

ATTACHMENT A-1

Beaver Valley Power Station, Unit No. 1
Proposed Technical Specification Change No. 231

The following is a list of the affected pages:

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	6-15
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3/4.11 RADIOACTIVE EFFLUENTSBASES

3/4.11.1 LIQUID EFFLUENTS3/4.11.1.4 LIQUID HOLDUP TANKS

Restricting the quantity of radioactive material contained in the specified tanks provides assurance that in the event of an uncontrolled release of the tanks' contents, the resulting concentrations would be less than the limits of 10 CFR Part 20, Appendix B, Table (2), Column 2, at the nearest potable water supply and the nearest surface water supply in an unrestricted area.

II

3/4.11.2 GASEOUS EFFLUENTS3/4.11.2.5 GAS STORAGE TANKS

Restricting the quantity of radioactivity contained in each gas storage tank provides assurance that in the event of an uncontrolled release of the tanks' contents, the resulting total body exposure to an individual located at the nearest exclusion area boundary for two hours immediately following the onset of the release will not exceed 0.5 rem. The specified limit restricting the quantity of radioactivity contained in each gas storage tank was specified to ensure that the total body exposure resulting from the postulated release remained a suitable fraction of the reference value set forth in 10 CFR 100.11 (a)(1).

3/4.11.2.6 EXPLOSIVE GAS MIXTURE

This specification is provided to ensure that the concentration of potentially explosive gas mixtures contained in the waste gas holdup system is maintained below the flammability limits of hydrogen and oxygen. Isolation of the affected tank for purposes of purging and/or discharge permits the flammable gas concentrations of the tank to be reduced below the lower explosive limit in a hydrogen rich system. Maintaining the concentration of hydrogen and oxygen below their flammability limits 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.

(Proposed wording)

6.8.6 The following programs shall be established, implemented, and maintained:

a. Radioactive Effluent Controls Program

A program shall be provided conforming with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to MEMBERS OF THE PUBLIC from radioactive effluents as low as reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- 1) Limitations on the operability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM,
- 2) Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 CFR Part 20, Appendix B, Table 2, Column 2, 10 times
- 3) Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.106 or 10 CFR 20.1302, as appropriate, and with the methodology and parameters in the ODCM,
- 4) Limitations on the annual and quarterly doses or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each unit to UNRESTRICTED AREAS conforming to Appendix I to 10 CFR Part 50,
- 5) Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days,
- 6) Limitations on the operability and use of the liquid and gaseous effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a 31-day period would exceed 2 percent of the guidelines for the annual dose or dose commitment conforming to Appendix I to 10 CFR Part 50,

- Replace with Insert 1
- 7) Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the SITE BOUNDARY conforming to the doses associated with 10 CFR Part 20, Appendix B, Table 2, Column 1,
 - 8) Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50,
 - 9) Limitations on the annual and quarterly doses to a MEMBER OF THE PUBLIC from Iodine-131, Iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50,
 - 10) Limitations on the annual dose or dose commitment to any MEMBER OF THE PUBLIC due to releases of radioactivity and to radiation from uranium fuel cycle sources conforming to 40 CFR Part 190.

b. Radiological Environmental Monitoring Program

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provide (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluent monitoring program and modeling of environmental exposure pathways. The program shall (1) be contained in the ODCM, (2) conform to the guidance of Appendix I to 10 CFR Part 50, and (3) include the following:

- 1) Monitoring, sampling, analysis, and reporting or radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM,
- 2) A Land Use Census to ensure that changes in the use of areas at and beyond the SITE BOUNDARY are identified and that modifications to the monitoring program are made if required by the results of this census, and

INSERT 1

shall be limited to the following:

- a. For noble gases: Less than or equal to 500 mrem/year to the total body and less than or equal to 3000 mrem/year to the skin and,
- b. For Iodine-131, for Iodine-133, for tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: Less than or equal to 1500 mrem/year to any organ,

6.13 PROCESS CONTROL PROGRAM (PCP)

Changes to the PCP:

- a. Shall be documented and records of reviews performed shall be retained as required by Specification 6.10.2.n. This documentation shall contain:
 - 1) Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and
 - 2) A determination that the change will maintain the overall conformance of the solidified waste product to existing requirements of Federal, State, or other applicable regulations.
- b. Shall become effective after review and acceptance by the OSC and the approval of the General Manager Nuclear Operations, predesignated alternate or a predesignated Manager to whom the General Manager Nuclear Operations has assigned in writing the responsibility for review and approval of specific subjects.

