked and source range de-energized, the operator no longer had a 1/M plot generated.

- There is no additional aggregate affect caused to the NAP subsystem by these three (3) items. All three are being corrected as part of Westinghouse update releases.

- PLS (Plant Control System), 8 items
  - The items are:
    1) VC-1506-01: Rod Withdrawal button deselects During Continuous Operation. During extended rod withdrawals during startups while depressing the rod withdrawal button (UP ARROW), the UP ARROW button may un-highlight and momentarily flash gray even though still depressed. Rod motion will still occur.
    2) VC-1506-02: CMT WR Level Indications go Bad Quality. The Wide Range (WR) Core Makeup Tank (CMT) level indications shift to Bad Quality once Automatic Depressurization System 1-3 (ADS 1-3) Actuate. Prior to this event, they would toggle to Bad Quality intermittently. The Bad Quality status is on indications PXS-LT009A/B & -LT010A/B (on Passive Core Cooling System (PXS) Supplemental Ind. Screen) and DDS-RSA11-L1 & DDS-RSA13-L1 (on WPIS screen 60017). [

]a,c Note that the non-calc (non-compensated) instrumentation in the CMT is not affected similarly.

    3) VC-1506-04: Decay Heat Calculation (DHC) Summary - Assembly Move NAP Function Not Functional. When attempting to simulate fuel assemblies being moved from the core to the Spent Fuel Pool (SFP), it was noted that the Decay Heat Calculation (DHC) NAP to maintain the administrative location of fuel does not work correctly. On display 40203 the assembly move buttons on the lower right portion indicate they are only available when the light DDS-AP-DHC Status indicates it is ACTIVE. This light is driven off of the automatic mode selector and is INACTIVE when in MODES 1&2 and ACTIVE in MODES 3-6. However, when the light indicates INACTIVE the buttons for moving are raised and available.

When the light changes status to ACTIVE the buttons for moving are grayed out and no longer available. The light being active or inactive is currently driven by the auto mode selector and becomes active in MODES 3-6. However, fuel cannot be moved from the core into the SFP in any MODE other than MODE 6. The light should be driven by the manual input of the Rx vessel head being removed or installed or upper internals position on display 40004.

4) VC-1506-05: Liquid Radwaste System WLS-MP-08C will not pump Monitor Tank C below 37". While performing a startup from Mode 6 it was discovered that the Liquid Waste System (WLS) WLS-MP-08C will not pump Monitor tank C around [ ]$_{a,c}$. The pump will turn on and occasionally the downstream check valve will throttle open and shut but there is little or no evidence of flow. Also, discharge pressure never goes above [ ]$_{a,c}$. Normal discharge pressure for the other monitor tank pumps is around [ ]$_{a,c}$ Note that it does pump when level is above [ ]$_{a,c}$ as the tank has been pumped down to [ ]$_{a,c}$ successfully. It appears to exhibit strange behavior at [ ]$_{a,c}$ and below.

5) VC-1506-39: Rod Step sound problems. During outward rod motion, the audible step counter randomly can have a one second pause in it with rod motion continuing. The step counter indication [ ]$_{a,c}$

6) VC-1506-40: Received Bank Sequence Out of Sequence Alarm. A Bank Sequence Out of Sequence (DDS-RSU01-X0) [ ]$_{a,c}$. The only oddity was that MD demanded position was -1 step vice 0 steps. Motion for bank M1 began once the proper [ ]$_{a,c}$ step overlap had occurred from MD to M1; before MD stops moving the out of sequence alarm comes in. VCS verified M1 and MD did have proper overlap, and that the Application Monitor was able to be pulled up from the point information. The alarm immediately cleared when MD reached 0 steps. Suspect alarm to be due to a small time delay in rod stepping.

7) VC-1506-41: Urgent Alarm during Case 2 Control Rod Exchange (CRE) at 90% Power. The Urgent Failure Alarm (UA) occurs [ ]$_{a,c}$. The UA appears to be a timing issue that

occurs only when MA and MD banks are both in motion when the Tavg-Tref deviation occurs. Basically, the Ovation controllers briefly generate a RODS IN and a RODS OUT signal to the MA bank and a RODS IN and a RODS OUT signal to the MD bank which results in a UA from the Power Cabinets.

8) VC-1507-53: Any Rods at Bottom Alarm: The "Any Rods at Bottom" alarm is actuating anytime rods are being driven through [ ]$_{a,c}$ steps. Based on APP-PLS-J1-023 Rev 2 3.1.2 R16 [ ]$_{a,c}$ The WEC ARP for this alarm, RM-ANYRODSBTTM-ALM, also has verbiage to this effect (APP-PLS-GJP-401 pg. 611)

- There is no additional aggregate affect caused to the PLS System by these eight (8) items.
  The following items are being corrected as part of Westinghouse update releases: SDR VC-1506-01, VC-1506-05, and VC-1507-53.

