



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-237

DRESDEN NUCLEAR POWER STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 149
License No. DPR-19

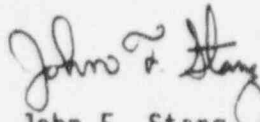
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Commonwealth Edison Company (the licensee) dated September 1, 1995, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-19 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 149, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented no later than June 30, 1996.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stang, Senior Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 2, 1996



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-249

DRESDEN NUCLEAR POWER STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 143
License No. DPR-25

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Commonwealth Edison Company (the licensee) dated September 1, 1995, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 3.B., and by deleting paragraphs 3.I. and 3.K. of Facility Operating License No. DPR-25* and is hereby amended to read as follows:

*Page 5 is attached, for convenience, for the composite license to reflect this change.

B. Technical Specifications

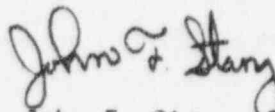
The Technical Specifications contained in Appendix A, as revised through Amendment No. 143, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

I. Deleted.

K. Deleted.

3. This license amendment is effective as of the date of its issuance and shall be implemented no later than June 30, 1996.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stang, Senior Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Attachments:

1. License page 5
2. Changes to the Technical Specifications

Date of Issuance: April 2, 1996

- H. Deleted [per Amendment 95].
 - I. Deleted.
 - J. Deleted [per Amendment 49].
 - K. Deleted.
 - L. Deleted [per Amendment 87].
 - M. Deleted.
4. This license is effective as of the date of issuance and shall expire at Mid-night January 12, 2011. [Amendment Nos. 2, 106.]

FOR THE ATOMIC ENERGY COMMISSION

Original Signed by

Peter A. Morris, Director
Division of Reactor Licensing

Enclosures:
Appendix A - Technical Specifications

Date of Issuance, January 12, 1971

ATTACHMENT TO LICENSE AMENDMENT NOS. 149 AND 143

FACILITY OPERATING LICENSE NOS. DPR-19 AND DPR-25

DOCKET NOS. 50-237 AND 50-249

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the attached pages. The revised pages are identified by the captioned amendment number.

<u>UNIT 2</u> <u>REMOVE</u>	<u>UNIT 3</u> <u>REMOVE</u>	<u>INSERT</u>
6-1	6-1	6-1
6-2	6-2	6-2
6-3	6-3	6-3
6-4	6-4	6-4
6-5	6-5	6-5
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6-7	6-7	6-7
6-8	6-8	6-8
6-9	6-9	6-9
6-10	6-10	6-10
6-11	6-11	6-11
6-12	6-12	6-12
-	-	6-12a
6-13	6-13	6-13
6-14	6-14	6-14
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6-24	6-24	---
6-25	6-25	---
6-26	6-26	---
6-27	---	---

ADMINISTRATIVE CONTROLS

6.1 RESPONSIBILITY

- 6.1.A The Station Manager shall be responsible for overall facility operation and shall delegate in writing the succession to this responsibility during his absence.
- 6.1.B The Shift Manager shall be responsible for directing and commanding the safe overall operation of the facility under all conditions.

ADMINISTRATIVE CONTROLS

6.2 ORGANIZATION**6.2.A Onsite and Offsite Organizations**

Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safety of the nuclear power plant.

1. Lines of authority, responsibility, and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated, as appropriate, in the form of organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in the Quality Assurance Manual.
2. The Station Manager shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for safe operation and maintenance of the plant.
3. The Chief Nuclear Officer (CNO) shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure nuclear safety.
4. The individuals who train the operating staff and those who carry out health physics and quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their independence from operating pressures.

ADMINISTRATIVE CONTROLS

6.2.B Unit Staff

The unit staff shall include the following:

1. Three non-licensed operators shall be on site at all times.
2. At least one licensed Reactor Operator shall be present in the control room when fuel is in the reactor. In addition, while the unit is in MODE(s) 1, 2, 3 or 4 at least one licensed Senior Reactor Operator shall be present in the control room.
3. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 6.2.B.1 and 6.2.C for a period of time not to exceed two hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.
4. A Radiation Protection Technician shall be on site when fuel is in the reactor. The position may be vacant for not more than two hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.
5. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety-related functions; e.g., senior reactor operators, reactor operators, health physicists, auxiliary operators, and key maintenance personnel.

