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SUBJECT: Responds to NRC 930303 ltr re notice of violation & proposed
 imposition of civil penalty from Insp Rept 50-397/92-41.
 Corrective actions: util will benchmark radwaste program w/
 other selected utils to ensure consistency w/industry stds.

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April 26, 1993
G02-93-096

Docket No. 50-397

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

Gentlemen:

Subject: **WNP-2, OPERATING LICENSE NO. NPF-21**
 NRC INSPECTION REPORT 92-41
 RESPONSE TO NOTICES OF VIOLATION

Reference: Letter dated March 3, 1993, JB Martin (NRC) to AL Oxsen (SS) "Notice of Violation and Proposed Imposition of Civil Penalty - \$5,000, NRC Inspection Report 92-41"

The Washington Public Power Supply System hereby replies to the Notices of Violation (NOV) contained in your letter dated March 25, 1993. Our reply, pursuant to the provisions of Section 2.201, Title 10, Code of Federal Regulations, consists of this letter and Appendix A (attached).

In Appendix A, the violations are addressed with an explanation of our position regarding validity, corrective actions and date of full compliance.

In the Reference you requested us to address actions necessary to correct our general performance in Radwaste shipping. As indicated in our response to NOV A contained in the attached Appendix A, several corrective actions have been and are being implemented to identify and correct deficiencies in our Radwaste Shipping Program. These include: 1) a corporate

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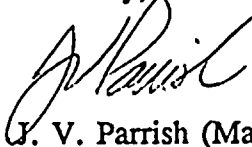


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**NRC INSPECTION REPORT 92-41
RESPONSE TO NOTICES OF VIOLATION**

review of WNP-2's shipping procedures by a former Radwaste supervisor from a licensed nuclear power facility; 2) review of the Radwaste Shipping Program by an outside consultant for regulatory compliance and process improvement; 3) training of personnel in specific areas of Radwaste shipping, 4) review of WNP-2 practices against other licensed utilities, 5) corporate level review of future radwaste shipments per the limitations discussed in Appendix A, and 6) the results of these reviews will be incorporated into the Radwaste program as appropriate. Implementation of these actions is expected to lead to sustained acceptable performance with the transportation of radioactive material.

Sincerely,



J. V. Parrish (Mail Drop 1023)
Assistant Managing Director, Operations

REF/bk

Attachments

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

Appendix A

During an NRC inspection conducted November 30 - December 21, 1992, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C, the violations are listed below:

- A. 10 CFR 20.201(b) requires that each licensee make such surveys as may be necessary to comply with the requirements of Part 20 and which are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present. As defined in 10 CFR 20.201(a), "survey" means an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions.

10 CFR 20.311 requires that any generator of radioactive waste, to the extent practicable, provide the radionuclide identity and quantity on the shipment manifest.

Contrary to the above, on October 8, 1992, for Licensee Shipment 92-61-02, the licensee did not make surveys necessary to provide the radionuclide identity and quantity on the shipment manifest.

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

Validity of Violation

The Supply System acknowledges deficiencies in its Radwaste Shipping Program. Detailed objective and independent reviews were performed on surveys for Shipment 92-61-02 by Supply System personnel, RADMAN program developers (WMG Inc.), and other industry personnel, including other utility licensees. The computer program RADMAN is used by the Supply System to classify the waste. The waste classification is based upon sample results, and the program uses this information to generate shipping information and prepare the required shipping documentation. Based on these reviews, the classification was determined to be correct. The radionuclide identities and quantities manifested were the result of decisions made during the classification process regarding the use of second order scaling for hard-to-measure nuclides. As noted during the Enforcement Conference discussion, each of the entities asked to classify the waste made slightly different assumptions in their methods. This resulted in differences in nuclide identification. The corrective actions described below will result in uniform application of scaling techniques.

Corrective Actions Taken/Results Achieved

1. WNP-2 has retained an industry consultant expert in classification issues to review our practices and recommend improvements.

2. Following review of our waste classification procedures, an industry consultant has concluded that they are adequate to ensure proper classification of waste and are consistent with others in the industry. This consultant provided onsite training for Radwaste personnel on 10 CFR 61 scaling factors and trending analyses.
3. The Supply System is now providing detailed documentation on the classification process for each shipment.
4. A corporate review of Radwaste procedures by a former Radwaste supervisor at another licensed facility has been completed. The results indicated that the procedures are adequate to comply with the regulatory requirements. Also, the procedures contain a sufficient level of detail to allow adequate performance.
5. The WNP-2 Shipping Coordinator has successfully completed WMG's newly created RADMAN user certification program. In addition, the Shipping Coordinator has completed a comprehensive one week course on 49 CFR compliance, covering all aspects of these transportation regulations.

