

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

P.O. Box 968 • 3000 George Washington Way • Richland, Washington 99352

March 29, 1990
G02-90-063

Docket No. 50-397

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

Gentlemen:


Subject: NUCLEAR PLANT NO. 2, OPERATING LICENSE NPF-21
RESPONSE TO GENERIC LETTER 88-14, "INSTRUMENT AIR
SUPPLY SYSTEM PROBLEMS AFFECTING SAFETY-RELATED
EQUIPMENT", CONCLUDING REPORT (TAC NO. 71741)

Reference: Letter, G02-89-170, GC Sorensen (SS) to NRC
same subject, dated September 15, 1989

As committed to in the reference, attached is the concluding report describing determinations resulting from the Supply System review of WNP-2 instrument air as requested by Generic Letter 88-14.

It should be pointed out that the ongoing instrument air quality testing continues to show that the instrument air is essentially contaminant free. With this submittal the Supply System considers the WNP-2 response to Generic Letter 88-14 to be complete.

Very truly yours,



G. C. Sorensen, Manager
Regulatory Programs

JDS/bk
Attachments

cc: JB Martin - NRC RV
NS Reynolds - BCP&R
RB Samworth - NRC
DL Williams - BPA/399
NRC Site Inspector - 901A

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CONCLUSION
INSTRUMENT AIR SYSTEMS REVIEW
RESPONSE TO GL 88-14

Maintenance, Surveillance and Testing

A complete review of the SMS (Scheduled Maintenance System) on components in or affecting the Instrument Air Systems has been completed. The majority of the essential system components affected by this review were already included in the SMS program at frequencies deemed to be adequate. Additional entries to the SMS program have been made based upon this review to further increase the reliability of the Instrument Air System.

Evaluation of Air Testing Results

The air quality testing performed to date reveals steadily improving results. This is attributed to improved maintenance and operating conditions ensuring a continuous supply of clean dry air. The addition of a moisture detector, installed approximately a year ago, immediately downstream of the CAS (Control and Service Air) drying towers with an annunciator in the main control room allows the performance of the drying towers to be trended and alerts the Control Room Operators if a problem develops. Additionally, since the periodic samples are taken at design flow rates through a high pressure diffuser, the blowdown effect appears to have removed the microscopic particulates that had accumulated in the system over the years prior to testing.

A plasma spectrographic analysis on the particulates showed traces of potassium, sodium, aluminum, boron and sulfur. Since iron was reported as a relatively low amount, it was concluded that the particulates originated from dust and dirt during construction and not from corrosion of the steel piping. The worst case concentration of particles greater than 40 micron measured during the quarterly air quality tests was 3.7 parts per billion by weight. Based upon this concentration, a filter would only accumulate 0.07 ounces of particles in 40 years of operation assuming it passed 1000 cubic feet per day, well within the capacity of the installed filters/regulators.

Conclusion

Based upon evaluation of the results on the instrument air quality tests and additions to the SMS program that further increased the reliability of the instrument air system, no further status reports concerning the requirements of Generic Letter 88-14 will be submitted unless specifically requested. Instrument air quality tests will continue to be conducted and evaluated to ensure that the instrument air system will perform as designed.

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