6.14 OFFSITE DOSE CALCULATION MANUAL (ODCM)

Changes to the ODCM:

- a. Shall be documented and records of reviews performed shall be retained as required by Specification 6.10.2.n. This documentation shall contain:
 - 1) Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and *as appropriate* *10 CFR Part 20.106 or*
 - 2) A determination that the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 50 and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.
- b. Shall become effective after review and acceptance by the OSC and the approval of the General Manager Nuclear Operations, predesignated alternate or a predesignated Manager to whom the General Manager Nuclear Operations has assigned in writing the responsibility for review and approval of specific subjects.

(Proposed Wording)

ATTACHMENT A-2

Beaver Valley Power Station, Unit No. 2
Proposed Technical Specification Change No. 101

The following is a list of the affected pages:

Affected Pages:	B 3/4 11-1
	6-14
	6-15
	6-25

3/4.11 RADIOACTIVE EFFLUENTSBASES3/4.11.1 LIQUID EFFLUENTS3/4.11.1.4 LIQUID HOLDUP TANKS

Restricting the quantity of radioactive material contained in the specified tanks provides assurance that in the event of an uncontrolled release of the tanks' contents, the resulting concentrations would be less than the limits of 10 CFR Part 20, Appendix B, Table ②, Column 2, at the nearest potable water supply and the nearest surface water supply in an unrestricted area.

3/4.11.2 GASEOUS EFFLUENTS3/4.11.2.5 GASEOUS WASTE STORAGE TANKS

Restricting the quantity of radioactivity contained in any connected group of gaseous waste storage tanks provides assurance that in the event of an uncontrolled release of the tanks' contents, the resulting total body exposure to an individual located at the nearest exclusion area boundary for two hours immediately following the onset of the release will not exceed 0.5 rem. The specified limit restricting the quantity of radioactivity contained in any connected group of gaseous waste storage tanks was specified to ensure that the total body exposure resulting from the postulated release remained a suitable fraction of the reference value set forth in 10 CFR 100.11(a)(1). The curie content limit is applied individually to each gaseous waste storage tank and collectively to the number of unisolated gaseous waste storage tanks.

3/4.11.2.6 EXPLOSIVE GAS MIXTURE

This specification is provided to ensure that the concentration of potentially explosive gas mixtures contained in the waste gas holdup system is maintained below the flammability limits of hydrogen and oxygen. Isolation of the affected tank for purposes of purging and/or discharge permits the flammable gas concentrations of the tank to be reduced below the lower explosive limit in a hydrogen rich system. Maintaining the concentration of hydrogen and oxygen below their flammability limits 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.

(Proposed wording)

PROCEDURES (Continued)

6.8.5 A program for monitoring of secondary water chemistry to inhibit steam generator tube degradation shall be implemented. This program shall be described in the station chemistry manual and shall include:

- a. Identification of a sampling schedule for the critical parameters and control points for these parameters;
- b. Identification of the procedures used to measure the values of the critical parameters;
- c. Identification for process sampling points;
- d. Procedures for the recording and management of data;
- e. Procedures defining corrective actions for off control point chemistry conditions; and
- f. A procedure identifying:
 - 1) the authority responsible for the interpretation of the data, and
 - 2) the sequence and timing of administrative events required to initiate corrective action.

6.8.6 The following programs shall be established, implemented, and maintained:

a. Radioactive Effluent Control Program

A program shall be provided conforming with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to MEMBERS OF THE PUBLIC from radioactive effluents as low as reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- 1) Limitations on the operability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM,
- 2) Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 CFR Part 20, Appendix B, Table 2, Column 2,

↑
10 times

(Proposed Wording)

PROCEDURES (Continued)

- 3) Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.106 or 10 CFR 20.1302, as appropriate, and with the methodology and parameters in the ODCM,
- 4) Limitations on the annual and quarterly doses or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each unit to UNRESTRICTED AREAS conforming to Appendix I to 10 CFR Part 50,
- 5) Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days,
- 6) Limitations on the operability and use of the liquid and gaseous effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a 31-day period would exceed 2 percent of the guidelines for the annual dose or dose commitment conforming to Appendix I to 10 CFR Part 50,
- 7) Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the SITE BOUNDARY conforming to the doses associated with 10 CFR Part 20, Appendix B, Table 2, Column 1,
- 8) Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50,
- 9) Limitations on the annual and quarterly doses to a MEMBER OF THE PUBLIC from Iodine-131, Iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50,
- 10) Limitations on the annual dose or dose commitment to any MEMBER OF THE PUBLIC due to releases of radioactivity and to radiation from uranium fuel cycle sources conforming to 40 CFR Part 190.

