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SUBJECT: Application for amend to License NPF-21 revising Tech Specs 3/4.6.5.3 re SBGT & 3/4.7.2 concerning CREFS,in ref to NRC Info Notice 87-032, "Deficiencies in Testing of Nuclear-Grade Activated Charcoal," dtd 870710.

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July 13, 1992
G02-92-166

Docket No. 50-397

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

Subject: WNP-2, OPERATING LICENSE NPF-21
REQUEST FOR AMENDMENT TO TECHNICAL SPECIFICATIONS 3/4.6.5.3, STANDBY GAS TREATMENT, AND 3/4.7.2 CONTROL ROOM EMERGENCY FILTRATION SYSTEMS

Reference: NRC Information Notice 87-32, "Deficiencies in the Testing of Nuclear-Grade Activated Charcoal," dated July 10, 1987

In accordance with the Code of Federal Regulations, Title 10, Parts 50.90 and 2.101, the Supply System hereby submits a request for amendment to the WNP-2 Technical Specifications. This proposal requests that the subject Technical Specifications be changed to incorporate improvements in charcoal testing standards. Additionally, minor clarifications and changes are also requested to: 1) upgrade the two Technical Specifications so that they accurately reflect the design and capability of the systems, 2) remove potential ambiguities in the required surveillance testing, and 3) editorially correct the Table of Contents to reflect the contents and page numbering of the WNP-2 Technical Specifications. In support of this request, proposed changes to the Bases section of the Technical Specifications are also included.

The function of the Standby Gas Treatment (SGT) System is to maintain secondary containment at a negative pressure with respect to the environment following a design basis accident and process gaseous releases to limit the thyroid dose and the whole body dose at the site boundary. The Control Room Emergency Filtration (CREF) System functions to process the Control Room makeup air to provide a filtered environment from which the plant can be operated following an uncontrolled release of radioactivity. Both systems use charcoal to adsorb iodine from the processed stream and thereby limit the dose to the thyroid. Testing programs are required to ensure that the adsorption capability of the charcoal beds is not degraded below design requirements.

Presently both Specifications require verifying charcoal efficiency by testing once per 18 months, every 720 hours of operation, and whenever activities have been performed in any ventilation zone communicating with the train that might degrade charcoal bed efficiency. Required testing is referenced to Regulatory Guide 1.52, revision 2 which references ANSI N510 - 1975. As noted in the reference, deficiencies have been noted in the testing of nuclear-grade activated charcoal. Further, standards that provide more consistent and accurate results over that required by the WNP-2 Technical Specifications have recently been accepted by the industry and Staff. As a result, the Supply System is proposing that the present method of testing be replaced by ASTM D 3803-1989.

The referenced Information Notice noted implementation problems with ASTM D 3803-1979 and followup activity by the Staff and the industry promoted changes in the 1979 standard. As a result, the 1989 version has been improved over the 1979 version and is proposed for use at WNP-2. The use of this standard with nominal relative humidity and temperature values will provide more accurate and consistent results over the testing method presently required by the WNP-2 Technical Specifications. The nominal temperature and relative humidity values bound the expected conditions at the filters under accident conditions. Use of the new standard will therefore provide greater assurance that the installed charcoal will perform its intended design safety function.

The other changes to these Technical Specifications are proposed to remove ambiguities in both Specifications and reduce unnecessary operating time on the SGT System units.

The second proposed change reduces the SGT 31-day operability test in Surveillance Requirement 4.6.5.3.a from 10 hours to 1 hour. The purpose of a 10 hour test was to ensure that the charcoal was periodically dried out. A periodic drying would remove moisture that might naturally occur due to condensation. Because the WNP-2 SGT units are continually heated there is no opportunity for moisture to build up in the charcoal beds. The SGT units have thermostatically controlled strip heaters that elevate the charcoal inlet plenum temperature to 90°F. This design feature combined with the naturally low humidity of the area assures that the relative humidity of the charcoal remains below 70%. Hence, the need for a frequent drying out as required by the present Technical Specifications is precluded. Further, 10 hours provides no additional assurance over 1 hour that the units are operable. An hour provides adequate time for the unit to reach design operating conditions. Elimination of the unnecessarily long run time preserves the equipment. "Main" heaters are specified in the proposed changes to differentiate from the thermostatically controlled strip heaters.

The third change ensures that the 31-day operability test is done with the heaters "operating" as opposed to "operable." This change removes ambiguity, verifies system operability correctly and has no technical impact on the specifications.