  SDR VC-1506-02 addresses Core Make-up Tank (CMT) Wide Range (WR) Level Indications which change to “Bad Quality” after Automatic Depressurization System (ADS) stages 1-3 actuate. This is a density compensated reading, which is currently adversely affected when the CMT water level drops below the upper instrument. There are no actuations which use this instrumentation, and no EOP decisions related to CMT level which relies on the use of this instrument only. Additionally, the CMT upper and lower narrow range instruments and the CMT top temperature instruments always [ ]$_{a,c}$

  SDR VC-1506-04 documents a problem with one feature of a NAP [ ]$_{a,c}$ Currently, the enable function is incorrectly tied to modes 1 thru 3, instead of mode 6. Using this feature in the simulator for training or examination is beyond the scope of licensed operator training.

  SDR VC-1506-39 concerns a pause or delay which affects the [ ]$_{a,c}$ This item is included in the “Affects Training list” which is provided to the crews. Although this can be distracting to the crew, [ ]$_{a,c}$ provide other redundant and diverse methods to determine rod movement.

  SDR VC-1506-40 concerns a [ ]$_{a,c}$ during the start of Bank M1 inward rod motion during that banks’ overlap with bank MD. The rod banks do have proper overlap, and the alarm

clears immediately as bank M1 moves from 0 steps to 1 step. This has been added to the “Affects Training list” so that is can be discussed when the event occurs. Plant maneuvers through this rod height only occur during plant start ups, so this is not seen commonly.

SDR VC-1506-41 documents a rod control “Urgent Alarm” which occurs during a Case 2 Control Rod Exchange (CRE). This occurs ~ 1 in every 10 performances of the evolution. The condition is added to the “Affects Training” list. This is an infrequently performed evolution, which can be repeated successfully if desired for training or examination.

- PMS (Protection and Safety Monitoring System), 2 items
  - The items are:
    1) VC-1507-38: CNMT Recirc Actuation for Div C and D not visible on PMS ESF Screen: While validating Integrated scenario 12, it was noticed that once CNMT Recirc was actuated the actuations for Divisions C and D did not have the white box with an X on the ESF Act Status Screen for PMS or the Non-Safety Operational Overview screen (33020). The individual PMS division screen for CNMT Recirc actuation (IRWST/INJT Recirc) did show that it had been actuated on all 4 divisions.

    2) VC-1507-39: CVS-V094 Power Failure. CVS-V094 does not close upon a loss of power to ILCA02 as expected. Based upon information in APP-PMS-J3-379 and AOP-336 this AOV should close upon a loss of power to the solenoid.

  - There is no additional aggregate affect caused to the PMS system by these 2 items, because they are unrelated.

    One item, VC-1507-38, concerns a display improvement to match an overview screen with the better information provided on the individual division displays.

    The other SDR, VC-1507-39, concerns the loss of DC power of the AOV in the CVS system which isolates the Zinc injection flowpath into containment.

- STS (Simulator Training System), 6 items
  - The items are:
    1) VC-1508-42; Simulator MCR missing Rad Monitoring Panel. Simulator MCR does not have a radiation monitoring panel on the back wall depicted in the design reference.SOS comment - verified above statement. APP-JC01-v1-001,Rev 4, shows a radiation monitoring panel on the back wall, note 6. (By Others)

    2) VC-1508-55; Simulator MCR missing cooling fins. Simulator MCR is missing cooling fins as designated by the (SNC) Unit 3 design documentation.
    APP-1242-EL-001, Rev 0, shows MCR lighting fixtures hanging from

chains and having the lighting hanger connected to "steel fin member" (APP-1250-SS-125) which is not in Simulator Design Database allowing for more details at this time.

3) VC-1508-56; Simulator MCR lights not hanging from chains. Simulator MCR lights are not hanging from chains as designated by the (SNC) Unit 3 design documentation listed below. APP-1242-EL-001, Rev 0, shows MCR lighting fixtures hanging from chains.

4) VC-1508-60; Kirk Key interlock not operable on spare battery LOAs. The Fused Transfer Switch Box Spare Battery Manual Switches on sim diagrams APP-EDS-E3-001, APP-EDS-E3-002, APP-EDS-E3-007, APP-EDS-E3-009, and APP-EDS-E3-010 can be closed simultaneously using the following LOAs:
EDS1DF1_C
EDS1DF2_C
EDS1DF5_C
EDS1DF3_C
EDS1DF4_C,
[

]a,c. (VCS sim specialist comment: [

]a,c. These are all LOA that students will not be affected by. This will be an enhancement to the ISS interface and is not considered a SIM discrepancy).