Replace
with
Insert 2

(Proposed Wording)

INSERT 2

shall be limited to the following:

- a. For noble gases: Less than or equal to 500 mrem/year to the total body and less than or equal to 3000 mrem/year to the skin and,
- b. For Iodine-131, for Iodine-133, for tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: Less than or equal to 1500 mrem/year to any organ,

6.14 OFFSITE DOSE CALCULATION MANUAL (ODCM)

Changes to the ODCM:

- a. Shall be documented and records of reviews performed shall be retained as required by Specification 6.10.2.n. This documentation shall contain:
 - 1) Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and *as appropriate* *10 CFR Part 20.106*
 - 2) A determination *as appropriate* that the change will maintain the level of radioactive effluent control required by *10 CFR* 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 50 and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.
- b. Shall become effective after review and acceptance by the OSC and the approval of the General Manager Nuclear Operations, predesignated alternate or a predesignated Manager to whom the General Manager Nuclear Operations has assigned in writing the responsibility for review and approval of specific subjects.
- c. Shall be submitted to the Commission in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Annual Radioactive Effluent Release Report for the period of the report in which any change to the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.

6.16 Moved to the PROCESS CONTROL PROGRAM.

(Proposed Wording)

ATTACHMENT B

Beaver Valley Power Station, Unit Nos. 1 and 2 Proposed Technical Specification Change No. 231 and 101 LIQUID AND GASEOUS EFFLUENT RELEASE LIMITS

A. DESCRIPTION OF AMENDMENT REQUEST

The proposed amendment will revise Administrative Controls Section 6.8.6.a.2 to add "10 times" preceding "10 CFR Part 20, Appendix B, Table 2, Column 2" and revise Administrative Controls Section 6.8.6.a.7 from "conforming to the doses associated with 10 CFR Part 20, Appendix B, Table 2, Column 1" to:

"shall be limited to the following:

- a. For noble gases: Less than or equal to 500 mrem/year to the total body and less than or equal to 3000 mrem/year to the skin and,
- b. For Iodine-131, for Iodine-133, for tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: Less than or equal to 1500 mrem/year to any organ,"

Also, Bases Section 3/4.11.1.4 will be revised to "10 CFR Part 20, Appendix B, Table II, Column 2" and Administrative Controls Section 6.14.a.2 will state "10 CFR Part 20.106 or 10 CFR 20.1302 as appropriate."

B. BACKGROUND

On June 12, 1995, the Nuclear Regulatory Commission (NRC) approved Technical Specification (TS) Amendments 188 and 70 for Beaver Valley Power Station (BVPS) Units 1 and 2, respectively, which implemented Generic Letter 89-01 and additional miscellaneous changes. Included in the amendment were changes to Administrative Controls Section 6.8.6.a, 6.14, and Bases Section 3/4.11.1.4 wherein reference to 10 CFR Part 20 was changed from Table II to Table 2 to reflect the revised 10 CFR Part 20 references.

Concurrent with the implementation of the amendments, the Offsite Dose Calculation Manual (ODCM) was updated to reflect the relocation of the Radiological Effluent Technical Specifications (RETS) (per Generic Letter 89-01) to the ODCM. This included changing the instantaneous liquid release concentration to 10 times the 10 CFR Part 20, Appendix B, Table 2, Column 2 requirements. This resulted in a release concentration consistent with the superseded version of 10 CFR Part 20. The Nuclear Management and Resources Council (now Nuclear Energy Institute) provided the NRC with the justification to continue complying with the superseded regulations by letter dated April 28, 1993. The NRC confirmed this position by letter dated June 30, 1993.

It was understood by BVPS personnel that only the ODCM need reflect the 10 times the revised 10 CFR Part 20 limits. It has been recently determined that the TS must also reflect the need to comply with 10 times the instantaneous liquid release concentration rate limit and thus not simply reference the revised 10 CFR Part 20 limits.

The BVPS Emergency Action Levels (EALs) rely upon the liquid effluent release concentration levels for declaration of either an unusual event or an alert. However, protective actions are taken based on the Environmental Protection Agency Drinking Water Standards. If the revised 10 CFR Part 20 limits were utilized, then the emergency classification would be entered at a concentration level which is a fraction of that currently used by BVPS and approved by the NRC.