The amount of overtime worked by unit staff members performing safety-related functions shall be limited in accordance with the NRC Policy Statement on working hours (Generic Letter 82-12). Any deviations from the guidelines of Generic Letter 82-12 shall be authorized in advance by the Station Manager or his designee, in accordance with approved administrative procedures, or by higher levels of management, in accordance with established procedures and with documentation of the basis for granting the deviation.

6. The Operations Manager or Shift Operations Supervisor shall hold a Senior Reactor Operator License.

6.2.C Shift Technical Advisor

The Shift Technical Advisor (STA) shall provide technical advisory support to the Unit Supervisor in the areas of thermal hydraulics, reactor engineering and plant analysis with regard to the safe operation of the facility. In addition, the STA shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift. A single STA may fulfill this function for both units.

ADMINISTRATIVE CONTROLS

6.3 UNIT STAFF QUALIFICATIONS

Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971, "Selection and Training of Nuclear Plant Personnel", dated March 8, 1971, except for the Radiation Protection Manager, who shall meet or exceed the qualifications of the Radiation Protection Manager as specified in Regulatory Guide 1.8, September 1975, and the Shift Technical Advisor who shall have a bachelor's degree or equivalent in a scientific or engineering discipline with specific training in plant design and response and analysis of the plant for transients and accidents.

ADMINISTRATIVE CONTROLS

6.4 TRAINING

A retraining and replacement program for the unit staff shall be maintained under the direction of the appropriate on site manager. Training shall be in accordance with ANSI N18.1-1971 and 10 CFR 55 for appropriate designated positions and shall include familiarization with relevant industry operational experience.

ADMINISTRATIVE CONTROLS

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ADMINISTRATIVE CONTROLS

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ADMINISTRATIVE CONTROLS

6.7 SAFETY LIMIT VIOLATION

6.7.A The following actions shall be taken in the event a Safety Limit is violated:

1. The NRC Operations Center shall be notified by telephone as soon as possible and in all cases within 1 hour. The Site Vice-President or his designated alternate shall be notified within 24 hours;
2. Within 30 days, a Licensee Event Report (LER) shall be prepared documenting the event pursuant to 10 CFR 50.73. The LER shall be submitted to the NRC.
3. Critical operation of the Unit shall not be resumed until authorized by the Commission.

ADMINISTRATIVE CONTROLS

6.8 PROCEDURES AND PROGRAMS

6.8.A Written procedures shall be established, implemented, and maintained covering the activities referenced below:

1. The applicable procedures recommended in Appendix A, of Regulatory Guide 1.33, Revision 2, February 1978,
2. The Emergency Operating Procedures required to implement the requirements of NUREG-0737 and Supplement 1 to NUREG-0737 as stated in Section 7.1 of Generic Letter No. 82-33,
3. Station Security Plan implementation,
4. Generating Station Emergency Response Plan implementation,
5. PROCESS CONTROL PROGRAM (PCP) implementation,
6. OFFSITE DOSE CALCULATION MANUAL (ODCM) implementation, and
7. Fire Protection Program implementation.

6.8.B The following programs shall be established, implemented, and maintained:

1. Reactor Coolant Sources Outside Primary Containment

This program provides controls to minimize leakage from those portions of systems outside primary containment that could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. The systems include CS, HPCI, LPCI, IC, process sampling, containment monitoring, and standby gas treatment systems. The program shall include the following:

- a. Preventive maintenance and periodic visual inspection requirements, and
- b. Leak test requirements for each system at a frequency of at least once per operating cycle.

ADMINISTRATIVE CONTROLS

2. In-Plant Radiation Monitoring

This program provides controls which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

- a. Training of personnel,
- b. Procedures for monitoring, and
- c. Provisions for maintenance of sampling and analysis equipment.