5) VC-1508-61; EDSS-DF-1 nomenclature and switch operability issue. On APP-EDS-E3-007, the switches inside the Spare Fused Transfer Switch Box EDSS-DF-1 are labeled with "K1". Per the corresponding one-line, the two leftmost switches should be labeled with "K3" and the two rightmost switches should be labeled with "K4".
Additionally, the LOAs for these switches seem to be incorrectly tied to the [

]a,c

6) VC-1508-108; Simulator Random Failures. There have been some recent simulator failures which have occurred for which the cause is not clear. This has happened ~ 3 times over a 6 week period, when the simulator has been used to support both Day shift and Second shift training. These have not been traced to any one STS component or subsystem. Most involve Jstation commands not being executed (such as FREEZE) or

APS indicated FROZEN with the SIM still in RUN. They have happen as early as one day after complete system reboots. More information is needed to determine if more frequent reboots are required during heavy usage periods to reduce these instances.

- There is no additional aggregate affect caused to the STS system by these 6 items, because they are unrelated.

  Three items; VC-1508-42, VC-1508-55, and VC-1508-56, all involve simulator room fidelity items which not impactful to the ability to conduct simulator training or examinations.

  Two SDRs, VC-1508-60 and VC-1508-61, concern functions that are transparent to the operators because they are plant alignments which must be implemented by a field operator/booth instructor.

  The last item, VC-1508-108, is determining if more frequent simulator reboots are required to prevent simulator instructor station failures during heavy usage periods.

- VES (Main Control Room Emergency Habitability System), 2 items
  - The items are:

1) VC-1507-07: After VES actuation, MCA pressure never builds up as designed. VES maintains a small positive pressure inside the Main Control Area (MCA) and is regulated via VES-D001A/B which cycle to maintain a minimum of [ ]$_{a,c}$. Both the SDS and 3B maintained [ ]$_{a,c}$ after VES actuation, with some spikes in pressure to [ ]$_{a,c}$. In either case this is not per design of VES-M3-001. Normally VBS maintains [ ]$_{a,c}$ as read between the MCR and the corridor as read on the VES-PDT-004A/B which is the nominal pressure. Low alarm is [ ]$_{a,c}$ and a high alarm is [ ]$_{a,c}$.

2) VC-1508-48: VES Supply Header Pressure not modeled correctly for a change in temperature w/o a change in mass. When VAS ventilation is secured to the VES Air Storage Area (Rm 12555), room temperature will rise as expected as indicated on VAS-TE080A and B. This rise in temperature should cause VES Supply Header Pressure (VES-PT001A and B) to rise, since the volume of air in the VES tanks is not changing (Pâ†‘=(nRTâ†‘)/V). As depicted in the attached trend, this does not happen in the current model. Since VES air storage tank pressure does not change in the model, this causes the calculated air quantity (VES-QIY008A and B) to lower which should not be the case. The VES air quantity should only change if you are filling VES or depressurizing it.

Westinghouse Non-Proprietary Class 3

- There is no additional aggregate affect caused to the VES system by these two (2) items.
  Both SDR VC-1507-07 and VC-1508-48 are being corrected as part of Westinghouse update releases.

- WGS (Waste Gas System) , 2 items
  - The items are:
    1) VC-1507-55: Possible modeling and/or Ovation issues with WGS Sample Package MS-01 AT-032 (AE032. "Per drawing APP-MS27-E5-001, APP-MS27-M6-001, APP-MS27-VMM-004 pages 20 & 354, APP-WGS-MC3-101 page 16, H2 monitor AT032 (AE032) provides only a digital output. Ovation drawing 16100 shows WGS-AT032 as having continuous indication. This continuous indication is inferred when looking at APP-MS27-M6-001, APP-WGS-M3C-101 page 23, and APP-WGS-M6-001. However per APP-MS27-VMM-004 page 354, AE032 provides only a digital output via a normally closed contact. Conflicting documentation exists. Currently exists as an analog input.

    2) VC-1508-50: Possible modeling and/or Ovation issues with WGS Sample Package MS-01 PS-001. Per drawing APP-MS27-E5-001 & APP-MS27-M6-001, PS-001 for monitoring N2 pressure to the WGS Sample Package should be modeled to give an Ovation alarm when pressure decreases below 60 psig. PS-001 does not seem to be monitored in Ovation or the WGS model. Per the listed references, PS-001 will generate an Ovation alarm on [ ]$_{a,c}$.
    There is no Ovation point monitoring WGS N2 pressure. Also nothing on WGS drawing or GCF list.

