



ENERGY NORTHWEST

David A. Swank
Columbia Generating Station
P.O. Box 968, PE04
Richland, WA 99352-0968
Ph. 509-377-2309 | F. 509-377-2354
daswank@energy-northwest.com

DEC 17 2014

GO2-14-175

EA-13-109

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

Subject: **COLUMBIA GENERATING STATION, DOCKET NO. 50-397
ENERGY NORTHWEST'S FIRST SIX-MONTH STATUS UPDATE
REPORT FOR THE IMPLEMENTATION OF NRC ORDER EA-13-109 –
OVERALL INTEGRATED PLAN FOR RELIABLE HARDENED
CONTAINMENT VENTS UNDER SEVERE ACCIDENT CONDITIONS**

- References:
1. NRC Order EA-12-050, "Order Modifying Licenses with Regard to Reliable Hardened Containment Vents," March 12, 2012
 2. NRC Order EA-13-109, "Order to Modify Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation under Severe Accident Conditions," June 6, 2013
 3. Letter GO2-14-107, dated June 30, 2014, from DA Swank, Energy Northwest, to the NRC, "Energy Northwest's Phase 1 Response to NRC Order EA-13-109 – Overall Integrated Plan for Reliable Hardened Containment Vents under Severe Accident Condition"

Dear Sir or Madam,

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued Order EA-12-050, (Reference 1) which directed Energy Northwest's Columbia Generating Station (Columbia) to have a reliable hardened vent to remove decay heat and maintain control of containment pressure within acceptable limits following events that result in the loss of active containment heat removal capability or prolonged Station Blackout.

On June 6, 2013, the NRC issued Order EA-13-109; (Reference 2) which rescinded the requirements imposed in Section IV and Attachment 2 of Order EA-12-050 and replaced them with the requirements contained in Section IV and Attachment 2 of Order EA-13-109. Order EA-13-109, Section IV, D.1 requires all licensees to submit an overall integrated plan (OIP) including a description of how compliance with the Phase 1 requirements described in Attachment 1 of the Order will be achieved.

In Reference 3, Energy Northwest submitted Columbia's Overall Integrated Plan for the installation of a reliable hardened severe accident capable wetwell vent.

A153
KLR

ENERGY NORTHWEST'S FIRST SIX-MONTH STATUS UPDATE REPORT FOR THE IMPLEMENTATION OF NRC ORDER EA-13-109 – OVERALL INTEGRATED PLAN FOR RELIABLE HARDENED CONTAINMENT VENTS UNDER SEVERE ACCIDENT CONDITIONS

Page 2 of 2

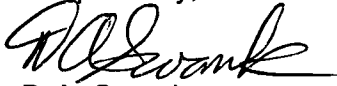
The attachment to this letter provides Energy Northwest's first six-month update report of Columbia's status of implementing Order EA-13-109 pursuant to Section IV, Condition C.2 of Reference 2.

There are no new or revised regulatory commitments contained in this letter. If you have any questions or require additional information, please contact Ms. L. L. Williams at (509) 377-8148.

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

Executed on the 16th day of December, 2014

Respectfully,



D.A. Swank

Assistant Vice President, Engineering

Attachment First Six-Month Status Update Report for the Implementation of NRC Order EA-13-109

cc: NRC Region IV Administrator
NRC NRR Project Manager
NRC Senior Resident Inspector/988C
MA Jones – BPA/1399 (email)

ENERGY NORTHWEST'S FIRST SIX-MONTH STATUS UPDATE REPORT FOR THE IMPLEMENTATION OF NRC ORDER EA-13-109 – OVERALL INTEGRATED PLAN FOR RELIABLE HARDENED CONTAINMENT VENTS UNDER SEVERE ACCIDENT CONDITIONS

ATTACHMENT

COLUMBIA GENERATING STATION, DOCKET NO. 50-397

**FIRST SIX-MONTH STATUS UPDATE REPORT FOR THE IMPLEMENTATION OF
NRC ORDER EA-13-109**

ENERGY NORTHWEST'S FIRST SIX-MONTH STATUS UPDATE REPORT FOR THE IMPLEMENTATION OF NRC ORDER EA-13-109 – OVERALL INTEGRATED PLAN FOR RELIABLE HARDENED CONTAINMENT VENTS UNDER SEVERE ACCIDENT CONDITIONS

Attachment
Page 2 of 8

1.0 Introduction

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued Order EA-12-050, (Reference 1) which directed Energy Northwest's Columbia Generating Station (Columbia), to have a reliable hardened vent to remove decay heat and maintain control of containment pressure within acceptable limits following events that result in the loss of active containment heat removal capability or prolonged Station Blackout.