3. Post Accident Sampling

This program provides controls which will ensure the capability to obtain and analyze reactor coolant, radioactive iodines and particulates in plant gaseous effluents, and primary containment atmosphere samples under accident conditions. The program shall include the following:

- a. Training of personnel,
- b. Procedures for sampling and analysis,
- c. Provisions for maintenance of sampling and analysis equipment.

 ADMINISTRATIVE CONTROLS

4. 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^{(a)(b)(c)(d)(e)} from radioactive effluents as low as reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by station procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- a. 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,
- b. Limitations on the instantaneous concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to ten (10) times the concentration values in 10 CFR Part 20, Appendix B, Table 2, Column 2 to 10 CFR Part 20.1001 - 20.2402,
- c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the ODCM,
- d. Limitations on the annual and quarterly doses to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each Unit conforming to Appendix I to 10 CFR Part 50,
- e. 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,

-
- a. A MEMBER OF THE PUBLIC shall be an individual in a CONTROLLED or UNRESTRICTED AREA. An individual is not a MEMBER OF THE PUBLIC during any period in which the individual receives an occupational dose.
 - b. The CONTROLLED AREA shall be an area, outside of a RESTRICTED AREA but inside the SITE BOUNDARY, access to which can be limited by the licensee for any reason.
 - c. An UNRESTRICTED AREA shall be any area, access to which is neither limited nor controlled by the licensee.
 - d. RESTRICTED AREA shall be an area, access to which is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials. RESTRICTED AREA(s) do not include areas used as residential quarters, but separate rooms in a residential building may be set apart as a RESTRICTED AREA.
 - e. The SITE BOUNDARY shall be that line beyond which the land is neither owned, nor leased, nor otherwise controlled by the licensee.

ADMINISTRATIVE CONTROLS

- f. 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 conforming to Appendix I to 10 CFR Part 50,
- g. Limitations on the dose rate resulting from radioactive materials released in gaseous effluents from the site to areas at or beyond the SITE BOUNDARY shall be limited to the following:
 - a) For noble gases: less than or equal to a dose rate of 500 mrem/yr to the whole body and less than or equal to a dose rate of 3000 mrem/yr to the skin, and
 - b) For Iodine-131, Iodine-133, tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: less than or equal to a dose rate of 1500 mrem/yr to any organ.
- h. 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,
- i. 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 conforming to Appendix I to 10 CFR Part 50,
- j. 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.

ADMINISTRATIVE CONTROLS

5. Primary Containment Leakage Rate Testing Program

A program shall be established to implement the leakage rate testing of the primary containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemption. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Testing Program," dated September 1995.

The peak calculated primary containment internal pressure for the design basis loss of coolant accident, P_s , is 48 psig.

The maximum allowable primary containment leakage rate, L_s , at P_s , is 1.6% of primary containment air weight per day.

Leakage rate acceptance criteria are:

- a. Primary containment overall leakage rate acceptance criterion is $\leq 1.0 L_s$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $\leq 0.60 L_s$ for the combined Type B and Type C tests, and $\leq 0.75 L_s$ for Type A tests.
- b. Air lock testing acceptance criteria is the overall air lock leakage rate is $\leq 0.05 L_s$ when tested at $\geq P_s$.

The provisions of 4.0.B do not apply to the test frequencies specified in the Primary Containment Leakage Rate Testing Program.

The provisions of 4.0.C are applicable to the Primary Containment Leakage Rate Testing Program.

ADMINISTRATIVE CONTROLS**6.9 REPORTING REQUIREMENTS**

In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following identified reports shall be submitted to the Regional Administrator of the appropriate Regional Office of the NRC unless otherwise noted.

6.9.A. Routine Reports

1. Deleted
2. Annual Report

Annual reports covering the activities of the Unit for the previous calendar year, as described in this section shall be submitted prior to March 1 of each year.