The fourth change specifies which flow test of ANSI N510-1980 is to be used to verify flowrate. Both Technical Specifications specify using ANSI N510-1980 to verify flowrate. However there are three measurements of flowrate in the standard, two of which (paragraphs 8.3.1.6 and 8.3.1.7) are concerned with verifying flowrate under degraded filter conditions. Because the filter elements have differential pressure alarms to alert the operators of degraded filter conditions and Technical Specification requirements to maintain the pressure drop across HEPA and charcoal banks below specified limits, degraded conditions are not experienced. Hence, the filters are maintained above the conditions anticipated in the standard and there is no need to verify flowrate per these paragraphs (degraded flow conditions). Elimination of these degraded filter tests focuses on exact testing requirements and eliminates superfluous activities that have no contribution toward verifying system operability.

The fifth change clarifies that charcoal removed for disposal need not be tested. The present Technical Specifications do not differentiate between discarded or "in use" charcoal. The Specifications could be interpreted to include testing both. Under the conditions of proving operability specified in the Technical Specifications, charcoal is discarded before it reaches a state of degradation that would impact the operability of the units. Significant margin exists between the point where charcoal is to be discarded and the point where it has degraded to an extent that would significantly degrade system performance. Hence, testing discarded charcoal provides no additional knowledge as to the units state of operability. No benefit is derived from testing discarded charcoal.

The sixth change clarifies the heater ratings of the SGT and CREF systems with respect to the manufacturer's ratings. Certified Vendor Information shows that the SGT units are rated at 460 volts and the CREF units are rated at 480 volts. Again this change has no technical impact but only removes ambiguity from the Specifications.

The last change recognizes the common practice in HVAC design that uses the abbreviation "cfm" whenever "acfm" (actual cfm) is meant. The abbreviation "acfm" is being specified to avoid any possibility that an "scfm" measurement might be required. This specificity is necessary as the design of the CREF units does not provide a method of controlling flow through the CREF units and therefore testing to an exact flow in "scfm" cannot be done. Hence, "acfm" is the appropriate unit. Once more, this change has no technical impact but only removes ambiguity from the Specifications.

The changes requested to the Table of Contents have been added to this request to administratively expedite corrections to the Table of Contents. These changes are strictly editorial and reflect the contents and page numbering (including the impact of the changes on SGT and CREF sections) of the WNP-2 Technical Specifications. No technical impact is represented by these changes. With the approval of the changes to the CREF and SGT specifications these Table of Contents changes will reflect changes to the WNP-2 Technical Specifications that have had appropriate no significant hazards evaluations and environmental assessments categorical exclusion statements submitted. As such, further discussion of these changes with respect to no significant hazards and environmental assessment evaluations is not necessary.

In summary the following changes to the CREF and SGT specifications are provided for clarification (quotation marks denote the proposed changes):

Surveillance 4.6.5.3.a	"main" heaters "operating"
Surveillance 4.6.5.3.b.3	verifying flow rate .... in accordance with ANSI N510-1980 "section 8.3.1(1) through 8.3.1(5)"
Surveillances 4.6.5.3.b.2 &.3	adding a footnote stating that "Carbon removed for disposal need not be sampled or tested."
Surveillance 4.6.5.3.d.4	heaters dissipate "the equivalent of" 20.7 ± 2.1 kW "at 460 volts".....
Surveillance 4.7.2.b	heaters "operating."
Surveillance 4.7.2.c.1	"using" replaces "and uses"
Surveillances 4.7.2.c.1, 3, 4.7.2.e.1, 2, 4.7.2.f and g	"acfm" replaces cfm
Surveillance 4.7.2.c.3	verifying flow rate .... in accordance with ANSI N510-1980 "section 8.3.1(1) through 8.3.1(5)"
Surveillances 4.7.2.c.2 & .3	adding a footnote stating that "Carbon removed for disposal need not be sampled or tested."
Surveillance 4.7.2.e.3	heaters dissipate "the equivalent of" 5.0 ± 0.5 kW "at 480 volts".....

These changes provide clarification so that ambiguity is removed from the Technical Specifications and precise system operability can be verified. As such, these changes represent enhancements to the Technical Specifications.