On June 6, 2013, the NRC issued Order EA-13-109; (Reference 2) which rescinded the requirements imposed in Section IV and Attachment 2 of Order EA-12-050 and replaced them with the requirements contained in Section IV and Attachment 2 of Order EA-13-109. Order EA-13-109, Section IV, D.1 required all licensees with Mark I and Mark II containments to submit an overall integrated plan (OIP) including a description of how compliance with the Phase 1 requirements described in Attachment 2 of the Order will be achieved. In Reference 3, Energy Northwest submitted Columbia's OIP for the installation of a reliable, severe accident capable, hardened containment venting system.

Section IV, Condition D.3, of Reference 2 also required status reports at 6-month intervals following the submittal of the Phase 1 OIP. This report is Energy Northwest's first six-month status report of Columbia's implementation of Phase 1 for Order EA-13-109.

2.0 Milestone Accomplishments

The following milestones have been completed since the initial submittal on June 30, 2014.

- Submittal of first 6-month update

3.0 Milestone Schedule Status

The following provides an updated milestone schedule to support reliable hardened vent OIP.

ENERGY NORTHWEST'S FIRST SIX-MONTH STATUS UPDATE REPORT FOR THE IMPLEMENTATION OF NRC ORDER EA-13-109 – OVERALL INTEGRATED PLAN FOR RELIABLE HARDENED CONTAINMENT VENTS UNDER SEVERE ACCIDENT CONDITIONS

Attachment

Page 3 of 8

Milestones	Target Completion Date	Activity Status	Revised Target Completion Date
Correspondence & Reports:			
Submit the Reliable Hardened Containment Vents under Severe Accident Conditions Overall Integrated Plan for Phase 1	Jun 30, 2014	Completed	N/A
First Status Update Report for the Overall Reliable Hardened Containment Vents under Severe Accident Conditions Integrated Plan for Phase 1	Dec 31, 2014		N/A
Second Status Update Report for the Overall Reliable Hardened Containment Vents under Severe Accident Conditions Integrated Plan for Phase 1	Jun 30, 2015		N/A
Third Status Update Report for the Overall Reliable Hardened Containment Vents under Severe Accident Conditions Integrated Plan for Phase 1	Dec 31, 2015		N/A
Fourth Status Update Report for the Overall Reliable Hardened Containment Vents under Severe Accident Conditions Integrated Plan for Phase 1	Jun 30, 2016		N/A
Fifth Status Update Report for the Overall Reliable Hardened Containment Vents under Severe Accident Conditions Integrated Plan for Phase 1	Dec 31, 2016		N/A
Final Completion Report for the Overall Reliable Hardened Containment Vents under Severe Accident Conditions Integrated Plan for Phase 1	June 2017		N/A

ENERGY NORTHWEST'S FIRST SIX-MONTH STATUS UPDATE REPORT FOR THE IMPLEMENTATION OF NRC ORDER EA-13-109 – OVERALL INTEGRATED PLAN FOR RELIABLE HARDENED CONTAINMENT VENTS UNDER SEVERE ACCIDENT CONDITIONS

Attachment
Page 4 of 8

Milestones	Target Completion Date	Activity Status	Revised Target Completion Date
Engineering & Modifications:			
Develop Engineering Design for Modifications (100% package) for Phase 1	Apr 2015	In Process	N/A
Plant Modification Installation for Phase 1	June 2017	Awaiting design completion	TBD
Program & Procedures:			
Develop the program and procedures to operate, test, and maintain the HVCS for Phase 1	June 2015	Awaiting design completion	TBD
Coordinate procedures for HCVS with AOPs, EOPs, SAGs FSGs, and SAMGs for Phase 1	Mar 2017	Awaiting design completion	TBD
Implement the procedures for Phase 1	June 2017	Awaiting design completion	TBD
Operations & Training:			
Develop the training for all personnel expected to operate the HCVS – Phase 1	Mar 2017	Awaiting design completion	TBD
Complete the training of personnel – Phase 1	Mar 2017	Awaiting design completion	TBD

4.0 Changes to Compliance Method

PLT-5 Identified three valves, HCV-1, 2, and 7. HCV-V-7 has been replaced by a rupture disc. Energy Northwest is eliminating valve HCV-V-7 and adding a rupture disk HCV-RD-54 to prevent secondary containment bypass leakage. As a result a separate nitrogen supply will be added for use in rupturing the disk if anticipatory venting is to be performed. This will be a manual action in the area of the remote operating station. To prevent inadvertent operation of the WW HCV, instead of the solenoid pilot valves being located in a locked cabinet, the remote operating station will have lockable pneumatic supply valves. A new Sketch 3 is attached.