Also, it has been determined that the new 10 CFR Part 20 requirements for gaseous effluents have no relationship to the RETS instantaneous offsite dose rate limits. The revised requirements for gaseous effluents are based on assumptions that are different than the superseded 10 CFR Part 20. These include, but are not limited to, the 50 mrem/year dose rate. Therefore, a linear correlation cannot be drawn between the revised 10 CFR Part 20 requirements and the superseded 10 CFR Part 20 requirements. Because of this, the actual dose rate limits from the superseded 10 CFR Part 20 Appendix B, Table II, Column 1 will be added to Administrative Controls Section 6.8.6.a.7.

The proposed change to the activity limit for the Liquid Holdup Tanks revises the references to the acceptance criteria contained in the superseded 10 CFR Part 20. Prior to issuance of TS Amendments 188 and 70, the Liquid Holdup Tank curie limit was based on that quantity which would not exceed the maximum permission concentration limits of 10 CFR Part 20, Appendix B, Table II, Column 2 at the nearest potable water supply if the tank and components should fail, or was limited to 10 curies. The basis for the Liquid Holdup Tanks has not changed; therefore, the TS Bases must continue to reflect the superseded 10 CFR Part 20 limits.

C. JUSTIFICATION

The proposed change to the liquid and gaseous release rate limits is being made in order to accommodate needed operational flexibility to facilitate implementation of the revised 10 CFR Part 20 requirements.

The basic requirements for TS concerning effluents from nuclear power reactors are stated in 10 CFR Part 50.36a. These requirements indicate that compliance with effluent TS will keep average annual releases of radioactive material in effluents to small percentages of the limits specified in the superseded 10 CFR Part 20.106 (now 10 CFR Part 20.1302). These requirements

further indicate that operational flexibility is allowed, compatible with considerations of health and safety, which may temporarily result in releases higher than such small percentages, but still within the limits specified in the superseded 10 CFR Part 20.106 which references Appendix B, Table II maximum permissible concentrations (MPCs). These referenced concentrations are specific values which relate to an annual dose of 500 mrem. It is further indicated in 10 CFR Part 50.36a that when using operational flexibility, best efforts shall be exerted to keep levels of radioactive materials in effluents as low as is reasonably achievable (ALARA) as set forth in 10 CFR Part 50, Appendix I.

As stated in Appendix B of the revised 10 CFR Part 20, the liquid effluent concentration (EC) limits given in Appendix B, Table 2, Column 2, are based on an annual dose of 50 mrem. Since a release concentration corresponding to a limiting dose rate of 500 mrem/year has been acceptable as a TS limit for liquid effluents, which applies at all times as an assurance that the limits of 10 CFR Part 50, Appendix I are not likely to be exceeded, it should not be necessary to reduce this limit by a factor of 10 as the revised 10 CFR Part 20 requires. The gaseous EC limits given in Appendix B, Table 2, Column 1, are based on an annual dose of 50 mrem for isotopes for which inhalation or ingestion is limiting, or 100 mrem for isotopes for which submersion (noble gases) is limiting. Release concentrations corresponding to limiting dose rates at the site boundary from noble gases less than or equal to 500 mrem/year to the whole body and 3000 mrem/year to the skin; and 1500 mrem/year to any organ from Iodine-131, Iodine-133, for tritium and all radionuclides in particulate form with half-lives greater than eight days have been acceptable as TS limits for gaseous effluents to assure that limits of 10 CFR Part 50, Appendix I and 40 CFR Part 190 are not likely to be exceeded. It should not be necessary to restrict the operational flexibility by incorporating the dose rate limit associated with the EC value for isotopes based on the inhalation/ingestion (50 mrem/year) or the dose rate associated with the EC value for isotopes based on submersion (100 mrem/year).

As with the gaseous effluent release limit, there is no linear correlation between the superseded and revised 10 CFR Part 20 limits for the Liquid Holdup Tank curie limit. The Liquid Holdup Tank curie limit is based on that quantity which would not exceed the effluent concentration limits (ECL) of 10 CFR Part 20, Appendix B, Table II, Column 2 at the nearest potable water supply if the tank and components should fail, or will be limited to 10 curies.

