

RECEIVED  
NRC  
REGION V

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

P.O. Box 968 • 3000 George Washington Way • Richland, Washington 99352-0968 (509) 372-5000

March 13, 1992  
G02-92-062

Docket No. 50-397

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Mail Station P1-137  
Washington, D. C. 20555

Gentlemen:

Subject: NUCLEAR PLANT NO. 2, OPERATING LICENSE NO. NPF-21  
NRC INSPECTION REPORT 91-42  
RESPONSE TO NOTICE OF VIOLATION

The Washington Public Power Supply System hereby replies to the Notice of Violation contained in your letter dated January 3, 1992. Our reply, pursuant to the provisions of Section 2.201, Title 10, Code of Federal Regulations, consists of this letter and Appendix A (attached). Per discussion with Phil Johnson of your staff, the Supply System received an extension to the time allowed for this response.

In Appendix A, the violation is addressed with an explanation of our position regarding validity, corrective action and date of full compliance.

This violation challenges a long standing policy concerning our interpretation of applicable requirements for 10 CFR 50.59 Evaluations and what constitutes "adequate justification" of technical decisions or conclusions. We believe that the extent of documentation and analytical support required to conclude that Plant changes do not constitute unreviewed safety questions or maintain adequate margins to unspecified and conservative safety limits should be commensurate with the safety significance of the change.

The Supply System maintains that detailed analyses are not always required to support technical decisions. Judgement of technically qualified personnel has value and validity to provide bases in support of technical decisions. Use of engineering judgement in Plant applications should be a function of relative safety implications of the issue being addressed, and expected duration of reliance on judgement versus calculation. However, management expects the bases for the judgements to be documented to the extent necessary to allow a peer to arrive at the same conclusion.

9203180320

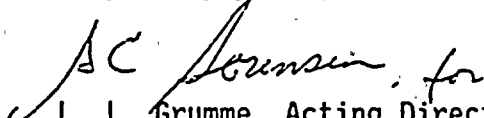


Page Two.  
NRC INSPECTION REPORT 91-42  
RESPONSE TO NOTICE OF VIOLATION

Further, the Supply System requires that all 10 CFR 50.59 Reviews and Safety Evaluations will be performed in a consistent manner, using as appropriate both qualitative and quantitative analyses. Limiting the range of design requirements considered is not acceptable for 10 CFR 50.59 Reviews and Safety Evaluations as occurred in the specific cited case. The rationale for concluding that there is no unreviewed safety question must be adequately documented.

Our 10 CFR 50.59 program has significantly improved since the time of the events leading to this violation. Therefore, the Supply System believes that our current program will ensure adequate Safety Evaluations are performed.

Very truly yours,

  
L. L. Grumme, Acting Director  
Licensing & Assurance

REF/bk  
Attachments

cc: JB Martin - NRC RV  
NS Reynolds - Winston & Strawn  
TR Quay - NRR  
DL Williams - BPA/399  
NRC Site Inspector - 901A



1

## APPENDIX A

During an NRC inspection conducted on November 4 through December 6, 1991, one violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR 2, Appendix C (1991), the violation is listed below:

10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings", states, in part:

"Activities affecting quality...shall be accomplished in accordance with these instructions, procedures or drawings..."

Licensee Administrative Procedure 1.3.43, Revision 0, "10 CFR 50.59 Evaluation Process" states in step 5.C.1.d"

"Complete the USQ [Unresolved Safety Question] Analysis if required (Attachment B). Provide an adequate justification to support the conclusions stated in response to questions 1A, 1B, and 1C."

Attachment B, question 1A requires response to the following:

"Can the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the FSAR be increased?"

Contrary to the above, on September 27, 1989, adequate justification was not provided to support the conclusions stated in response to question 1A on Attachment B for Instrument Setpoint Change Request 952 regarding a change to standby gas treatment system (SGTS) fan flow limiters SGT-LMTR-1A1, 1A2, 1B1, and 1B2, to raise maximum flow from 4457 cfm to 5600 cfm. The justification did not address the ability of the SGTS fan motors to operate at the increased flow under more rigorous conditions within the allowable ranges of instrument inaccuracy, degraded voltage, or reduced building temperatures.