PLT-7 WW piping will be sized to vent 1% of rated thermal power with a 17% uprate to a power of 4079 MWt. The piping will also be sized to support anticipatory venting and pass 80,000 lbm/hr at a maximum pressure of 10 psig in the WW.

Energy Northwest will use Option number 5 of the NEI White Paper HCV-WP-03, Hydrogen/Carbon Monoxide Control Measures and add a check valve at the

ENERGY NORTHWEST'S FIRST SIX-MONTH STATUS UPDATE REPORT FOR THE IMPLEMENTATION OF NRC ORDER EA-13-109 – OVERALL INTEGRATED PLAN FOR RELIABLE HARDENED CONTAINMENT VENTS UNDER SEVERE ACCIDENT CONDITIONS

Attachment
Page 5 of 8

discharge end of the vent pipe to address the flammability of combustible gasses.

The testing and inspection of components identified in Table 4-1 are being changed.

Table 4-1 Testing and Inspection Requirements

Description	Frequency	<u>Reason for Change</u>
Cycle the HCVS valves not used to maintain containment integrity during operations.	Once per operating cycle	This testing has been deleted because HCV-V-7 has been replaced by a rupture disc to prevent secondary containment bypass leakage.
Perform visual inspections and a walk down of HCVS components	Once per operating cycle Once every other operating cycle	The frequency of testing is being changed. The accessible components are routinely monitored during operator rounds and will be visually inspected as part of the validation testing every other operating cycle. The new discharge check valve and outside components will be inspected during the testing identified below.
Test the HCVS radiation monitors.	Once per operating cycle	Testing and calibration have been separated. Testing will be performed once per operating cycle.
Calibrate the HCVS radiation monitors	Once per every other operating cycle	Calibration will be performed every other outage because this is a qualitative instrument.
Leak test the HCVS.	Prior to first declaring the system functional	NO CHANGE
Validate the HCVS operating procedures by conducting an open/close test of the HCVS control logic from its control panel and ensuring that all interfacing system valves move to their proper (intended) positions.	Once per every other operating cycle	The validation of the HCVS operating procedures will be tested as specified. However, there are no interfacing valves in this system.
Leak test and stroke the discharge check valve.	Once per every three operating cycle	This testing is added to include the added discharge check valve.

ENERGY NORTHWEST'S FIRST SIX-MONTH STATUS UPDATE REPORT FOR THE IMPLEMENTATION OF NRC ORDER EA-13-109 – OVERALL INTEGRATED PLAN FOR RELIABLE HARDENED CONTAINMENT VENTS UNDER SEVERE ACCIDENT CONDITIONS

Attachment

Page 6 of 8

5.0 Need for Relief/Relaxation and Basis for the Relief/Relaxation

Energy Northwest expects to fully comply with the Order and its implementation date and does not anticipate a request for relief and/or relaxation of Order EA-13-109.

6.0 Open Items

Item Number	Open Items Action	Status	Response
1	Provide resolution of the potential secondary containment bypass leakage path in the first 6-month update of the HCVS OIP	Closed	Columbia will use a rupture disk to prevent secondary containment bypass leakage
2	Evaluate the location of the ROS for accessibility.		
3	Determine the location of the portable air compressor and evaluate for accessibility under SA HCVS use.		
4	Evaluate the location of the FLEX DGs for accessibility under Severe Accident HCVS use.		
5	Confirm suppression pool heat capacity	Closed*	*Calculation ME-02-14-02, Revision 0, Appendix C confirms that there is sufficient heat capacity in the suppression pool water when at a minimum Technical Specification level to control pressure in containment before venting commences.
6	Determine the method of qualification for each instrument listed		
7	Complete the evaluation to determine accessibility, habitability, staffing sufficiency, and communication capability of the ROS.		
8	Identify design codes after design is finalized.		
9	Equipment qualifications will include temperature, pressure, radiation level, and total integrated dose radiation from the effluent vent pipe at local and remote locations.		
10	Provide site-specific details of the EOPs when available.		

7.0 Potential Safety Evaluation Impacts

Energy Northwest does not believe there are any potential impacts to the Draft Safety Evaluation.