The reports required shall include:

- a. Tabulation of the number of station, utility, and other personnel (including contractors) receiving exposures greater than 100 mrem/year and their associated person rem exposure according to work and job functions, e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling. The dose assignments to various duty functions may be estimated based on pocket dosimeter or TLD. Small exposures totaling less than 20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the total whole body dose received from external sources should be assigned to specific major work functions.
- b. The results of specific activity analysis in which the reactor coolant exceeded the limits of Specification 3.6.J. The following information shall be included: (1) Reactor power history starting 48 hours prior to the first sample in which the limit was exceeded; (2) results of the last isotopic analysis for radioiodine performed prior to exceeding the limit, results of analysis while limit was exceeded and results of one analysis after the radioiodine activity was reduced to less than the limit. Each result should include date and time of sampling and the radioiodine concentrations; (3) Clean-up system flow history starting 48 hours prior to the first sample in which the limit was exceeded; (4) Graph of the I-131 concentration and one other radioiodine isotope concentration in microcuries per gram as a function of time for the duration of the specific activity above the steady-state level; and (5) The time duration when the specific activity of the reactor coolant exceeded the radioiodine limit.

ADMINISTRATIVE CONTROLS

3. Annual Radiological Environmental Operating Report

The Annual Radiological Environmental Operating Report covering the operation of the Unit during the previous calendar year shall be submitted prior to May 1 of each year. The report shall include summaries, interpretations, and analysis of trends of the results of the Radiological Environmental Monitoring Program for the reporting period. The material provided shall be consistent with the objectives outlined in (1) the ODCM and (2) Sections IV.B.2, IV.B.3, and IV.C of Appendix I to 10 CFR Part 50.

4. Radioactive Effluent Release Report

The Radioactive Effluent Release Report covering the operation of the facility during the previous calendar year shall be submitted prior to April 1 of each year. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the facility. The material provided shall be (1) consistent with the objectives outlined in the ODCM and PCP and (2) in conformance with 10 CFR 50.36a and Section IV.B.1 of Appendix I to 10 CFR Part 50.

5. Monthly Operating Report

Routine reports of operating statistics and shutdown experience, including documentation of all challenges to safety valves or safety/relief valves, shall be submitted on a monthly basis to the Director, Office of Resource Management, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the Regional Administrator of the NRC Regional Office, no later than the 15th of each month following the calendar month covered by the report.

6. CORE OPERATING LIMITS REPORT

- a. Core operating limits shall be established and documented in the CORE OPERATING LIMITS REPORT before each reload cycle or any remaining part of a reload cycle for the following:
 - (1) The Control Rod Withdrawal Block Instrumentation for Table 3.2.E-1 of Specification 3.2.E.
 - (2) The Average Planar Linear Heat Generation Rate (APLHGR) Limit for Specification 3.11.A.
 - (3) The Local Steady State Linear Heat Generation Rate (LHGR) for Specification 3.11.D.
 - (4) The Minimum Critical Power Operating Limit (including 20% scram insertion time) for Specification 3.11.C. This includes rated and off-rated flow conditions.

ADMINISTRATIVE CONTROLS

- b. The analytical methods used to determine the operating limits shall be those previously reviewed and approved by the NRC in the latest approved revision or supplement of topical reports:
- (1) ANF-1125(P)(A), "Critical Power Correlation - ANFB."
 - (2) ANF-524(P)(A), "ANF Critical Power Methodology for Boiling Water Reactors."
 - (3) XN-NF-79-71(P)(A), "Exxon Nuclear Plant Transient Methodology for Boiling Water Reactors."
 - (4) XN-NF-80-19(P)(A), "Exxon Nuclear Methodology for Boiling Water Reactors."
 - (5) XN-NF-85-67(P)(A), "Generic Mechanical Design for Exxon Nuclear Jet Pump Boiling Water Reactors Reload Fuel."
 - (6) XN-NF-81-22(P)(A), "Generic Statistical Uncertainty Analysis Methodology."
 - (7) ANF-913(P)(A), "CONTRANSA2: A Computer Program for Boiling Water Reactor Transient Analysis."
 - (8) Commonwealth Edison Company Topical Report NFSR-0091, "Benchmark of CASMO/MICROBURN BWR Nuclear Design Methods", and associated Supplements on Neutronics Licensing Analyses (Supplement 1) and La Salle County Unit 2 Benchmarking (Supplement 2).
- c. The core operating limits shall be determined so that all applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as shutdown margin, and transient and accident analysis limits) of the safety analysis are met. The CORE OPERATING LIMITS REPORT, including any mid-cycle revisions or supplements thereto, shall be provided upon issuance, for each reload cycle, to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector.