This is a Severity Level IV violation (Supplement I).

### Validity of Violation

The Supply System acknowledges the validity of the violation. The 10 CFR 50.59 Safety Evaluation did not adequately document the basis for concluding operability of the SGT trains over the full range of design basis conditions. The root cause for the violation was Risks and Consequences of Decisions Not Completely Identified or Assessed.

Review of WNP-2 calculations in 1989 for Secondary Containment differential pressure draw-down time following a postulated LOOP/LOCA revealed the original analytical results did not meet design requirements given newly established system performance assumptions precipitated by new secondary containment challenges. Failure to consider diesel start times in the associated dose calculations and adverse environmental conditions resulted in the calculated draw-down time exceeding the design basis. Increased SGT System flow rate was required to achieve a satisfactory calculated draw-down time. A Justification for Continued Operation (JCO) was approved by the Plant Operations Committee (POC) on September 20, 1989 which allowed continued operation of the Plant provided the setpoint for



the SGT System fan flow limiters was changed from 4457 cfm to 5600 cfm. To implement the JCO, an Instrument Setpoint Change Request (ISCR) was initiated to change the flow limit setpoints on both trains of the SGT System. To support the ISCR, a 10 CFR 50.59 Safety Evaluation was performed to determine if an Unreviewed Safety Question (USQ) would exist with the setpoint change.

The fundamental error was that the 10 CFR 50.59 Safety Evaluation for the ISCR used the JCO as the sole basis to justify the conclusion that there was no unreviewed safety question with the setpoint change. The purpose of this specific JCO was to document the logic that an adequate secondary containment system could be maintained. The ISCR required an independent Safety Evaluation of the 5600 cfm setpoint. This was not adequately considered or documented based upon the Licensing Basis as a stand alone 10 CFR 50.59 Safety Evaluation would have required.

To support design assessment and the 10 CFR 50.59 Safety Evaluation for the setpoint change, SGT System testing at the higher flow rate was performed under normal operating conditions with satisfactory results. The measurements taken, i.e., air flow and motor current, provided an understanding of the system operating margins. Operability of the SGT trains with the new flow setpoint was not analyzed in detail at the full range of design basis conditions and instrument inaccuracies. However, the SGT System was judged qualitatively to be operable over the range of design basis conditions where quantitative analyses were not performed. Although based on engineering expertise and observed margin at the tested conditions, this conclusion was not documented. Testing at degraded conditions was not feasible.

#### Corrective Steps Taken/Results Achieved

1. Since September, 1989 to the present, upgrades made to the process of 10 CFR 50.59 Reviews and Safety Evaluations have clarified the requirements necessary to perform an adequate review and safety evaluation.

Plant personnel have been and are continuing to be trained in the preparation and review of 10 CFR 50.59 Reviews and Safety Evaluations. The first level of training emphasizes the need to review the proposed change against Licensing Basis Documents (LBD) and adequately document the justification for the conclusions. If the change may affect the LBDs, a Safety Evaluation is needed to determine if an Unreviewed Safety Question exists. Instruction is provided on how to perform a safety evaluation. A second level of training is provided in which personnel are trained on the design basis of the Plant. They are trained to review the Safety Evaluations for adequate consideration of all relevant design basis issues, and to ensure the appropriate level of analysis necessary to support the conclusions.





The first level of training is a 2½ day course and approximately 270 Plant personnel have been trained to date. The second level of training is a two week course and 60 Supply System personnel have been trained to date. The second level training has included primarily supervisory and senior level personnel. Currently, only those personnel who have successfully completed the first level of training may provide the independent review of 10 CFR 50.59 Reviews and Safety Evaluations. Eventually, only those personnel who have had second level training will be permitted to review the 10 CFR 50.59 Reviews and Safety Evaluations.

The current Plant procedure that governs the 10 CFR 50.59 process (PPM 1.3.43) and the above described training emphasize that only LBDs can be used to justify the conclusions of the Reviews and Safety Evaluations. The training and process improvements made since the subject 10 CFR 50.59 Safety Evaluation was performed are considered adequate to preclude recurrence.