ENERGY NORTHWEST'S FIRST SIX-MONTH STATUS UPDATE REPORT FOR THE IMPLEMENTATION OF NRC ORDER EA-13-109 – OVERALL INTEGRATED PLAN FOR RELIABLE HARDENED CONTAINMENT VENTS UNDER SEVERE ACCIDENT CONDITIONS

Attachment

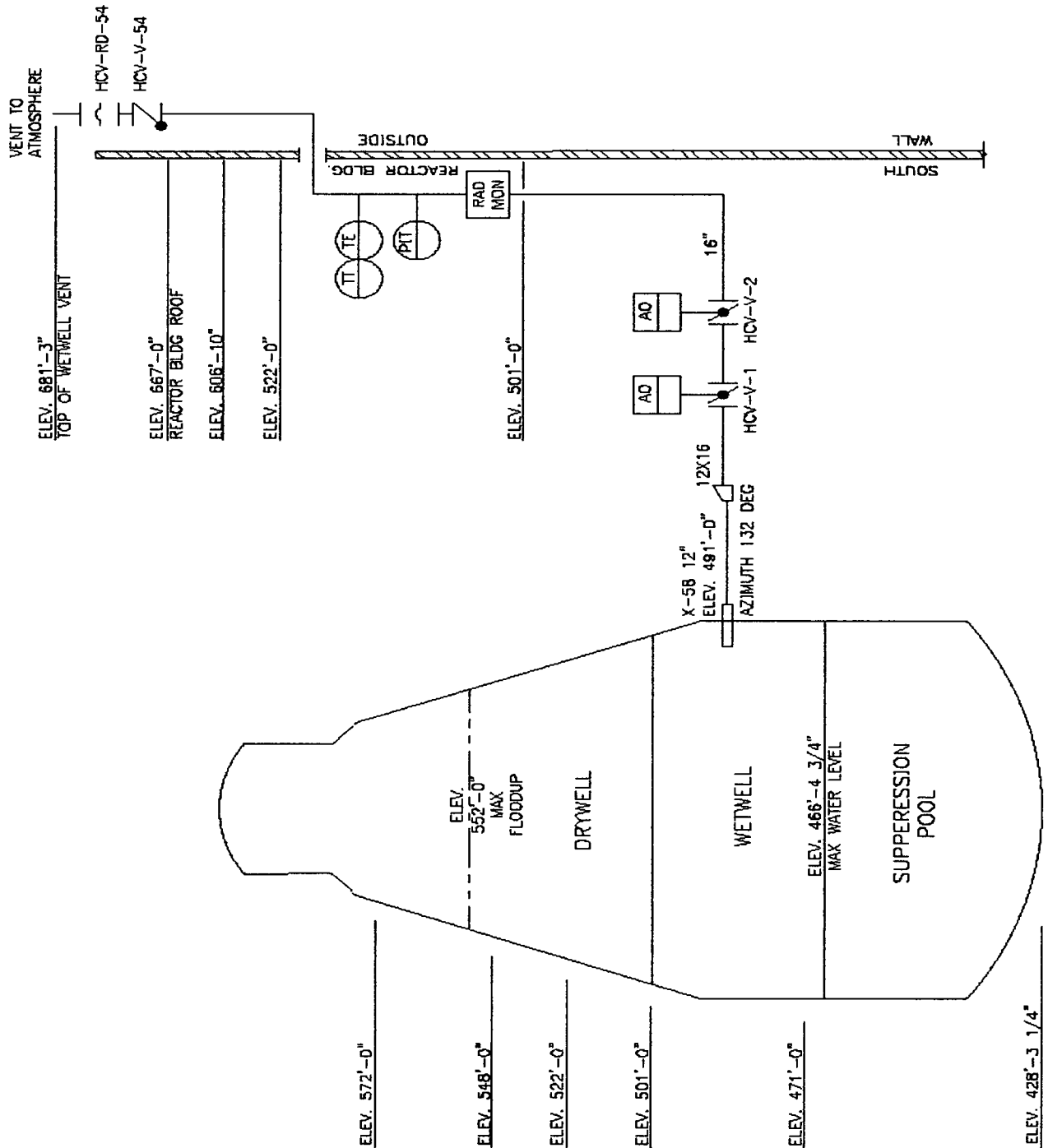
Page 7 of 8

8.0 References

1. NRC Order EA-12-050, "Order Modifying Licenses with Regard to Reliable Hardened Containment Vents," March 12, 2012
2. NRC Order EA-13-109, "Order to Modify Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation under Severe Accident Conditions," June 6, 2013
3. Letter GO2-14-107, dated June 30, 2014, from DA Swank, Energy Northwest, to the NRC, "Energy Northwest's Phase 1 Response to NRC Order EA-13-109 – Overall Integrated Plan for Reliable Hardened Containment Vents under Severe Accident Condition"

ENERGY NORTHWEST'S FIRST SIX-MONTH STATUS UPDATE REPORT FOR THE IMPLEMENTATION OF NRC ORDER EA-13-109 – OVERALL INTEGRATED PLAN FOR RELIABLE HARDENED CONTAINMENT VENTS UNDER SEVERE ACCIDENT CONDITIONS

Attachment
Page 8 of 8



New Sketch 3 – Flow Diagram