Corrective Actions to be Taken

1. The improved scaling factor trending process will be implemented by July 1, 1993, following verification and validation of the process and input data.
2. A subsequent review of the Radwaste Program and procedures by an outside consultant will be completed by June 1, 1993, for regulatory compliance and process improvements. Appropriate enhancements identified in this review, as well as those identified by internal review, will be incorporated by June 30, 1993.
3. A corporate level technical review began on April 20, 1993, on all radwaste shipments to ensure that our procedures and practices comply with regulatory requirements. An evaluation will be completed by July 20, 1993, to determine whether continuation of the review is required.
4. The Supply System will benchmark its Radwaste Program with other selected nuclear utilities to ensure consistency with industry standards. Initial utility benchmarking visits will be completed by June 1, 1993. Appropriate improvements to the program will be implemented by June 30, 1993.

Date of Full Compliance

WNP-2 is in full compliance.

- B. 10 CFR 20.301 requires that no licensee dispose of licensed radioactive material except by certain specified methods.

Contrary to the above, from August 1985 to December 1992, the licensee disposed of cooling tower sludge, containing radioactivity at an average concentration of 5 E-7 microcuries per milliliter, by burial in an onsite landfill, a method not authorized by 10 CFR 20.301.

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

Validity of Violation

The Supply System acknowledges that timely resolution of this issue did not occur. The level of sensitivity to environmental radioactivity issues of personnel performing the initial evaluations was not aligned with the current regulatory perspectives. Indications of radioactive deposition have been measured since 1985. The results of previous analyses to determine the source of the radioactive material were indeterminate.

On May 12, 1988, the NRC issued Information Notice No. 88-22, Disposal of Sludge From Onsite Sewage Treatment Facilities At Nuclear Power Stations. The results of the evaluation of this notice indicated that WNP-2 does not have a program for disposal of cooling tower sediment. However, the evaluation incorrectly concluded that a more formal program was not needed. A program to conform to the regulatory requirements would have prompted definitive evaluation of the condition.

The Supply System cannot acknowledge or deny the violation at this time. Preliminary results were received April 23, 1993, from an outside consultant regarding the slightly contaminated cooling tower sediments at WNP-2. The status report stated, "In summary, the indications are that the identified low-level radioactive materials in the sediments originated from an upstream source unrelated to the operation and releases from WNP-2. The data do not support a conclusion that WNP-2 is a source of this radioactive material."

This conclusion is based in part on a correlation of Zn-65 and Mn-54 isotopic concentrations in sediment samples taken of the river intake water, the drinking water makeup flocculator, and the cooling towers. The flocculator is fed from the Cooling Tower Makeup (TMU) line. The appearance of these isotopes in the river intake water and the flocculator are consistent with the trends observed in the cooling tower sediment samples. The analysis further indicates that if gaseous effluents or other Plant activity were being introduced into the tower sediments, the data would show a more consistent presence of Plant related nuclides in the sediment samples. The consultant stated, "The graduated appearance can be explained by a difference in the rate of river transport of the various radionuclides. The fact that the Cooling Tower sediments are more concentrated than the river water sample is consistent with the expected concentrating effect of

the Cooling Tower evaporative losses." The consultant further states, "The discovery of this historical spectral analysis data from the river intake and flocculator is the most conclusive evidence yet discovered to discriminate the actual source of the Cooling Tower sediment activity. While previously proposed statistical evaluations will be continued to fruition, there now appears to be ample evidence that the activity in the Cooling Tower sediments is not of plant origin but is being brought onsite from the suspended solids content of the Columbia River."

Corrective Actions Taken/Results Achieved

1. The cooling tower sediments will be handled and controlled without regard to the source of the radioactive material. These materials are being identified and documented in accordance with the requirements of 10 CFR 50.75(g) for site decommissioning purposes. Appropriate controls will remain in place to ensure these materials are not a source of significant exposure to Plant personnel or the public.
2. Per Letter (No. G02-93-086) dated April 13, 1993, GC Sorensen (SS) to NRC, "NRC Inspection Report 92-35 Residual Low-Level Radioactive Materials," disposal of materials with residual low-level radioactivity will be performed per 10 CFR 50.75(g) rather than 10 CFR 20.302(a) as previously indicated.