2. The SGTS fan motors had been determined to be capable of operating at the increased flow under more rigorous conditions within the allowable ranges of instrument inaccuracy, degraded voltage, and reduced building temperatures. However, independent of the setpoint change for the JCO, a review of the SGT System flow instrumentation determined that the actual flow through the SGT would be greater than the indicated flow. The flow setpoint of 5600 cfm could result in tripping of the fan motors under highly unlikely simultaneous occurrence of allowable but extremely degraded conditions. The JCO and the associated ISCR 10 CFR 50.59 safety evaluation was determined to be invalid and the SGT System was declared inoperable.

#### Corrective Action to be Taken

1. The JCO and any associated 10 CFR 50.59 Safety Evaluation for the SGT System flow setpoint change ISCR will be revised with consideration of the flow instrumentation calibration error and to include determination of the consequences of the change for the full range of design requirements.
2. A Licensee Event Report (LER) will be provided to the NRC per 10 CFR 50.73 to document the incorrect flow setpoint on the SGT System.

#### Date of Full Compliance

WNP-2 will be in full compliance when a revised JCO and necessary 10 CFR 50.59 Safety Evaluations are approved prior to Plant restart from our current shutdown beginning February 27, 1992.



# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9203180320 DOC. DATE: 92/03/13 NOTARIZED: NO DOCKET #  
FACIL: 50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe 05000397  
AUTH. NAME AUTHOR AFFILIATION  
MUMME, L.L. Washington Public Power Supply System  
RECIP. NAME RECIPIENT AFFILIATION  
Document Control Branch (Document Control Desk)

SUBJECT: Responds to NRC 920103 ltr re violations noted in insp rept  
50-397/91-42 on 911104 to 1206. Corrective actions: training  
of personnel in preparation of 10CFR50.59 Reviews & Safety  
Evaluations & review of SGTS fan sys.

DISTRIBUTION CODE: IE01D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 5  
TITLE: General (50 Dkt)-Insp Rept/Notice of Violation Response

### NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD5 PD	1 1	ENG, P.L.	1 1
INTERNAL:	ACRS	2 2	AEOD	1 1
	AEOD/DEIIB	1 1	AEOD/DSP/TPAB	1 1
	DEDRO	1 1	NRR HARBUCK, C.	1 1
	NRR MORISSEAU, D	1 1	NRR/DLPQ/LHFBPT	1 1
	NRR/DLPQ/LPEB10	1 1	NRR/DOEA/OEAB	1 1
	NRR/DREP/PEPB9H	1 1	NRR/DST/DIR 8E2	1 1
	NRR/PMAS/ILRB12	1 1	NUDOCS-ABSTRACT	1 1
	OE DIR	1 1	OGC/HDS1	1 1
	REG FILE 02	1 1	RGN5 FILE 01	1 1
EXTERNAL:	EG&G/BRYCE, J.H.	1 1	NRC PDR	1 1
	NSIC	1 1		

Conf No 8414733223

### NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,  
ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION  
LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 24 ENCL 24





---

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

---

P.O. Box 968 • 3000 George Washington Way • Richland, Washington 99352-0968 • (509) 372-5000

---

March 13, 1992  
G02-92-062

Docket No. 50-397

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Mail Station P1-137  
Washington, D. C. 20555

Gentlemen:

Subject: NUCLEAR PLANT NO. 2, OPERATING LICENSE NO. NPF-21  
NRC INSPECTION REPORT 91-42  
RESPONSE TO NOTICE OF VIOLATION

The Washington Public Power Supply System hereby replies to the Notice of Violation contained in your letter dated January 3, 1992. Our reply, pursuant to the provisions of Section 2.201, Title 10, Code of Federal Regulations, consists of this letter and Appendix A (attached). Per discussion with Phil Johnson of your staff, the Supply System received an extension to the time allowed for this response.

In Appendix A, the violation is addressed with an explanation of our position regarding validity, corrective action and date of full compliance.