6.9.B Special Reports

Special reports shall be submitted to the Regional Administrator of the NRC Regional Office within the time period specified for each report.

ADMINISTRATIVE CONTROLS

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ADMINISTRATIVE CONTROLS

6.11 RADIATION PROTECTION PROGRAM

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.

ADMINISTRATIVE CONTROLS

6.12 HIGH RADIATION AREA

6.12.A Pursuant to 10 CFR 20.1601(c), in lieu of the requirements of paragraph 20.1601 of 10 CFR Part 20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr at 30 cm (12 in.) shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit (RWP)^(f) (or equivalent document). Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

1. A radiation monitoring device which continuously indicates the radiation dose rate in the area.
2. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate levels in the area have been established and personnel have been made knowledgeable of them; or
3. An individual qualified in radiation protection procedures with a radiation dose rate monitoring device, who is responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified in the RWP (or equivalent document).

f Health Physics personnel or personnel escorted by health physics personnel shall be exempt from the RWP issuance requirements during the performance of their assigned radiation protection duties, provided they are otherwise following plant radiation protection procedures for entry into high radiation areas.

ADMINISTRATIVE CONTROLS

- 6.12.B In addition to the requirements of 6.12.A, areas accessible to personnel with radiation levels greater than 1000 mrem/hr at 30 cm (12 in.) from the radiation source or from any surface which the radiation penetrates shall require the following:
1. Doors shall be locked to prevent unauthorized entry and shall not prevent individuals from leaving the area. In place of locking the door, continuous, direct or electronic surveillance that is capable of preventing unauthorized entry may be used. The keys shall be maintained under the administrative control of the Shift Manager on duty and/or health physics supervision.
 2. Personnel access and exposure control requirements of activities being performed within these areas shall be specified by an approved RWP(or equivalent document).
 3. Each person entering the area shall be provided with an alarming radiation monitoring device that continuously integrates the radiation dose rate (such as an electronic dosimeter.) Continuous surveillance and radiation monitoring by a Radiation Protection Technician may be substituted for an alarming dosimeter.
 4. [THIS ITEM INTENTIONALLY LEFT BLANK].
 5. For individual HIGH RADIATION AREAS accessible to personnel with radiation levels of greater than 1000 mrem/h at 30 cm (12 in.) that are located within large areas where no enclosure exists for purposes of locking, and where no enclosure can be reasonably constructed around the individual areas, then such individual areas shall be barricaded, conspicuously posted, and a flashing light shall be activated as a warning device.

ADMINISTRATIVE CONTROLS

6.13 PROCESS CONTROL PROGRAM (PCP)

6.13.A Changes to the PCP:

1. Shall be documented and records of reviews performed shall be retained. This documentation shall contain:
 - a. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and,
 - b. 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.

2. [THIS ITEM INTENTIONALLY LEFT BLANK].

ADMINISTRATIVE CONTROLS

6.14 OFFSITE DOSE CALCULATION MANUAL (ODCM)**6.14.A Changes to the ODCM:**

1. Shall be documented and records of reviews performed shall be retained. This documentation shall contain:
 - a. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and,
 - b. 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.
2. [THIS ITEM INTENTIONALLY LEFT BLANK].
3. 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 Radioactive Effluent Report for the period of the report in which any change to the ODCM was made effective. 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.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

COMMONWEALTH EDISON COMPANY

AND

MIDAMERICAN ENERGY COMPANY

DOCKET NO. 50-254

QUAD CITIES NUCLEAR POWER STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 170
License No. DPR-29

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated September 20, 1995, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 3.B., and by deleting paragraphs 3.G., 3.J. and 3.L. of Facility Operating License No. DPR-29* and is hereby amended to read as follows:

*Page 5 is attached, for convenience, for the composite license to reflect this change.