  - There is no additional aggregate affect caused to the WGS system by these 2 items, because they are both associated with a sample flow skid within the WG system that monitors the WLS degasified outlet flowpath. The issues identified do not prevent the sample skid, or associated flowpath from functioning.

- ZOS (Onsite Standby Power System), 2 items

  - The items are:
    1) VC-1508-46: Diesel Fuel oil day tank level transmitters not operating correctly. Reference documentation differs from actual control in the PRS. DOS level transmitters 016A/017A or 016B/017B on the day tank control the refilling of the day tank based on level. The refilling should start when day tank level reaches low level [ ]$_{a,c}$ and stop at high level [ ]$_{a,c}$ The refilling of the day tank actually begins at 44.67% and stops at 100%, which would most likely cause overfill of the tank. Additionally as level rises at ~ 85% the level indication jumps to 100%. Based on
    VCS data: and per signal diagram and testing pumps start at 81.7%. At

89.4%, repeatable on both tanks, received level spike to 100% which secured associated makeup pump. This is above the reference document setpoint of [ ]a,c but below the signal diagram setpoint for securing the pump of [ ]a,c

2) VC-1508-69: D/G power demand point not being driven. Diesel Generator Power demand (ZOS-MG-02A/B(52)-KWD is not driven in Ovation properly on the Load Sequencer page (22403). They always display 0 k. SOS comments - the above statement is true. These points do not respond as DG load increases.

- There is no additional aggregate affect caused to the ZOS system by these 2 items, because they are unrelated.

  One item; VC-1508-46, tracks a delta between the controller setpoints in design documentation vs. current simulator operation for level control in the Standby Diesel Generator Day tank. The simulator does model day tank level lowering as the DG is run, and models the Fuel Oil system providing makeup to the tank. The setpoints for the level that the tank starts and stops filling are inconsistent with the reference document. Tracking system performance to this detail is well beyond what is normally undertaken in License Operator training. [

  ]a,c

  The other SDR, VC-1508-69, concerns a display point on the Load Sequencer screen which is not responding, but the information is available on the ZOS overview screen and the individual DG screens.

Westinghouse Non-Proprietary Class 3

Aggregate Study Evaluation Results

Section 3

Table of Simulator Discrepancy Report items added between 4/28/15 and 9/1/15

and

not impacting 55.45(a) Criteria

Assessment of effects of Simulator Discrepancy Report items added between 4/28/15 and 9/1/15 for impact to License Operator Training

Table of Simulator Discrepancy Report items not impacting 55.45(a) Criteria

Tracking #	Summary	Detailed Description	System	Status	Status Date	Evaluation Basis	Other NOTES
		STATUS OPEN					
VC-1505-01	VBS-MY-Y01 Soft Control Feedback does not work.	VBS-MY-Y01 (MCR Operator Work Area Elec Htr) Soft Control Feedback does not work. When ENABLE is selected the action does occur, but the feedback to the soft-control does not change to [ ]$_{a,c}$ as expected. [ ]$_{a,c}$ light in upper left corner of display box does illuminate as expected.	VBS	Open	5/8/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. This is a plant design issue. The Operator does get a Red Light in the upper corner of the Display Box for this heater as indication the desired action has occurred. The current indication does not impact the actions taken by the operator and does not distract from training	
VC-1505-02	LAN Left WPIS screen has dark blue sections	LAN LEFT WPIS on 2B sim was swapped from WPIS-9 and Paul P replaced affected cards. Initially operation appeared satisfactory, and then a different failure mode appeared (dark blue sections). More cards are on order.	OCS	Open	5/22/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. The large WPIS LAN screens are not required for plant operation, and are only provided in the control room for tracking information such as weather or display of reference drawings. This information can be obtained and displayed on the other WPIS LAN screen or any of the LAN terminals at any work station	
VC-1505-04	Trend screen plots wrong	Some Navigation Trend Group displays show the wrong trends. TR-Loop Delta T is displaying Tcolds and TR-RCS Temp is displaying Pressurizer steam and	OCS	Open	5/29/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. Ovation control software allows	VNP tracking # 6189

Westinghouse Non-Proprietary Class 3

Assessment of effects of Simulator Discrepancy Report items added between 4/28/15 and 9/1/15 for impact to License Operator Training