This violation challenges a long standing policy concerning our interpretation of applicable requirements for 10 CFR 50.59 Evaluations and what constitutes "adequate justification" of technical decisions or conclusions. We believe that the extent of documentation and analytical support required to conclude that Plant changes do not constitute unreviewed safety questions or maintain adequate margins to unspecified and conservative safety limits should be commensurate with the safety significance of the change.

The Supply System maintains that detailed analyses are not always required to support technical decisions. Judgement of technically qualified personnel has value and validity to provide bases in support of technical decisions. Use of engineering judgement in Plant applications should be a function of relative safety implications of the issue being addressed, and expected duration of reliance on judgement versus calculation. However, management expects the bases for the judgements to be documented to the extent necessary to allow a peer to arrive at the same conclusion.

9203180320 920313  
PDR ADOCK 05000397  
Q PDR

*Cent No PA1A733723*  
*IEO*  
*11*




Page Two  
NRC INSPECTION REPORT 91-42  
RESPONSE TO NOTICE OF VIOLATION

Further, the Supply System requires that all 10 CFR 50.59 Reviews and Safety Evaluations will be performed in a consistent manner, using as appropriate both qualitative and quantitative analyses. Limiting the range of design requirements considered is not acceptable for 10 CFR 50.59 Reviews and Safety Evaluations as occurred in the specific cited case. The rationale for concluding that there is no unreviewed safety question must be adequately documented.

Our 10 CFR 50.59 program has significantly improved since the time of the events leading to this violation. Therefore, the Supply System believes that our current program will ensure adequate Safety Evaluations are performed.

Very truly yours,

  
L. L. Grumme, Acting Director  
Licensing & Assurance

REF/bk  
Attachments

cc: JB Martin - NRC RV  
NS Reynolds - Winston & Strawn  
TR Quay - NRR  
DL Williams - BPA/399  
NRC Site Inspector - 901A





## APPENDIX A

During an NRC inspection conducted on November 4 through December 6, 1991, one violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR 2, Appendix C (1991), the violation is listed below:

10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings", states, in part:

"Activities affecting quality...shall be accomplished in accordance with these instructions, procedures or drawings..."

Licensee Administrative Procedure 1.3.43, Revision 0, "10 CFR 50.59 Evaluation Process" states in step 5.C.1.d"

"Complete the USQ [Unresolved Safety Question] Analysis if required (Attachment B). Provide an adequate justification to support the conclusions stated in response to questions 1A, 1B, and 1C."

Attachment B, question 1A requires response to the following:

"Can the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the FSAR be increased?"

Contrary to the above, on September 27, 1989, adequate justification was not provided to support the conclusions stated in response to question 1A on Attachment B for Instrument Setpoint Change Request 952 regarding a change to standby gas treatment system (SGTS) fan flow limiters SGT-LMTR-1A1, 1A2, 1B1, and 1B2, to raise maximum flow from 4457 cfm to 5600 cfm. The justification did not address the ability of the SGTS fan motors to operate at the increased flow under more rigorous conditions within the allowable ranges of instrument inaccuracy, degraded voltage, or reduced building temperatures.

This is a Severity Level IV violation (Supplement I).

### Validity of Violation

The Supply System acknowledges the validity of the violation. The 10 CFR 50.59 Safety Evaluation did not adequately document the basis for concluding operability of the SGT trains over the full range of design basis conditions. The root cause for the violation was Risks and Consequences of Decisions Not Completely Identified or Assessed.

Review of WNP-2 calculations in 1989 for Secondary Containment differential pressure draw-down time following a postulated LOOP/LOCA revealed the original analytical results did not meet design requirements given newly established system performance assumptions precipitated by new secondary containment challenges. Failure to consider diesel start times in the associated dose calculations and adverse environmental conditions resulted in the calculated draw-down time exceeding the design basis. Increased SGT System flow rate was required to achieve a satisfactory calculated draw-down time. A Justification for Continued Operation (JCO) was approved by the Plant Operations Committee (POC) on September 20, 1989 which allowed continued operation of the Plant provided the setpoint for

the SGT System fan flow limiters was changed from 4457 cfm to 5600 cfm. To implement the JCO, an Instrument Setpoint Change Request (ISCR) was initiated to change the flow limit setpoints on both trains of the SGT System. To support the ISCR, a 10 CFR 50.59 Safety Evaluation was performed to determine if an Unreviewed Safety Question (USQ) would exist with the setpoint change.