D. SAFETY ANALYSIS

Operational history at Beaver Valley has demonstrated that the use of the concentration values associated with the superseded 10 CFR Part 20.106 and that the use of the proposed dose rate values as TS limits have resulted in calculated maximum individual doses to a member of the public that are small percentages of the limits of 10 CFR Part 50, Appendix I. Therefore, the use of concentration values which correspond to an annual dose of 500 mrem (ten times the concentration values stated in revised 10 CFR Part 20, Appendix B, Table 2, Column 2) should not have a negative impact on the ability to continue to operate within the limits of 10 CFR Part 50, Appendix I and 40 CFR Part 190. Therefore, Administrative Control Section 6.8.6.a.2 has been revised by adding "10 times" to the current specified limits and Administrative Control Section 6.8.6.a.7 has been revised to comply with the superseded 10 CFR Part 20 limits for gaseous effluents.

Having sufficient operational flexibility is especially important in establishing a basis for effluent monitor setpoint calculations. As discussed above, the concentrations stated in the revised 10 CFR Part 20, Appendix B, Table 2, Column 1, relate to a dose of 50 mrem in a year, and in Column 2, the concentrations relate to a dose of 50 or 100 mrem in a year. When applied on an instantaneous basis, this corresponds to a dose rate of 50 mrem/year for liquid releases and a dose rate of 50 or 100 mrem/year for gaseous releases. These low values are impractical upon which to base effluent monitor setpoint calculations for many liquid and gaseous effluent release situations when monitor background, monitor sensitivity, and monitor performance must be taken into account.

Therefore, to accommodate operational flexibility needed for effluent releases, the limits associated with the liquid release concentration TS are based on ten times the concentrations stated in the revised 10 CFR Part 20, Appendix B, Table 2, Column 2, to apply at all times. The multiplier of ten is proposed because the annual dose of 500 mrem, upon which the concentrations in the superseded 10 CFR Part 20, Appendix B, Table II, Column 2, are based, is a factor of 10 higher than the annual dose of 50 mrem, upon which the concentrations in the revised 10 CFR Part 20, Appendix B, Table 2, Column 2, are based.

Since the correlation between the superseded and revised 10 CFR Part 20 gaseous waste limits is not linear, and to accommodate operational flexibility, BVPS is returning to the previous RETS instantaneous dose rate limit for noble gases of 500 mrem/year to the whole body and 3000 mrem/year to the skin; and for Iodine-131, Iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than eight days, an instantaneous dose rate limit of 1500 mrem/year to any organ.

Likewise, the correlation between the superseded and revised 10 CFR Part 20 Liquid Holdup Tank curie limit is not linear either. Because of this, the reference is being changed back to the superseded 10 CFR Part 20 reference.

Compliance with the limits of the revised 10 CFR Part 20.1301 will be demonstrated by operating within the limits of 10 CFR Part 50, Appendix I and 40 CFR Part 190. Therefore, these changes have been determined to be safe and will not reduce the safety of the plant.

E. NO SIGNIFICANT HAZARDS EVALUATION

The no significant hazard considerations involved with the proposed amendment have been evaluated, focusing on the three standards set forth in 10 CFR Part 50.92(c) as quoted below:

The Commission may make a final determination, pursuant to the procedures in paragraph 50.91, that a proposed amendment to an operating license for a facility licensed under paragraph 50.21(b) or paragraph 50.22 or for a testing facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or
- (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or
- (3) Involve a significant reduction in a margin of safety.

The following evaluation is provided for the no significant hazards consideration standards.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

The likelihood that an accident will occur is neither increased or decreased by this proposed technical specification change which modifies the liquid and gaseous effluent release limits and the Liquid Holdup Tank activity limit. This technical specification change will not impact the function or method of operation of plant equipment. Thus, there is no significant increase in the probability of a previously analyzed accident due to this change. No systems, equipment, or components are affected by the proposed change. Thus, the consequences of a malfunction of equipment important to safety previously evaluated in the Updated Final Safety Analysis Report are not increased by this change.

The proposed change affects the liquid and gaseous effluent release limits and Liquid Holdup Tank activity limit. As such, the proposed change has no impact on accident initiators or plant equipment, and therefore, does not affect the probabilities or consequences of an accident.

Therefore, the proposed change will not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed technical specification revisions do not involve changes to the physical plant or operation of equipment considered as a potential accident initiator or equipment necessary to mitigate the consequences of an accident. The new Beaver Valley Power Station-Emergency Action Levels do use multiples of Offsite Dose Calculation Manual liquid release criteria for initiation of an unusual event or alert. However, there are no protective actions required when reaching either the unusual event or alert levels. The protective actions are performed when Environmental Protection Agency Drinking Water Standards are met or exceeded. Since limitations on concentrations of radioactive material released in liquid and gaseous effluents to unrestricted areas does not contribute to accident initiation, a change related to the requirement cannot produce a new accident scenario or produce a new type of equipment malfunction, as such, this change does not alter any existing accident scenarios.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the change involve a significant reduction in a margin of safety?