Table of Simulator Discrepancy Report items not impacting 55.45(a) Criteria

Tracking #	Summary	Detailed Description	System	Status	Status Date	Evaluation Basis	Other NOTES
		liquid temps.				the Operator to create customizable trends from any indication on the screen by right clicking the parameter. The Top panel navigation also includes a convenience link to a set of pre-assembled trend groups (23 currently available). The operator also has the ability to build custom sets of trends combining any combination and amount of parameters they choose.	
VC-1505-06	WRS-V-008 not connected to the model	WRS-V008 is shut in the current 100% IC. With this valve shut WRS-MP001A and WRS-MP001B should not operate. Opened and closed V008 with no effect on WRS-MP-01A discharge pressure or check valve indication	WRS	Open	5/29/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. WRS-MP001A/001B are two Air driven sump pumps in a sump in the Aux building. WRS-V-008 is the compressed air supply to those pumps. Operation of these two pumps is beyond the level of detail attended to in License Operator Simulator training.	VNP tracking # 6098

Westinghouse Non-Proprietary Class 3

Assessment of effects of Simulator Discrepancy Report items added between 4/28/15 and 9/1/15 for impact to License Operator Training

Table of Simulator Discrepancy Report items not impacting 55.45(a) Criteria

Tracking #	Summary	Detailed Description	System	Status	Status Date	Evaluation Basis	Other NOTES
VC-1506-18	SSS Display Ovation screen #17600 shows incorrect flowpath	Display 17600 indicates that all SSS effluents pass through either SSS-V920 or SSS-V921. This is incorrect. The sample effluents from the DST and FW Heater connect downstream of these valves prior to entering the Sample Recovery Tank SSS-MT-01. This was verified against the P&ID	DDS	Open	8/21/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. This issue is related to the system mimic presented on the graphical display. The mimic represents four system flow paths and the connection points to two separate headers. Two of these flow paths should connect to their respective headers downstream of two flow diverting valves. The current graphic has these lines connecting upstream of the flow diverting valves. The error does not change the operation of the valves or the system, just improperly represents the process fluid flow paths that will be diverted when the valves reposition. These displays are infrequently used during normal routine operations.	VNP tracking # 5644
VC-1506-25	CCS Screen issue	Screen 17101: CCS header flow given in scientific notation. It is desired to have standard units. SOS comment - verified CCS-FT-101-1 has wrong display units. Should be standard display gpm. CCS-FT101-2 display correctly but is not used on main CCS graphic.	DDS	Open	7/7/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. This item is minor in nature, and is being changed to standard units with the 8/15/15 patch	VNP #6160

Westinghouse Non-Proprietary Class 3

Assessment of effects of Simulator Discrepancy Report items added between 4/28/15 and 9/1/15 for impact to License Operator Training

Table of Simulator Discrepancy Report items not impacting 55.45(a) Criteria

Tracking #	Summary	Detailed Description	System	Status	Status Date	Evaluation Basis	Other NOTES
VC-1507-26	Demineralized Water Feed Pump A and B (DWS-MP-01A/B) Issues	"According to the DWS SSD (APP-DWS-M3-001, Rev D) these pumps should [ ]a,c. However, this is not the case in the simulator since there is no poke available for the operator to use and the local method is not modeled correctly. SOS Comments - According to APP-DWS-M3C-100, Rev. 5, Table 5.1.1-2-3, DWS-MP-01A(B) [ ]a,c and this is the note: "Electrical interface scheme will be developed after information received from vendor. Vendor to provide motor MP-01A/B fed from contractor or Breaker." [ ]a,c	DWS	Open	8/21/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. Design change APP-GW-GEE-2907 replaced the motors for the DWS pumps AND moved the control of the pumps to the Local Control Station. Therefore, operation of these components from the MCR is no longer in the plant design and is consistent with the controls currently available to the MCR operators.	VNP tracking # 6498
VC-1507-41	Letdown Tuning	[ ]a,c SOS comments- VCS machine operates in similar manner if letdown is initiated without makeup flow in progress, [	CVS	Open	8/22/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. The simulator is modeling the AP1000 plant design. Current plant design results [	VNP tracking # 6158

Westinghouse Non-Proprietary Class 3

Assessment of effects of Simulator Discrepancy Report items added between 4/28/15 and 9/1/15 for impact to License Operator Training

