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 ARBUCKLE,J.D. Washington Public Power Supply System
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 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 91-021-00:on 910801,determined that tritium sampling was not being performed during startup,shutdown & 15 percent power change evolutions.Caused by inadequate procedure/procedure review.Changed procedure.W/910830 ltr.

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 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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August 30, 1991
G02-91-160

Docket No. 50-397

Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: NUCLEAR PLANT NO. 2
LICENSEE EVENT REPORT NO. 91-021

Dear Sir:

Transmitted herewith is Licensee Event Report No. 91-021 for the WNP-2 Plant. This report is submitted in response to the report requirements of 10CFR50.73 and discusses the items of reportability, corrective action taken, and action taken to preclude recurrence.

Very truly yours,

J. W. Baker

J. W. Baker (M/D 927M)
WNP-2 Plant Manager

Enclosure:
Licensee Event Report No. 91-021

cc: Mr. John B. Martin, NRC - Region V
Mr. C. Sorensen, NRC Resident Inspector (M/D 901A)
INPO Records Center - Atlanta, GA
Ms. Dottie Sherman, ANO
Mr. D. L. Williams, BPA (M/D 399)
NRC Resident Inspector - walk over copy

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LICENSEE EVENT REPORT (LER)

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

Immediate corrective action consisted of changing the procedure to include the requirement to sample for tritium following shutdown, startup and thermal power changes. Further actions are currently being evaluated and will be resolved as part of the corrective action process for LER 91-013, "Technical Specification - Surveillance Procedure Verification Program Identification of Nonconforming Conditions."

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 600 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Washington Nuclear Plant - Unit 2	0 5 0 0 0 3 9 7	9 1	0 2 1	0	0	2 OF	0 4

TEXT (If more space is required, use additional NRC Form 368A's) (17)

Abstract (Continued)

This event posed no threat to the health and safety of either the public or Plant personnel because the concentration of tritium in the primary coolant is not significantly dependent on short-term changes in reactor power.

Plant Conditions

- a) Power Level - 0%
- b) Plant Condition - Mode 4 (Cold Shutdown)

Event Description

On August 1, 1991 it was determined that sampling for tritium at the Main Plant Release Point (Vent) was not being performed during startup, shutdown and 15 percent power change evolutions as required by Technical Specification 4.11.2.1.2. This discrepancy was discovered by Plant Chemistry personnel during procedural verification efforts associated with implementation of NRC Generic Letter 89-01. Generic Letter 89-01 provides guidance for relocating the procedural details of the Radiological Effluent Technical Specifications (RETS) to the Offsite Dose Calculation Manual (ODCM).

Technical Specification 4.11.2.1.2 requires in part that, "The dose rate due to . . . tritium and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents shall be determined to be within limits in accordance with the methodology and parameters in the ODCM by obtaining representative samples and performing analyses in accordance with the sampling and analysis program specified in Table 4.11-2." Table 4.11.2 (Note b) requires that sampling and analysis be performed for tritium following shutdown, startup or a thermal power change exceeding 15 percent of rated thermal power within a one-hour period.

During their review of Plant Procedure (PPM) 7.4.11.2.1.2.3, "Grab Samples Following Shutdown, Startup and Thermal Power Changes," Plant Chemistry personnel discovered that it had never included the requirement to sample for tritium during those conditions. There is, however, a procedure in place that has been performed to sample and analyze for tritium on a weekly basis as required by the Technical Specifications.

Immediate Corrective Action

Plant Procedure 7.4.11.2.1.2.3 was changed to include the requirement to sample for tritium following shutdown, startup and thermal power change evolutions.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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Further Evaluation and Corrective ActionA. Further Evaluation

1. This event is reportable in accordance with the requirements of 10CFR50.73(a)(2)(i)(B) as a condition prohibited by the Plant's Technical Specifications.
2. There were no structures, systems or components that were inoperable at the start of this event than contributed to the event.
3. The cause of this event is Less Than Adequate Procedure/Procedure Review. The procedure never included the requirement to sample for tritium following shutdown, startup and thermal power changes as required by the Technical Specifications. However, as previously stated, there is a procedure in place that has been performed to sample and analyze for tritium on a weekly basis.

B. Further Corrective Action

1. Changes have been made to the procedure preparation and review process since the time-frame when the procedure was developed (and subsequent reviews were performed) for the sampling of radiological effluents following shutdown, startup and thermal power change evolutions. Specifically, a procedural verification and validation process has recently been implemented. It was during this process that the failure to sample for tritium as required by the Technical Specification was identified. Furthermore, the procedure had not been through the verification and validation process prior to the discovery of this discrepancy. Verification is the process of confirming and documenting the technical accuracy and written correctness of Plant procedures. Validation is the evaluation performed to determine that Plant procedures provide adequate guidance to the procedure user and to ensure proper operation/maintenance of Plant equipment.
2. Further programmatic actions are currently being evaluated and will be resolved as part of the corrective action process for LER 91-013, and its subsequent revisions. LER 91-013 reported several items of noncompliance with the Technical Specifications that were identified as part of a program to verify that Technical Specification requirements, prerequisites, frequencies and acceptance criteria are addressed in Plant procedures.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 600 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Safety Significance

There is no safety significance associated with this event. Tritium in a Boiling Water Reactor is produced primarily by 1) activation of naturally occurring deuterium in the primary coolant, 2) nuclear fission of the uranium oxide fuel, and 3) neutron reactions with the boron in the control rods. The tritium formed in the control rods, which could be released in liquid or gaseous effluents, is negligible. The amount of tritium that could be transferred from the fuel to the coolant is also small because essentially all fission-product tritium will remain in the fuel rods unless defects are present in the cladding material. The prime source of tritium is that produced from activation of deuterium in the primary coolant. However, due to a relatively low production rate and long half-life (12.3 years), the concentration of tritium in the primary coolant is not significantly dependent on short-term changes in reactor power.

Reviews of the weekly tritium samples have consistently shown no increased trends and the results have always been well below the Technical Specification-required values. Accordingly, tritium production to-date has had no impact on the offsite dose and; therefore, this event did not affect the health and safety of either the public or Plant personnel.

Similar Events

There have been instances pertaining to noncompliance with the Technical Specifications and those events are discussed in detail in LERs 91-013-00 and 91-013-01, "Technical Specification - Surveillance Procedure Verification Program Identification of Nonconforming Conditions."

EIIS InformationText Reference

Main Plant Release Point (Vent)

EIIS ReferenceSystemComponent