The proposed change concerns the liquid and gaseous effluent release limits and Liquid Holdup Tank activity limit and does not directly affect plant equipment or operation related to design basis accident prevention or mitigation. Safety limits and limiting safety system settings are not affected by this proposed change.

Therefore, use of the proposed technical specification would not involve a significant reduction in the margin of safety.

F. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Based on the considerations expressed above, it is concluded that the activities associated with this license amendment request satisfies the no significant hazards consideration standards of 10 CFR Part 50.92(c) and, accordingly, a no significant hazards consideration finding is justified.

G. ENVIRONMENTAL IMPACT ANALYSIS

The proposed technical specification amendments have been reviewed against the criteria of 10 CFR Part 51.22 for environmental considerations. The proposed amendment does not involve a significant hazards consideration, nor increase the types and amounts of effluents that may be released offsite above those allowed in the superseded 10 CFR Part 20, nor increase individual or cumulative occupational radiation exposures. The proposed effluent concentration (EC) multiplier of ten requested in this submittal for the revised 10 CFR Part 20 requirements for liquid releases will allow the liquid effluent release rates to correspond to 500 mrem/year as is the case in the superseded version of 10 CFR Part 20. The revision of the gaseous effluent release rate reference from Appendix B, Table 2, Column 1 to specific dose limits is necessary because there is no linear correlation between the superseded and revised 10 CFR Part 20 limits for gaseous effluents. Compliance with the annual dose limits of the revised 10 CFR Part 20.1301 will be demonstrated by operating within the limits of 10 CFR Part 50, Appendix I and 40 CFR Part 190. Therefore, the proposed technical specification amendments meet the criteria given in 10 CFR Part 51.22(c)(9) for a categorical exclusion from the requirement for an Environmental Impact Statement.

ATTACHMENT C-1

Beaver Valley Power Station, Unit No. 1
Proposed Technical Specification Change No. 231

Applicable Typed Pages

ATTACHMENT TO LICENSE AMENDMENT NO.
FACILITY OPERATING LICENSE NO. DPR-66
DOCKET NO. 50-334

Replace the following pages of Appendix A, Technical Specifications, with the enclosed pages as indicated. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove

B 3/4 11-1
6-14
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Insert

B 3/4 11-1
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6-24

3/4.11 RADIOACTIVE EFFLUENTSBASES

3/4.11.1 LIQUID EFFLUENTS3/4.11.1.4 LIQUID HOLDUP TANKS

Restricting the quantity of radioactive material contained in the specified tanks provides assurance that in the event of an uncontrolled release of the tanks' contents, the resulting concentrations would be less than the limits of 10 CFR Part 20, Appendix B, Table II, Column 2, at the nearest potable water supply and the nearest surface water supply in an unrestricted area.

3/4.11.2 GASEOUS EFFLUENTS3/4.11.2.5 GAS STORAGE TANKS

Restricting the quantity of radioactivity contained in each gas storage tank provides assurance that in the event of an uncontrolled release of the tanks' contents, the resulting total body exposure to an individual located at the nearest exclusion area boundary for two hours immediately following the onset of the release will not exceed 0.5 rem. The specified limit restricting the quantity of radioactivity contained in each gas storage tank was specified to ensure that the total body exposure resulting from the postulated release remained a suitable fraction of the reference value set forth in 10 CFR 100.11 (a)(1).

3/4.11.2.6 EXPLOSIVE GAS MIXTURE

This specification is provided to ensure that the concentration of potentially explosive gas mixtures contained in the waste gas holdup system is maintained below the flammability limits of hydrogen and oxygen. Isolation of the affected tank for purposes of purging and/or discharge permits the flammable gas concentrations of the tank to be reduced below the lower explosive limit in a hydrogen rich system. Maintaining the concentration of hydrogen and oxygen below their flammability limits 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.