Table of Simulator Discrepancy Report items not impacting 55.45(a) Criteria

Tracking #	Summary	Detailed Description	System	Status	Status Date	Evaluation Basis	Other NOTES
		]a,c which is the current design. This will be considered as an enhancement.				]a,c temperature alarm response procedure provides the required guidance for the operator to respond to this situation. The procedure directs the operator to [ ]a,c Since the actions operators are expected to take in response to this condition are identical to those they would otherwise take, the issue has no impact on the simulator's suitability for the conduct of operating training or tests.	
VC-1507-45	Primary trend screen rendering	Primary Trend Screens: when a second screen was rendered by RO B, the trends indicated different values between the two for Loop Tcold and RNS flow. When selecting a WPIS to print screen, selected trends may or may not spike and possibly also experience a loss of the historical data. SOS Comment - could not reproduce the 2nd trend issue, however when Print is selected from a WPIS trend there is an issue. IF you print WPIS trends	DDS	Open	7/15/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. VCS could not reproduce all aspects of the problem as noted at SNC, however there is a potential to impact WPIS trending if the trend screens are aligned to a different mode than the rest of the WPIS panels, concurrent with a print demand. This fluctuation has no impact on actions the operator may or may not take in response to	VNP tracking #6182

Westinghouse Non-Proprietary Class 3

Assessment of effects of Simulator Discrepancy Report items added between 4/28/15 and 9/1/15 for impact to License Operator Training

Table of Simulator Discrepancy Report items not impacting 55.45(a) Criteria

Tracking #	Summary	Detailed Description	System	Status	Status Date	Evaluation Basis	Other NOTES
		when the Mode you are IN does not match trends, then data is lost. This does not happen if Trends are aligned to current mode.				plant conditions.	
VC-1507-46	Default trend screen color	Trend screen. The yellow popup background makes some of the resident text unreadable. This occurs when you hold the cursor on the trend and the parameters are displayed in a popup box. The background color of the box is off white, so lighter colored text is hard to read. SOS comment - this is true and also makes it necessary to change the color of #1 point before you print a chart with out black background.	DDS	Open	7/13/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. The ovation trend program was opened and the settings associated with trend color were observed. The first two points that are selected to be trended default to red and light blue. If more points than this are required the operator is able to change the trend color using the properties menu. The operator is also able to shift to a tabular view vice a graphical view to see the information. Although, inconvenient, the capability is available to change the trend color if sufficient trends are added to a single trend window that results in one of them being yellow and therefore does not affect the indications available to or actions taken by an operator.	VNP tracking #6185

Westinghouse Non-Proprietary Class 3

Assessment of effects of Simulator Discrepancy Report items added between 4/28/15 and 9/1/15 for impact to License Operator Training

Table of Simulator Discrepancy Report items not impacting 55.45(a) Criteria

Tracking #	Summary	Detailed Description	System	Status	Status Date	Evaluation Basis	Other NOTES
VC-1507-52	PCS Indications – Inconsistent naming	The indications for containment pressure are named differently on various screens and do not match the naming scheme of the APP-PCS-GJX-400, PCS Component Nomenclature List. On the Critical Safety Function Screens (60030, 60031) the two ranges of containment pressure indication are shown as "ExtR" and "NormR"; I'm assuming this means Extended Range and Normal Range. On the PCS graphics screen, 12800, the same indications are shown as "NARROW RANGE" and "WIDE RANGE". On these nomenclature lists they are shown as "Ctmt Press" and "WR Ctmt Press". Recommend using "NR Ctmt Press" and "WR Ctmt Press" on both graphics screens. Also recommend finding the controlling document for the creation of those graphics screens to determine if the verbiage is specified there.	DDS	Open	7/15/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. The issue is associated with the nomenclature associated with CTMT pressure on the Critical Safety Function (CSF) WPIS display. On this display the CTMT pressures are labeled as 'ExtR' and 'NormR', meaning 'Extended Range' and 'Normal Range'. Although the naming of the points on the graphics is not consistent, the information being provided by the graphics is readily identifiable. On the PCS graphic, which contains the instruments that provide the input to the CSF display, the instruments are labeled as 'Wide Range' and 'Narrow Range'. For this reason it does not affect the indications provided to or actions taken by an operator.	VNP tracking #6447

Westinghouse Non-Proprietary Class 3

Assessment of effects of Simulator Discrepancy Report items added between 4/28/15 and 9/1/15 for impact to License Operator Training