The Supply System has evaluated the remaining two proposed changes (the new standard and the reduction in SGT surveillance run time from 10 hours to 1 hour) per 10CFR 50.92 and determined that they do not represent a significant hazard. The change to a more consistent and accurate method of charcoal testing provides more assurance of system operability for the SGT and CREF systems. Hence, plant safety is enhanced by this change. The reduction in SGT run time to prove operability removes unnecessary run time that is redundant to the SGT design. As stated above, the additional changes remove ambiguities and more accurately reflect system capability and design. In summary, incorporating these changes does not represent a significant hazard because it does not:

1) Involve a significant increase in the probability or consequences of an accident previously evaluated because the proposed method of testing will provide more consistent and accurate measurement of charcoal adsorption capability over that presently required by the WNP-2 Technical Specifications. The SGT and CREF systems are mitigating systems that cannot, of themselves, initiate an accident. Because the proposed test standard will provide greater assurance of charcoal operability this change enhances the mitigation of an accident. As a result, the proposed change to the new standard has no impact on the probability or consequences of a previously evaluated accident.

   The change in SGT surveillance operability run time to 1 hour from 10 hours does not involve a significant increase in the probability or consequences of an accident previously evaluated because the intent of the surveillance (assurance that the charcoal beds are not degraded due to moisture buildup) is satisfied by system design. The thermostatically controlled heaters assure that excessive moisture adsorption will not occur. Hence, a "drying out" run of 10 hours is redundant to the system design. The consequences of a previously evaluated accident are therefore not increased because charcoal efficiency is maintained by the system design.

   Because the remaining changes have no technical impact on the SGT or CREF systems but remove ambiguity from the surveillance testing and system design capabilities they also do not represent a significant increase in the probability or consequences of a previously evaluated accident. As stated above, the systems are mitigative and do not contribute to the initiation of an accident. Further, the mitigative capabilities are not changed as a result of the clarifications. Hence these changes do not represent a significant increase in the probability or consequences of a previously evaluated accident.

2) Create the possibility of a new or different kind of accident from any accident previously evaluated because operation and testing of the systems remain the same. No new modes of operation result due to this change. Therefore, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3) Involve a significant reduction in a margin of safety because the margin of safety presently provided by the current Technical Specifications is enhanced by a more consistent and accurate testing method. Therefore, this change does not involve a reduction in a margin of safety.

   Reducing the SGT operability run time merely removes a requirement imposed on the units that is already accomplished by SGT design. Hence, reduction from 10 hours to 1 hour has no effect on the function of the system, by design the carbon will remain free of excessive moisture degradation. Therefore, this change also does not involve a reduction in a margin of safety.

The remaining changes remove ambiguity and clarify the design requirements of the systems. As such, these changes ensure that the system will continually be evaluated to the same requirements. Therefore the possibility of misapplying the Technical Specifications is reduced. Accordingly, these additional changes do not represent an impact to a margin of safety.

As discussed above, the Supply System considers that these changes do not involve a significant hazards consideration. Nor, considering the enhancement to charcoal testing consistency and accuracy, do these changes involve a potential for significant change in the types or significant increase in the amount of any effluents that may be released offsite. Nor do they involve a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed changes meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(C)(9) and therefore, per 10 CFR 51.22(b), an environmental assessment of these changes is not required.

This Technical Specification change request has been reviewed and approved by the WNP-2 Plant Operations Committee (POC) and the Supply System Corporate Nuclear Safety Review Board (CNSRB). In accordance with 10 CFR 50.91, the State of Washington has been provided a copy of this letter.

Sincerely,

G. C. Sorensen, Manager
Regulatory Programs (Mail Drop 280)

PLP/bk
Attachments

cc: RG Waldo - EFSEC
JB Martin - NRC RV
NS Reynolds - Winston & Strawn
NRC Site Inspector - 901A
R Assa - NRC
DL Williams - BPA/399

STATE OF WASHINGTON)
)
COUNTY OF BENTON)

Subject: REQUEST FOR AMENDMENT TO TECH SPECS 3/4.6.5.3 AND 3/4.7.2

I, G. C. SORENSEN, being duly sworn, subscribe to and say that I am the Manager, Regulatory Programs, for the WASHINGTON PUBLIC POWER SUPPLY SYSTEM, the applicant herein; that I have full authority to execute this oath; that I have reviewed the foregoing; and that to the best of my knowledge, information, and belief the statements made in it are true.

DATE: 10 July, 1992

G. C. Sorensen, Manager
Regulatory Programs

On this date personally appeared before me G. C. SORENSEN, to me known to be the individual who executed the foregoing instrument, and acknowledged that he signed the same as his free act and deed for the uses and purposes herein mentioned.

GIVEN under my hand and seal this 10 day of July 1992.

Sandra L. Nuxall
Notary Public in and for the
STATE OF WASHINGTON

SANDRA L. NUXALL NOTARY PUBLIC STATE OF WASHINGTON

My Commission Expires February 29, 1996


SANDRA L. NUXALL
NOTARY PUBLIC
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