6.8.6 The following programs shall be established, implemented, and maintained:

a. Radioactive Effluent Controls Program

A program shall be provided conforming with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to MEMBERS OF THE PUBLIC from radioactive effluents as low as reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- 1) Limitations on the operability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM,
- 2) Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 times 10 CFR Part 20, Appendix B, Table 2, Column 2,
- 3) Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.106 or 10 CFR 20.1302, as appropriate, and with the methodology and parameters in the ODCM,
- 4) Limitations on the annual and quarterly doses or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each unit to UNRESTRICTED AREAS conforming to Appendix I to 10 CFR Part 50,
- 5) Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days,
- 6) Limitations on the operability and use of the liquid and gaseous effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a 31-day period would exceed 2 percent of the guidelines for the annual dose or dose commitment conforming to Appendix I to 10 CFR Part 50,

- 7) Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the SITE BOUNDARY shall be limited to the following:
 - a) For noble gases: Less than or equal to 500 mrem/year to the total body and less than or equal to 3000 mrem/year to the skin and,
 - b) For Iodine-131, for Iodine-133, for tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: Less than or equal to 1500 mrem/year to any organ,
- 8) Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50,
- 9) Limitations on the annual and quarterly doses to a MEMBER OF THE PUBLIC from Iodine-131, Iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50,
- 10) Limitations on the annual dose or dose commitment to any MEMBER OF THE PUBLIC due to releases of radioactivity and to radiation from uranium fuel cycle sources conforming to 40 CFR Part 190.

b. Radiological Environmental Monitoring Program

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provide (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluent monitoring program and modeling of environmental exposure pathways. The program shall (1) be contained in the ODCM, (2) conform to the guidance of Appendix I to 10 CFR Part 50, and (3) include the following:

- 1) Monitoring, sampling, analysis, and reporting or radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM,
- 2) A Land Use Census to ensure that changes in the use of areas at and beyond the SITE BOUNDARY are identified and that modifications to the monitoring program are made if required by the results of this census, and

6.13 PROCESS CONTROL PROGRAM (PCP)

Changes to the PCP:

- a. Shall be documented and records of reviews performed shall be retained as required by Specification 6.10.2.n. This documentation shall contain:
 - 1) Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and
 - 2) A determination that the change will maintain the overall conformance of the solidified waste product to existing requirements of Federal, State, or other applicable regulations.
- b. Shall become effective after review and acceptance by the OSC and the approval of the General Manager Nuclear Operations, predesignated alternate or a predesignated Manager to whom the General Manager Nuclear Operations has assigned in writing the responsibility for review and approval of specific subjects.

6.14 OFFSITE DOSE CALCULATION MANUAL (ODCM)

Changes to the ODCM:

- a. Shall be documented and records of reviews performed shall be retained as required by Specification 6.10.2.n. This documentation shall contain:
 - 1) Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and
 - 2) A determination that the change will maintain the level of radioactive effluent control required by 10 CFR Part 20.106 or 10 CFR 20.1302 as appropriate, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 50 and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.
- b. Shall become effective after review and acceptance by the OSC and the approval of the General Manager Nuclear Operations, predesignated alternate or a predesignated Manager to whom the General Manager Nuclear Operations has assigned in writing the responsibility for review and approval of specific subjects.

ATTACHMENT C-2

Beaver Valley Power Station, Unit No. 2
Proposed Technical Specification Change No. 101

Applicable Typed Pages

ATTACHMENT TO LICENSE AMENDMENT NO.
FACILITY OPERATING LICENSE NO. NPF-73
DOCKET NO. 50-412

Replace the following pages of Appendix A, Technical Specifications, with the enclosed pages as indicated. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove

B 3/4 11-1
6-14
6-15
6-16
6-25

Insert

B 3/4 11-1
6-14
6-15
6-16
6-25

3/4.11 RADIOACTIVE EFFLUENTSBASES

3/4.11.1 LIQUID EFFLUENTS3/4.11.1.4 LIQUID HOLDUP TANKS

Restricting the quantity of radioactive material contained in the specified tanks provides assurance that in the event of an uncontrolled release of the tanks' contents, the resulting concentrations would be less than the limits of 10 CFR Part 20, Appendix B, Table II, Column 2, at the nearest potable water supply and the nearest surface water supply in an unrestricted area.

3/4.11.2 GASEOUS EFFLUENTS3/4.11.2.5 GASEOUS WASTE STORAGE TANKS

Restricting the quantity of radioactivity contained in any connected group of gaseous waste storage tanks provides assurance that in the event of an uncontrolled release of the tanks' contents, the resulting total body exposure to an individual located at the nearest exclusion area boundary for two hours immediately following the onset of the release will not exceed 0.5 rem. The specified limit restricting the quantity of radioactivity contained in any connected group of gaseous waste storage tanks was specified to ensure that the total body exposure resulting from the postulated release remained a suitable fraction of the reference value set forth in 10 CFR 100.11(a)(1). The curie content limit is applied individually to each gaseous waste storage tank and collectively to the number of unisolated gaseous waste storage tanks.