Table of Simulator Discrepancy Report items not impacting 55.45(a) Criteria

Tracking #	Summary	Detailed Description	System	Status	Status Date	Evaluation Basis	Other NOTES
VC-1507-58	Units for Division D RCS Tavg has wrong units	The Ovation PMS mimic display for PMS Screen 000005 (page 2 of RCS variables) has the correct value, but incorrect units for Division D RCS Average Coolant Temperature for l cold leg 2B (PMSD-RCTA (2B)). Indication is in % Span, should be in degrees F. This is also seen on the PMS mimic displays in PLS.	PMS	Open	7/13/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. The primary indication to check this parameter is the PMS RCS variables, page 2 (PMS screen 000005). This screen is correct in every regard. Ovation also provides a PMS mimic screen, which should be identical to the actual PMS screen. On the mimic the units on the Division D RCS Average Coolant Temperature for l cold leg 2B is in % Span, but should be in degrees F. The impact of this is minimal, given that the correct value is displayed in both locations, the primary screen used for this variable is correct, and the indication of this parameter is provided for all four divisions in a row, which allows the operator to easily recognize that this values is a temperature, not a % of span.	VNP Tracking #6752

Westinghouse Non-Proprietary Class 3

Assessment of effects of Simulator Discrepancy Report items added between 4/28/15 and 9/1/15 for impact to License Operator Training

Table of Simulator Discrepancy Report items not impacting 55.45(a) Criteria

Tracking #	Summary	Detailed Description	System	Status	Status Date	Evaluation Basis	Other NOTES
VC-1507-61	OPDMS AFD Screen (32400) does not update	OPDMS AFD Screen (32400) does not update correctly. The point used to indicate Current AFD does not move and always indicates AFD is in the middle of the band at 100% power	NAP	Open	7/13/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. The OPDMS AFD screen provides a "live" graphical display of AFD, showing the target value, and the target range. The current target value ramps from [ ]a,c power to [ ]a,c power. There is a "blue dot" which plots actual AFD on this graph as plant conditions change. The "blue dot" does move with actual AFD, as power changes. [ ]a,c There is minimal impact to this because the primary focus is directed to the "blue dot", which does track correctly.	VNP Tracking #6791

Westinghouse Non-Proprietary Class 3

Assessment of effects of Simulator Discrepancy Report items added between 4/28/15 and 9/1/15 for impact to License Operator Training

Table of Simulator Discrepancy Report items not impacting 55.45(a) Criteria

Tracking #	Summary	Detailed Description	System	Status	Status Date	Evaluation Basis	Other NOTES
VC-1507-69	GCF for WGS-AIT031 and 032 do not work.	Global Component Failures for WGS-AIT031 and 032 do not work. All 3 options were tried for both channels with no effect.	WGS	Open	7/31/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. These two WGS instruments are the Hydrogen monitors for the waste gas carbon bed vault, and the waste gas system sample panel cabinet. Although the global component failures do not function for these components, it is always possible to perform a remote override of the instrumentation value, to drive whatever output is desired.	
VC-1508-14	Plant Mode NAP Temperature Input	The Automatic Plant Mode calculation uses the average Tcold (DDS-BAP10-T3) vice Tavg input for determining the plant mode. The issue appears to be due to inconsistent documentation; APP-DDS-J4-126 section 7.4 states that the ⌈]a,c be calculated by the DDS-AP-BAP application while section 3 properly identifies the temperature input as [ ]a,c APP-DDS-GMP-012 also identifies the temperature input to be used as ⌈]a,c as that is the temperature indication specified in the AP1000 Technical	NAP	Open	8/22/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. The plant conditions which have Tavg as a portion of the MODE determination are times that there is very little difference between Tavg and Tcold indications. Because of these small variations in temperature, the MODE change updates at the correct time and the input that caused the MODE change is transparent to the operator.	VNP tracking #6188

Westinghouse Non-Proprietary Class 3

Assessment of effects of Simulator Discrepancy Report items added between 4/28/15 and 9/1/15 for impact to License Operator Training

Table of Simulator Discrepancy Report items not impacting 55.45(a) Criteria

Tracking #	Summary	Detailed Description	System	Status	Status Date	Evaluation Basis	Other NOTES
		Specifications to be used; see Table 1.1-1 and the definition for MODE in section 1.1. For this calculation recommend using a Redundant Selection Algorithm (RSA) selected output from PMSA-RCTA, PMSB-RCTA, PMSC-RCTA and PMSD-RCTA.					
VC-1508-55	Simulator MCR missing cooling fins	Simulator MCR is missing cooling fins as designated by the Unit 3 design documentation. SOS comment - verified above statement. APP-1242-EL-001, Rev 0, shows MCR lighting fixtures hanging from chains and having the lighting hanger connected to "steel fin member" (APP-1250-SS-125) which is not in Simulator Design Database allowing for more details at this time.	STS	Open	8/24/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. Missing cooling fins was determined to be a physical fidelity issue that imposes no operational restrictions on the indications available to or actions taken by the operator. A Training Needs Assessment was performed and it was determined that this issue does not impact any of the six criteria listed under ANSI/ANS-3.5-1998, Section 4.2.1.4 or any of the 13 criteria listed under 10 CFR 55.45(a).	VNP tracking #233

