



Nebraska Public Power District

GENERAL OFFICE
P.O. BOX 499, COLUMBUS, NEBRASKA 68601-0499
TELEPHONE (402) 564-8561

July 19, 1984
NLS3400199

Office of Nuclear Reactor Regulation
Operating Reactors Branch No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Mr. Domenic B. Vassallo, Chief

- Reference: 1) Letter from J. M. Pilant to D. B. Vassallo dated March 7, 1984, "Proposed Radiological Effluent Technical Specifications"
- 2) Letter from J. M. Pilant to D. B. Vassallo dated April 10, 1984, "Revised Pages to Proposed Radiological Effluent Technical Specifications"

Dear Mr. Vassallo:

Subject: Revision to Proposed Change No. 7 to Technical Specifications
Radiological Effluent Technical Specifications (RETS)
Cooper Nuclear Station
NRC Docket No. 50-298, DPR-46

The District submitted an updated revision of RETS in Reference 1 with subsequent NRC Staff questions resolved in the submittal of Reference 2. Enclosed are updated Technical Specification pages which clarify previous submittals and incorporate all amendments to the Cooper Nuclear Station Facility Operating License up through Amendment 86 issued June 1, 1984.

Should you have any questions or require additional information, please contact me. In addition to one signed original, ten copies are submitted for your use.

Sincerely,

Jay M. Pilant
Technical Staff Manager
Nuclear Power Group

JMP/grs:emz19/12
Enclosures

8407250252 840719
PDR ADOCK 05000298
PDR

17009
1/1

4.2 BASES (cont'd.)

The best test procedure of all those examined is to perfectly stagger the tests. That is, if the test interval is four months, test one or the other channel every two months. This is shown in Curve No. 5. The difference between Cases 4 and 5 is negligible. There may be other arguments, however, that more strongly support the perfectly staggered tests, including reductions in human error.

The conclusions to be drawn are these:

1. A 1 out of n system may be treated the same as a single channel in terms of choosing a test interval and
2. more than one channel should not be bypassed for testing at any one time.

The bases for the radiation monitors are contained in the section denoted Environmental/Radiological Effluents.

LIMITING CONDITION FOR OPERATION

3.21.C (Cont'd)

7. Containment

- a. Whenever the primary containment is vented/purged, it shall be vented/purged through the Standby Gas Treatment System. With this specification not satisfied, suspend all venting/purging of the containment. This specification does not apply to Normal Ventilation, or during start-up while performing primary containment inerting in accordance with Specification 3.7.A.5.b following a shutdown of greater than 24 hours.
- b. The provisions of Definition J are not applicable. The reporting provisions of Specification 6.5.2 are not applicable.

D. Effluent Dose Liquid/Gaseous

Applicability: At all times.

Specification:

1. The dose or dose commitment to a (actual) member of the public due to radiation and radioactive releases from Cooper Station shall not exceed 75 mrem to his thyroid or 25 mrem to his total body or any other body organ during a calendar year. In the event the calculated dose from radioactive material in liquid or gaseous effluents exceeds two times the limit of Specification 3.21.B.2.a, 3.21.C.2.a, or 3.21.C.3.a, prepare and submit a Special Report, in lieu of any other report, to the Commission pursuant to Specification 6.5.3 within 31 days which 1) defines actions to be taken to reduce releases and prevent recurrence and 2) results of an exposure analysis including effluent pathways and direct radiation to determine whether the dose or dose commitment to a member of the public due to radiation and radioactive releases from Cooper Station during the calendar year through the period covered by the calculation was less than limits stated in this Specification. If the estimated dose exceeds the limits stated herein, and if the condition resulting in doses exceeding these limits has not already been corrected, submission of the Special Report shall be deemed a timely request for a variance in accord with provisions of 40 CFR Part 190, provided

SURVEILLANCE REQUIREMENTS

4.21.C.6 (Cont'd)

- 1) At least once per 31 days during normal operation.
- 2) Within 4 hours following an increase, as indicated by the Condenser Air Ejector Noble Gas Activity Monitor, of greater than 50%, after factoring out increases due to changes in THERMAL POWER level, in the nominal steady state fission gas release from the primary coolant.

- b. The radioactivity rate of noble gases at or near the outlet of the main condenser air ejector shall be monitored in accordance with Table 3.21.A.2.

D. Effluent Dose Liquid/Gaseous

1. Dose Calculations - The cumulative dose to a Member of the Public contributed by radioactive material in gaseous and liquid effluents shall be calculated at least once per year in accordance with the ODAM in order to verify compliance with Specification 3.21.D.

LIMITING CONDITION FOR OPERATION

3.21.D (Cont'd)

information specified in 40 CFR Part 190.11(b) is included. In that event, a variance is granted until NRC Staff action on the item is complete.

2. The provisions of Definition J are not applicable.

E. Solid Radioactive Waste

Applicability: During solid radwaste processing.