3/4.11.2.6 EXPLOSIVE GAS MIXTURE

This specification is provided to ensure that the concentration of potentially explosive gas mixtures contained in the waste gas holdup system is maintained below the flammability limits of hydrogen and oxygen. Isolation of the affected tank for purposes of purging and/or discharge permits the flammable gas concentrations of the tank to be reduced below the lower explosive limit in a hydrogen rich system. Maintaining the concentration of hydrogen and oxygen below their flammability limits 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.

PROCEDURES (Continued)

6.8.5 A program for monitoring of secondary water chemistry to inhibit steam generator tube degradation shall be implemented. This program shall be described in the station chemistry manual and shall include:

- a. Identification of a sampling schedule for the critical parameters and control points for these parameters;
- b. Identification of the procedures used to measure the values of the critical parameters;
- c. Identification for process sampling points;
- d. Procedures for the recording and management of data;
- e. Procedures defining corrective actions for off control point chemistry conditions; and
- f. A procedure identifying:
 - 1) the authority responsible for the interpretation of the data, and
 - 2) the sequence and timing of administrative events required to initiate corrective action.

6.8.6 The following programs shall be established, implemented, and maintained:

a. Radioactive Effluent Control Program

A program shall be provided conforming with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to MEMBERS OF THE PUBLIC from radioactive effluents as low as reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- 1) Limitations on the operability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM,
- 2) Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 times 10 CFR Part 20, Appendix B, Table 2, Column 2,

PROCEDURES (Continued)

- 3) Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.106 or 10 CFR 20.1302, as appropriate, and with the methodology and parameters in the ODCM,
- 4) Limitations on the annual and quarterly doses or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each unit to UNRESTRICTED AREAS conforming to Appendix I to 10 CFR Part 50,
- 5) Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days,
- 6) Limitations on the operability and use of the liquid and gaseous effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a 31-day period would exceed 2 percent of the guidelines for the annual dose or dose commitment conforming to Appendix I to 10 CFR Part 50,
- 7) Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the SITE BOUNDARY shall be limited to the following:
 - a) For noble gases: Less than or equal to 500 mrem/year to the total body and less than or equal to 3000 mrem/year to the skin and,
 - b) For Iodine-131, for Iodine-133, for tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: Less than or equal to 1500 mrem/year to any organ,
- 8) Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50,
- 9) Limitations on the annual and quarterly doses to a MEMBER OF THE PUBLIC from Iodine-131, Iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50,

PROCEDURES (Continued)

- 10) Limitations on the annual dose or dose commitment to any MEMBER OF THE PUBLIC due to releases of radioactivity and to radiation from uranium fuel cycle sources conforming to 40 CFR Part 190.

b. Radiological Environmental Monitoring Program

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provide (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluent monitoring program and modeling of environmental exposure pathways. The program shall (1) be contained in the ODCM, (2) conform to the guidance of Appendix I to 10 CFR Part 50, and (3) include the following:

- 1) Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM,
- 2) A Land Use Census to ensure that changes in the use of areas at and beyond the SITE BOUNDARY are identified and that modifications to the monitoring program are made if required by the results of this census, and
- 3) Participation in an Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

6.9 REPORTING REQUIREMENTS

ROUTINE REPORTS

6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted to the U.S. Nuclear Regulatory Commission, Document Control Desk.

STARTUP REPORTS

6.9.1.1 A summary report of plant startup and power escalation testing will be submitted following (1) receipt of an operating license, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or had been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal, or hydraulic performance of the plant.

6.14 OFFSITE DOSE CALCULATION MANUAL (ODCM)

Changes to the ODCM:

- a. Shall be documented and records of reviews performed shall be retained as required by Specification 6.10.2.n. This documentation shall contain:
 - 1) Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and
 - 2) A determination that the change will maintain the level of radioactive effluent control required by 10 CFR Part 20.106 or 10 CFR 20.1302 as appropriate, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 50 and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.
- b. Shall become effective after review and acceptance by the OSC and the approval of the General Manager Nuclear Operations, predesignated alternate or a predesignated Manager to whom the General Manager Nuclear Operations has assigned in writing the responsibility for review and approval of specific subjects.
- c. Shall be submitted to the Commission in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Annual Radioactive Effluent Release Report for the period of the report in which any change to the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.

6.16 Moved to the PROCESS CONTROL PROGRAM.