Corrective Actions to be Taken

1. By June 30, 1993, the Supply System will complete the final analysis to determine the source of the tower sediment radioactivity.
2. An amendment to this response communicating the final results of the analyses will be provided by July 30, 1993.
3. A cooling tower sediment disposition program will be implemented by August 30, 1993.

Date of Full Compliance

WNP-2 will be in full compliance when disposition of the cooling tower sediment in the onsite landfill is verified to comply with all State and Federal regulatory requirements.

- C. Technical Specification 6.8.1 requires that written procedures shall be established, implemented, and maintained covering the activities referenced in Regulatory Guide 1.33, Appendix A.

Regulatory Guide 1.33, Appendix A, Section 1, "Administrative Procedures," references procedures as follows:

9. Procedures for Performing Maintenance

- e. General procedures for the control of maintenance, repair, replacement, and modification of work should be prepared before reactor operation is begun. These procedures should include information on areas such as the following:
 - (1) Method for obtaining permission and clearance for operation personnel to work and for logging such work...

PPM 1.3.9, "Temporary Modifications," defines a temporary modification as "any alteration to the Plant which will cause a piece of equipment, a component, or a system to be physically or functionally different from approved design documents." PPM 1.3.9 outlines the requirements for performing such temporary modifications, including applicable approvals, engineering evaluations, and documentation.

Contrary to the above, on May 28, 1992, and December 1, 1992, PPM 1.3.9 had not been implemented as required, in that check valves designed for permanent installation had been removed from the service air system, and the required approvals, engineering evaluations, and documentation had not been performed.

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

Validity of Violation

The Supply System acknowledges the validity of this violation. There were two root causes for this violation. The first root cause was failure to correctly follow procedures which led to inadequate personnel work practices. On multiple occasions Service Air (SA) System check valves were found removed without the appropriate administrative review and approval.

The check valves in question are upstream of quick disconnect couplings for air operated tools. The check valves are required to prevent inadvertent contamination of the SA System. A root cause analysis on previous instances of SA check valve removal determined that Plant personnel may have believed the check valves blocked air flow. Therefore, by removing the check valve they believed their air operated equipment would perform better. Subsequent tests of the check valve revealed only a one psig pressure drop across the valve. The minimum system operating pressure is 90 psig. The pressure drop is considered insignificant.

The second root cause was ineffective implementation of corrective actions to prevent recurrence of unauthorized SA check valve removal. The previous corrective actions included: 1) installation of equipment identification tags on all of the SA check valves in question; 2) training of all Plant personnel involved with operation of air driven equipment, and 3) a memo from the Plant Manager to all employees and contractor personnel indicating the results of the pressure drop tests and that removal of the SA check valves is not allowed without the proper administrative approval. These corrective actions did not prevent recurrence.



Mandatory procedure compliance continues to be emphasized to all Plant personnel. Willful disregard of procedures or management direction will not be tolerated.

Corrective Steps Taken/Results Achieved

1. A review indicated that similar unauthorized modifications on other systems has not been observed.
2. Signs have been posted throughout the Plant and General Employee Training (GET) has been modified to inform personnel on what a SA check valve looks like and its purpose, and instructing them not to remove them.

Corrective Action to be Taken

A memo will be written by the Plant Manager by May 5, 1993, to all appropriate supervisors directing them to provide sufficient oversight to ensure against unauthorized removal of the SA check valves in question.

Date of Full Compliance

WNP-2 was in full compliance on December 1, 1992, when the SA check valve was reinstalled.

D. Technical Specification 6.11.1 states:

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

Licensee Procedure PPM 1.11.11, "Entry Into, Conduct In, and Exit from Radiologically Controlled Areas," Section 4.5 states: "persons entering a radiologically controlled area shall adhere to all requirements specified by Health Physics (HP) personnel (i.e., RWP requirements, posted instructions, verbal instructions, etc.)."

PPM 11.2.6.2, "Direct Reading Pocket Dosimeters and Alarming Dosimeters," Section 6.3.9.a-c requires each person exiting the radiologically controlled area to record the time, pocket dosimeter reading, and net dose received on his or her radiation exposure card (REC). In addition, if exposure was received, Section 6.3.9.e requires that the REC and pocket dosimeter shall be turned in to HP for recording the exposure.

Contrary to the above:

1. On December 23, 1991, a WNP-2 engineer failed to adhere to posted HP instructions, which prohibited egress from the radiologically controlled area at an alternate access point.



2. On December 3, 1992, a WNP-2 equipment operator failed to frisk himself as required by posted radiological instructions prior to entering the men's washroom located on the 487' level of the Radwaste Building.
3. As of December 6, 1992, approximately 36 RECs were found with either (1) the time, pocket dosimeter reading, and net doses not recorded, or (2) exposure received, and the REC not turned in to HP for recording the exposure.