Specification:

1. The appropriate equipment of the solid radwaste system shall be operated to process radioactive waste containing liquid and liquid destined for disposal subject to 10 CFR Part 61 to a form that meets applicable requirements of 10 CFR Part 61.56 before the waste is shipped from the site.
2. Suspend delivery to a carrier for transport of any container of waste subject to Specification 3.21.E.1 which does not comply with 10 CFR Part 61.56.

SURVEILLANCE REQUIREMENTS

4.21 (Cont'd)

E. Solid Radioactive Waste

1. Operating parameters and limits for the solidification of radioactive waste were established during preparational testing of the system. Radioactive waste solidification shall be performed in accordance with established parameters and limits. In addition, every 10th batch of dewatered waste will be sampled prior to solidification and analyzed for pH.
2. Each drum of solidified or dewatered radioactive waste will be inspected, prior to capping, to insure that there is no free standing liquid on top of the solid waste.
3. The Semiannual Radioactive Material Release Report in Specification 6.5.1.F shall include the following information for radioactive solid waste shipped off-site during the report period:

3.21 & 4.21 BASES (Cont'd)

3.21.C & 4.21.C GASEOUS EFFLUENTS (Cont'd)

3.21.C.4 & 4.21.C.4 Gaseous Radwaste System

The OPERABILITY of the gaseous radwaste treatment system and the ventilation exhaust treatment systems ensures that the systems will be available for use whenever gaseous effluents require treatment prior to release to the environment. The requirement that the appropriate portions of these systems be used when specified provides reasonable assurance that the releases of radioactive materials in gaseous effluents will be kept "as low as is reasonably achievable." This specification implements the requirements of 10 CFR Part 50.36a, General Design Criterion 60 of Appendix A to 10 CFR Part 50, and design objective Section IID of Appendix I to 10 CFR Part 50. The specified limits governing the use of appropriate portions of the systems are specified as a suitable fraction of the dose design objectives set forth in Sections II.B and II.C of Appendix I, 10 CFR Part 50, for gaseous effluents.

3.21.C.5 & 4.21.C.5 Hydrogen Concentration

This specification is provided to ensure that the concentration of potentially explosive gas mixtures contained in the waste gas treatment system is maintained below the flammability limits of hydrogen and oxygen. While the Augmented Treatment System is in service the hydrogen and oxygen concentrations are prevented from reaching the flammability limits. Maintaining the concentration of hydrogen below its flammability limit provides assurance that the releases of radioactive materials will be controlled in conformance with the requirements of General Design Criterion 60 of Appendix A to 10 CFR Part 50.

3.21.C.6 & 4.21.C.6 Air Ejector

Restricting the gross radioactivity rate of noble gases from the main condenser provides reasonable assurance that the total body exposure to an individual at the exclusion area boundary will not exceed a small fraction of the limits of 10 CFR Part 100 in the event this effluent is inadvertently discharged directly to the environment without treatment. This specification implements the requirements of General Design Criteria 60 and 64 of Appendix A to 10 CFR Part 50.

3.21.C.7 & 4.21.C.7 Containment

This specification provides reasonable assurance that releases of Iodine from drywell purging during power operations and 24 hours after shutdown will not be excessively large, particularly due to Iodine spiking. The exemptions to using the SBGT system are intended to minimize the time the SBGT system is on line while coolant temperature is greater than 200°F, hence to decrease the probability of damage to the SBGT filters that could occur from overpressurization due to a LOCA and the main purge and vent valves open.

3.21.D & 4.21.D EFFLUENT DOSE LIQUID/GASEOUS

This specification is provided to meet the reporting requirements of 40 CFR Part 190.

- c. Summarized and tabulated results in the format of Table 6.5-1 of analyses of samples required by the radiological environmental monitoring program, and taken during the report period. In the event that some results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted as soon as possible in a supplementary report.
- d. A summary description of the radiological environmental monitoring program including any changes; a map of all sampling locations keyed to a table giving distances and directions from the reactor; and the results of participation in the Inter-laboratory Comparison Program, required by Specification 3.21.G.

F. Semiannual Radioactive Material Release Report

- 1. A report of radioactive materials released from the Station during the preceding six months shall be submitted to the NRC within 60 days after January 1 and July 1 of each year*.
- 2. A Semiannual Radioactive Material Release Report shall include the following:
 - a. A summary by calendar quarter of the quantities of radioactive liquid and gaseous effluents released from the Station. The data should be reported in the format recommended in Regulatory Guide 1.21, Appendix B, Tables 1 and 2.
 - b. A summary of radioactive solid waste shipped from the Station, including information named in Specification 4.21.E.3.
 - c. A summary of meteorological data collected during the year shall be included in the Semiannual Report submitted within 60 days after January 1 of each year.
 - d. A list and brief description of each unplanned release of gaseous or liquid radioactive effluent that causes a limit in Specification 3.21.B.1.a, 3.21.B.2.a, 3.21.C.1.a, 3.21.C.2.a, or 3.21.C.3.a to be exceeded.
 - e. Calculated offsite dose to humans resulting from the release of effluents and their subsequent dispersion in the atmosphere reported in accordance with Regulatory Guide 1.21.