The fundamental error was that the 10 CFR 50.59 Safety Evaluation for the ISCR used the JCO as the sole basis to justify the conclusion that there was no unreviewed safety question with the setpoint change. The purpose of this specific JCO was to document the logic that an adequate secondary containment system could be maintained. The ISCR required an independent Safety Evaluation of the 5600 cfm setpoint. This was not adequately considered or documented based upon the Licensing Basis as a stand alone 10 CFR 50.59 Safety Evaluation would have required.

To support design assessment and the 10 CFR 50.59 Safety Evaluation for the setpoint change, SGT System testing at the higher flow rate was performed under normal operating conditions with satisfactory results. The measurements taken, i.e., air flow and motor current, provided an understanding of the system operating margins. Operability of the SGT trains with the new flow setpoint was not analyzed in detail at the full range of design basis conditions and instrument inaccuracies. However, the SGT System was judged qualitatively to be operable over the range of design basis conditions where quantitative analyses were not performed. Although based on engineering expertise and observed margin at the tested conditions, this conclusion was not documented. Testing at degraded conditions was not feasible.

#### Corrective Steps Taken/Results Achieved

1. Since September, 1989 to the present, upgrades made to the process of 10 CFR 50.59 Reviews and Safety Evaluations have clarified the requirements necessary to perform an adequate review and safety evaluation.

Plant personnel have been and are continuing to be trained in the preparation and review of 10 CFR 50.59 Reviews and Safety Evaluations. The first level of training emphasizes the need to review the proposed change against Licensing Basis Documents (LBD) and adequately document the justification for the conclusions. If the change may affect the LBDs, a Safety Evaluation is needed to determine if an Unreviewed Safety Question exists. Instruction is provided on how to perform a safety evaluation. A second level of training is provided in which personnel are trained on the design basis of the Plant. They are trained to review the Safety Evaluations for adequate consideration of all relevant design basis issues, and to ensure the appropriate level of analysis necessary to support the conclusions.



The first level of training is a 2½ day course and approximately 270 Plant personnel have been trained to date. The second level of training is a two week course and 60 Supply System personnel have been trained to date. The second level training has included primarily supervisory and senior level personnel. Currently, only those personnel who have successfully completed the first level of training may provide the independent review of 10 CFR 50.59 Reviews and Safety Evaluations. Eventually, only those personnel who have had second level training will be permitted to review the 10 CFR 50.59 Reviews and Safety Evaluations.

The current Plant procedure that governs the 10 CFR 50.59 process (PPM 1.3.43) and the above described training emphasize that only LBDs can be used to justify the conclusions of the Reviews and Safety Evaluations. The training and process improvements made since the subject 10 CFR 50.59 Safety Evaluation was performed are considered adequate to preclude recurrence.

2. The SGTS fan motors had been determined to be capable of operating at the increased flow under more rigorous conditions within the allowable ranges of instrument inaccuracy, degraded voltage, and reduced building temperatures. However, independent of the setpoint change for the JCO, a review of the SGT System flow instrumentation determined that the actual flow through the SGT would be greater than the indicated flow. The flow setpoint of 5600 cfm could result in tripping of the fan motors under highly unlikely simultaneous occurrence of allowable but extremely degraded conditions. The JCO and the associated ISCR 10 CFR 50.59 safety evaluation was determined to be invalid and the SGT System was declared inoperable.

#### Corrective Action to be Taken

1. The JCO and any associated 10 CFR 50.59 Safety Evaluation for the SGT System flow setpoint change ISCR will be revised with consideration of the flow instrumentation calibration error and to include determination of the consequences of the change for the full range of design requirements.
2. A Licensee Event Report (LER) will be provided to the NRC per 10 CFR 50.73 to document the incorrect flow setpoint on the SGT System.

#### Date of Full Compliance

WNP-2 will be in full compliance when a revised JCO and necessary 10 CFR 50.59 Safety Evaluations are approved prior to Plant restart from our current shutdown beginning February 27, 1992.