Westinghouse Non-Proprietary Class 3

Assessment of effects of Simulator Discrepancy Report items added between 4/28/15 and 9/1/15 for impact to License Operator Training

Table of Simulator Discrepancy Report items not impacting 55.45(a) Criteria

Tracking #	Summary	Detailed Description	System	Status	Status Date	Evaluation Basis	Other NOTES
VC-1508-56	Simulator MCR lights not hanging from chains	Simulator MCR lights are not hanging from chains as designated by the Unit 3 design documentation listed below. SOS comment - verified above statement. APP-1242-EL-001, Rev 0, shows MCR lighting fixtures hanging from chains.	STS	Open	8/24/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. The MCR lights not hanging from chains in the MCR was determined to be a minor physical difference between MCR and simulation facility that imposes no operational restrictions on the indications available to or actions taken by the operator. The current MCR lighting responds properly to loss of power scenarios. A Training Needs Assessment was performed and it was determined that this issue does not impact any of the six criteria listed under ANSI/ANS-3.5-1998, Section 4.2.1.4 or any of the 13 criteria listed under 10 CFR 55.45(a)	VNP tracking #235
VC-1508-60	Kirk Key interlock not operable on spare battery LOAs	The Fused Transfer Switch Box Spare Battery Manual Switches on sim diagrams APP-EDS-E3-001, APP-EDS-E3-002, APP-EDS-E3-007, APP-EDS-E3-009, and APP-EDS-E3-010 can be closed simultaneously using the following LOAs: EDS1DF1_C EDS1DF2_C EDS1DF5_C EDS1DF3_C EDS1DF4_C, [	STS	Open	8/22/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. The Kirk Key indication in question is associated with EDS and does not update on the graphical display, [	VNP tracking #6091

Westinghouse Non-Proprietary Class 3

Assessment of effects of Simulator Discrepancy Report items added between 4/28/15 and 9/1/15 for impact to License Operator Training

Table of Simulator Discrepancy Report items not impacting 55.45(a) Criteria

Tracking #	Summary	Detailed Description	System	Status	Status Date	Evaluation Basis	Other NOTES
		]a,c SOS comment – ⌈]a,c These are all LOA that students will not be affected by. This will be an enhancement to the ISS interface and is not considered a SIM discrepancy.				]a,c indication the booth operator can make the appropriate reports to the MCR and this issue is transparent to the MCR operators.	
VC-1508-61	EDSS-DF-1 nomenclature and switch operability issue	On APP-EDS-E3-007, the switches inside the Spare Fused Transfer Switch Box EDSS-DF-1 are labeled with "K1". Per the corresponding one-line, the two leftmost switches should be labeled with "K3" and the two rightmost switches should be labeled with "K4". Additionally, the LOAs for these switches seem to be incorrectly tied to the ⌈	STS	Open	8/25/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. This issue is similar to VC-1508-60. The spare battery is still able to be placed in service when required. The nomenclature and operability issues are related to the simulator instructor station and are transparent to the operator.	VNP tracking #6092

Westinghouse Non-Proprietary Class 3

Assessment of effects of Simulator Discrepancy Report items added between 4/28/15 and 9/1/15 for impact to License Operator Training

Table of Simulator Discrepancy Report items not impacting 55.45(a) Criteria

Tracking #	Summary	Detailed Description	System	Status	Status Date	Evaluation Basis	Other NOTES
		]a,c oneline. SOS comment - verified APP-EDS-E3-015, Rev 0, supports the above statements. Also verified LOAs and wrong.					
VC-1508-62	SMS Detector ranges not consistent with design statements	SMS detectors currently have a maximum indication range of [ ]a,c. Design documents discuss peak impact indications of [ ]a,c but do not give an actual range of the detector anywhere. The PRS currently only has UDAs for all these detectors and the alarms are set at [ ]a,c which is outside the allowed range of the detector and therefore will result in never receiving an alarm based on the settings. In addition, the fault range for these detectors is [-]a,c above the maximum indicating range). SOS comments- Agree, VCS machine has same conditions as reported above.	SMS	Open	8/21/2015	This issue does not impact the simulator's suitability for the conduct of operating training or tests. Current training material directs the booth operator to insert user defined alarms to generate the alarms to allow operators to respond accordingly prior to the initiation of the training event, thus making this issue transparent to the operators	VNP tracking #6246

Westinghouse Non-Proprietary Class 3