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

Validity of Violation

The Supply System acknowledges the validity of the violation. The root cause for this violation was failure to correctly follow procedures. The occurrences in the events discussed above were the result of hasty ingress or egress of a Radiologically Controlled Area (RCA). The haste led to poor judgement in the interpretation and implementation of Health Physics procedures, and/or failure to perform self-checking to ensure compliance with the procedures. Management expectations are that adequate time be allotted by all individuals to properly enter and exit RCAs in accordance with established procedures. Disregard for procedures and/or management expectations can and will lead to disciplinary action.

Corrective Steps Taken/Results Achieved

1. The QA engineer and equipment operator have been counselled by the responsible management with appropriate documentation included in the individuals' personnel files.
2. The QA engineer no longer has unescorted RCA access privileges.
3. The equipment operator has attended additional Personnel Radiation Protection Training.
4. The equipment operator received appropriate disciplinary action commensurate with the Supply System's policy for the severity of the infraction.
5. The equipment operator presented a discussion to fellow crew members of the seriousness of the incident.
6. Specific detailed training has been given to all Supply System employees with unescorted access into an RCA on the proper use of the RECs.
7. Graduated disciplinary action has been instituted and publicized for any person failing to follow REC procedures. This has resulted in a significant decrease in incorrect REC documentation.

Corrective Action to be Taken

1. The personnel performance expectation section of the General Information Handbook will be changed by June 30, 1993, to include a statement of radiological protection expectations for employees receiving Category 2 Radiation Protection training.
2. The lessons learned from these incidents will be incorporated into General Employee Training by June 1, 1993.

Date of Full Compliance

WNP-2 was in full compliance when the Radiation Protection performance deficiencies were resolved with the individuals.

- E. Technical Specification 6.8.1 requires that written procedures shall be established, implemented, and maintained covering the activities referenced in Regulatory Guide 1.33, Appendix A.

Regulatory Guide 1.33, Appendix A, Section 7, "Procedures for Control of Radioactivity," references procedures as follows:

b. Solid Waste System

(1) Spent Resins and Filter Sludge Handling

PPM 11.2.23.21, "Use of NUPAC Service Transport Cask Model 10/142," Prerequisite 4.2, requires that the waste burial classification for RW shipments be determined prior to using the shipping cask for radwaste shipments.

Contrary to the above, during September 1992, while processing spent resin in preparation for radwaste shipment 92-61-02, Liner #338 was not classified prior to using the shipping cask.

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

Validity of Violation

The Supply System acknowledges the validity of the violation. Plant procedure PPM 1.2.3, Use of Controlled Plant Procedures, did not provide a clear definition of the prerequisite requirements. This contributed to poor composition of the prerequisite section of the procedures in addition to inconsistent interpretation of the prerequisite requirements. Although unclear, the intent of Prerequisite 4.2 in PPM 11.2.23.21 was to classify the waste prior to shipment. In the instance described above, the resins were processed into the cask as allowed by PPM 11.2.23.21. Samples were taken and classification was completed after the resin was placed into the cask, but prior to shipment, as allowed by the prerequisite statement.

Revision 3 of PPM 11.2.23.21 was used to process the September 1992, shipment in question. Revision 17 of Plant procedure PPM 1.2.3, Use of Controlled Plant Procedures, was in effect at the time this shipment was processed. The term prerequisite was not formally defined by Revision 17 of PPM 1.2.3. The prerequisite section for Plant procedures at that time contained both prerequisites and other items. These other items are now known as precautions or limitations and are required to be satisfied during the performance of the procedure if certain conditions exist. On October 2, 1992, Revision 18 of PPM 1.2.3 was approved which defined prerequisites as "...items, conditions or other concerns which must be satisfied prior to procedure performance...."

Corrective Steps Taken/Results Achieved

1. On October 14, 1992, the Radwaste Shipping Coordinators received training on PPM 1.2.3, Revision 18. This documented training included the changes to PPM 1.2.3, procedural compliance expectations and, in particular, step "5.1.8 If the Prerequisites for a procedure can not be met, the procedure shall either be deviated prior to use or not used."
2. PPM 11.2.23.21 was not used again until after December 23, 1992. The procedure was deviated prior to use to move Prerequisite 4.2 to the Precautions and Limitations section of the procedure in addition to clarifying the wording.

Corrective Action to be Taken

None required.

Date of Full Compliance

WNP-2 is in full compliance.

