

NRC FORM 361  
(08-15-2024)U.S. NUCLEAR REGULATORY COMMISSION  
OPERATIONS CENTER

APPROVED BY OMB: NO. 3150-0238

EXPIRES: 07/31/2026

REACTOR PLANT EVENT  
NOTIFICATION WORKSHEET

Estimated burden per response to comply with this voluntary collection request: 30 minutes. The information provided will be used for evaluation of licensee event description, facility status and for input to the public website. Send comments regarding burden estimate to the FOIA, Library, and Information Collections Branch (T-6 A10M), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by email to [Infocollects.Resource@nrc.gov](mailto:Infocollects.Resource@nrc.gov), and the OMB reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0238), Attn: Desk Officer for the Nuclear Regulatory Commission, 725 17th Street NW, Washington, DC 20503. The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the document requesting or requiring the collection displays a currently valid OMB control number.

EN # 57785

NRC OPERATIONS TELEPHONE NUMBERS: PRIMARY - 301-816-5100 or 800-532-3469#, BACKUPS - [1st] 301-951-0550 or 800-449-3694#, [2nd] 301-415-0550 and [3rd] 301-415-0553. #Licensees who maintain their own ETS are provided these telephone numbers.  
FAX - 301-816-5151, EMAIL - hoo.hoc@nrc.gov

<b>Notification Time</b> 11:31 PDT	<b>Facility or Organization</b> Columbia Generating Station	<b>Unit</b> 2	<b>Name of Caller/Title</b> Valerie Lagen, Licensing Engineer	<b>Call Back #</b> (509) 377-2441
<b>Event Time &amp; Zone</b> 08:27 PDT	<b>Event Date</b> 06/23/2025	<b>Power/Mode (At Time of Event)</b> 18%/Mode 1		<b>Power/Mode (At Time of Notification)</b> 0%/Mode 4
<b>EVENT CLASSIFICATION</b>		<b>1-HR. NON-EMERGENCY 10 CFR 50.72(b)(1)</b>		
<input type="checkbox"/> GENERAL EMERGENCY	GEN/AAEC	<input type="checkbox"/> TS Deviation	ADEV	<input type="checkbox"/> (v)(A) Safe S/D Capability AINA
<input type="checkbox"/> SITE AREA EMERGENCY	SIT/AAEC	<b>4-HR. NON-EMERGENCY 10 CFR 50.72(b)(2)</b>		<input type="checkbox"/> (v)(B) RHR Capability AINB
<input type="checkbox"/> ALERT	ALE/AAEC	<input type="checkbox"/> (i) TS Required S/D	ASHU	<input type="checkbox"/> (v)(C) Control of Rad Release AINC
<input type="checkbox"/> UNUSUAL EVENT	UNU/AAEC	<input type="checkbox"/> (iv)(A) ECCS Discharge to RCS	ACCS	<input type="checkbox"/> (v)(D) Accident Mitigation AIND
<input type="checkbox"/> 50.72 NON-EMERGENCY (see next columns)		<input type="checkbox"/> (iv)(B) RPS Actuation (scram)	ARPS	<input type="checkbox"/> (xii) Offsite Medical AMED
<input type="checkbox"/> 10 CFR 73	D???	<input type="checkbox"/> (xi) Offsite Notification	APRE	<input type="checkbox"/> (xiii) Loss Comm/Asmt/Response ACOM
<input type="checkbox"/> MATERIAL/EXPOSURE	B???	<b>8-HR. NON-EMERGENCY 10 CFR 50.72(b)(3)</b>		<input type="checkbox"/> 60-DAY OPTIONAL 10 CFR 50.73(a)(1)
<input type="checkbox"/> FITNESS FOR DUTY	HFIT	<input type="checkbox"/> Invalid Specified System Actuation	AINV	
<input type="checkbox"/> OTHER UNSPECIFIED REQMT. (see last column)		<input type="checkbox"/> (ii)(A) Degraded Condition	ADEG	<b>OTHER UNSPECIFIED REQUIREMENT (IDENTIFY)</b>
<input type="checkbox"/> INFORMATION ONLY	NNF	<input type="checkbox"/> (ii)(B) Unanalyzed Condition	AUNA	<input checked="" type="checkbox"/> 10 CFR 21.21(d)(3)(i) Defects NONR
		<input type="checkbox"/> (iv)(A) Specified System Actuation	AESF	<input type="checkbox"/> NONR

**Event Description** (Include: Systems affected, actuations and their initiating signals, causes, effect of event on plant, actions taken or planned, etc.) (Continue on Page 2)