*It should be noted that this data has not normally been available to the District within 60 days and a verbal extension has typically been required from the NRC CNS Project Manager.

TABLE OF CONTENTS (Cont'd)

	<u>SURVEILLANCE REQUIREMENTS</u>	<u>Page No.</u>
<u>LIMITING CONDITIONS FOR OPERATION</u>		
6.2 Review and Audit		220
6.2.1.A Station Operations Review Committee (SORC)		220
A.1 Membership		220
A.2 Meeting Frequency		220
A.3 Quorum		220
A.4 Responsibilities		220
A.5 Authority		221
A.6 Records		221
A.7 Procedures		222
6.2.1.B NPPD Safety Review and Audit Board (SRAB)		222
B.1 Membership		223
B.2 Meeting Frequency		223
B.3 Quorum		223
B.4 Review		223
B.5 Authority		224
B.6 Records		225
B.7 Audits		225
6.3 Procedures and Programs		226
6.3.1 Introduction		226
6.3.2 Procedures		226
6.3.3 Maintenance and Test Procedures		226
6.3.4 Radiation Control Procedures		226
.A High Radiation Areas		226a
6.3.5 Temporary Changes		226a
6.3.6 Exercise of Procedures		226a
6.3.7 Programs		226a
.A Systems Integrity Monitoring Program		226a
.B Iodine Monitoring Program		226a
.C Environmental Qualification Program		226a
6.4 Record Retention		228
6.4.1 5 year retention		228
6.4.2 Life retention		228
6.4.3 2 year retention		229
6.5 Station Reporting Requirements		230
6.5.1 Routine Reports		230
.A Introduction		230
.B Startup Report		230
.C Annual Reports		230
.D Monthly Operating Report		231
.E Annual Radiological Environmental Report		231
.F Semiannual Radioactive Material Release Report		231a

TABLE OF CONTENTS (Cont'd)

<u>LIMITING CONDITIONS FOR OPERATION</u>		<u>SURVEILLANCE REQUIREMENTS</u>	<u>Page No.</u>
6.5.2	Reportable Events		231c
6.5.3	Unique Reporting Requirements		235
6.6	Environmental Qualification		235b
6.7	Systems Integrity Monitoring Program		235b
6.8	Iodine Monitoring Program		235b
6.9	Process Control Program		235b
6.10	Offsite Dose Assessment Manual (ODAM)		235c
6.11	Major Changes to Radioactive Waste Treatment Systems		235c

6.3 PROCEDURES AND PROGRAMS

6.3.1 Introduction

Station personnel shall be provided detailed written procedures to be used for operation and maintenance of system components and systems that could have an effect on nuclear safety.

6.3.2 Procedures

Written procedures and instructions including applicable check off lists shall be provided and adhered to for the following:

- A. Normal startup, operation, shutdown and fuel handling operations of the station including all systems and components involving nuclear safety.
- B. Actions to be taken to correct specific and foreseen potential or actual malfunctions of safety related systems or components including responses to alarms, primary system leaks and abnormal reactivity changes.
- C. Emergency conditions involving possible or actual releases of radioactive materials.
- D. Implementing procedures of the Security Plan and the Emergency Plan.
- E. Implementing procedures for the fire protection program.
- F. Administrative procedures for shift overtime.
- G. Implementing procedures for the Offsite Dose Assessment Manual.

6.3.3 Maintenance and Test Procedures

The following maintenance and test procedures will be provided to satisfy routine inspection, preventive maintenance programs, and operating license requirements.

- A. Routine testing of Engineered Safeguards and equipment as required by the facility License and the Technical Specifications.
- B. Routine testing of standby and redundant equipment.
- C. Preventive or corrective maintenance of plant equipment and systems that could have an effect on nuclear safety.
- D. Calibration and preventive maintenance of instrumentation that could affect the nuclear safety of the plant.
- E. Special testing of equipment for proposed changes to operational procedures or proposed system design changes.

6.3.4 Radiation Control Procedures

Radiation control procedures shall be maintained and made available to all station personnel. These procedures shall show permissible radiation exposure, and shall be consistent with the requirements of 10 CFR 20.

Reportable Events

A Reportable Event shall be any of those conditions specified in Section 50.73 to 10CFR Part 50. The NRC shall be notified and a report submitted pursuant to the requirements of Section 50.73. Each Reportable Event shall be reviewed by SORC and the results of this review shall be submitted to SRAB and the Assistant General Manager - Nuclear.