## Part 21 - Valcor Solenoid Valve Defect Identified

Valcor supplied replacement V70900-45 solenoid valves with substitute EM163-80 EPDM O-ring material (due to the obsolescence of the original E0515-80 material) and certified to the original qualification test report based on Delta Qualification report QRSKC26022-1. These replacement solenoid valves were installed at Columbia Generating Station (CGS) in July 2024 as Control Rod Drive Scram Discharge Volume Solenoid Drain Valves. On September 26, 2024, CGS identified this change in material and the issue was entered into the corrective action program. Columbia's review of the Delta Qualification report identified the justification of the thermal life of the new O-ring compound when used in normally energized valves such as those supplied to CGS was not adequate. This issue was communicated to the NRC with an interim Part 21 notification on November 21, 2024 (ML24326A362).

Valcor's report of additional testing to attempt to justify the new O-ring material as equal to or better than the original material was submitted to CGS on February 24, 2025. Columbia concluded the justification was inadequate and submitted to a third party for evaluation.

<b>NOTIFICATIONS</b>	<b>YES</b>	<b>NO</b>	<b>WILL BE</b>	<b>Anything Unusual or not understood?</b> <input type="checkbox"/> Yes (Explain above) <input checked="" type="checkbox"/> No
NRC RESIDENT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
STATE(s)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
LOCAL	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Did all systems function as required?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain above)
OTHER GOV AGENCIES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Mode of operations until corrected</b> (if applicable)
MEDIA/PRESS RELEASE	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Additional Information continued on next page?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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## REACTOR PLANT EVENT NOTIFICATION WORKSHEET (Continued)

EN # 57785

## RADIOLOGICAL RELEASES: CHECK OR FILL IN APPLICABLE ITEMS (specific details/explanations should be covered in event description)

<input type="checkbox"/> Liquid Release	<input type="checkbox"/> Gaseous Release	<input type="checkbox"/> Unplanned Release	<input type="checkbox"/> Planned Release	<input type="checkbox"/> Ongoing	<input type="checkbox"/> Terminated
<input type="checkbox"/> Monitored	<input type="checkbox"/> Unmonitored	<input type="checkbox"/> Offsite Release	<input type="checkbox"/> T.S. Exceeded	<input type="checkbox"/> RM Alarms	<input type="checkbox"/> Areas Evacuated
<input type="checkbox"/> Personnel Exposed or Contaminated		<input type="checkbox"/> Offsite Protection Actions Recommended		*State release path in description	

	Release Rate (Ci/sec)	% T.S. Limit	HOO Guide	Total Activity (Ci)	% T.S. Limit	HOO Guide
Noble Gas			0.1 Ci/sec			1000 Ci
Iodine			10 µCi/sec			0.01 Ci
Particulate			1 µCi/sec			1 mCi
Liquid (excluding tritium and dissolved noble gas)			10 µCi/min			0.1 Ci
Liquid (tritium)			0.2 Ci/min			5 Ci
TOTAL						

	Plant Stack	Condenser/Air Ejector	Main Steam Line	SG Blowdown	Other
RAD Monitor Readings					
Alarm Setpoints					
% T.S. Limit (If applicable)					

## RCS OR SG TUBE LEAKS: CHECK OR FILL IN APPLICABLE ITEMS: (specific details/explanations should be covered in event description)

Location of the Leak (e.g., SG #, valve, pipe, etc.)

Leak Rate	Units: gpm/gpd	T. S. Limits	Sudden or Long-Term Development
Leak Start Date	Time	Coolant Activity and Units:	Primary Secondary

List of Safety Related Equipment not Operational

Event Description (Include: Systems affected, actuations and their initiating signals, causes, effect of event on plant, actions taken or planned, etc.) (Continued from Page 1)

On June 23, 2025, CGS received a third party Evaluation Report of the Valcor O-ring substitution for V70900-45 solenoid valves. This review of the supplier qualification reports determined that the reports did not establish that the new compound O-rings are equivalent to the original compound O-rings. The determination of a defect was entered into the corrective action program on June 24, 2025.

As part of the original corrective action, the environmental qualification was evaluated for the substitute O-rings for these solenoid valves resulting in a more limited life than the original O-ring compound. Initial operability was evaluated as part of the corrective action on September 26, 2024. The results of the third party review do not impact the currently installed equipment. The initial operability evaluation is still valid as the newly established qualified life is not impacted by the new test data or third party evaluation report. The limited thermal life of the substitute O-ring material was incorporated into the preventative maintenance program as part of the corrective action.

The NRC Resident Inspector has been notified of this event, and a written report will be submitted to the NRC within 30 days.