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 170, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

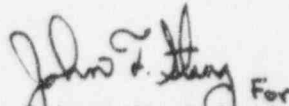
G. Deleted.

J. Deleted.

L. Deleted.

3. This license amendment is effective as of the date of its issuance and shall be implemented no later than June 30, 1996.

FOR THE NUCLEAR REGULATORY COMMISSION



For
Robert M. Pulsifer, Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Attachments:

1. License page 5
2. Changes to the Technical Specifications

Date of Issuance: April 2, 1996

with revisions submitted through July 15, 1992. Changes made in accordance with 10 CFR 73.55, shall be implemented in accordance with the schedule set forth therein.

- F. Commonwealth Edison Company shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report for the facility and as approved in the Safety Evaluation Reports dated July 27, 1979 with supplements dated November 5, 1980 and February 12, 1981; December 30, 1982; December 1, 1987 with supplement dated April 20, 1988; December 11, 1987 with supplement dated July 21, 1988; and February 25, 1991, subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

- G. Deleted.
- H. Deleted by incorporation into 3.E above, per Amendment No. 64 dated March 19, 1981.
- I. (OPEN)
- J. Deleted.
- K. Deleted by Amendment No. 103 dated December 15, 1987.
- L. Deleted.
4. This license is effective as of the date of issuance, and shall expire at midnight, December 14, 2012.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by:

A. Giambusso, Deputy Director
for Reactor Projects
Directorate of Licensing

Enclosures: Appendixes A and B--
Technical Specifications

Amendment No. ~~141~~, ~~150~~, 170



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

COMMONWEALTH EDISON COMPANY

AND

MIDAMERICAN ENERGY COMPANY

DOCKET NO. 50-265

QUAD CITIES NUCLEAR POWER STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 166
License No. DPR-30

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated September 20, 1995, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 3.B., and by deleting paragraphs 3.H., 3.I. and 3.K. of Facility Operating License No. DPR-30 and is hereby amended to read as follows:

*Page 5 is attached, for convenience, for the composite license to reflect this change.

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 166, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

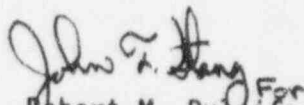
H. Deleted.

I. Deleted.

K. Deleted.

3. This license amendment is effective as of the date of its issuance and shall be implemented no later than June 30, 1996.

FOR THE NUCLEAR REGULATORY COMMISSION



For
Robert M. Pulsifer, Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 2, 1996

with revisions submitted through July 15, 1992. Changes made in accordance with 10 CFR 73.55, shall be implemented in accordance with the schedule set forth therein.

- F. Commonwealth Edison Company shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report for the facility and as approved in the Safety Evaluation Reports dated July 27, 1979 with supplements dated November 5, 1980 and February 12, 1981; December 30, 1982; December 1, 1987 with supplement dated April 20, 1988; December 11, 1987 with supplement dated July 21, 1988; and February 25, 1991, subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

- G. Deleted by incorporation into 3.E above, per Amendment No. dated March 19, 1981.
- H. Deleted.
- I. Deleted.
- J. Deleted
- K. Deleted.
4. This license is effective as of the date of issuance, and shall expire at midnight, December 14, 2012.

FOR THE ATOMIC ENERGY COMMISSION

Original signed by:

A. Giambusso, Deputy Director
for Reactor Projects
Directorate of Licensing

Enclosures: Appendices A and B -- Technical Specifications

Date of Issuance: December 14, 1972

ATTACHMENT TO LICENSE AMENDMENT NOS. 170 AND 166
FACILITY OPERATING LICENSE NOS. DPR-29 AND DPR-30
DOCKET NOS. 50-254 AND 50-265

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the attached pages. The revised pages are identified by the captioned amendment number.

<u>UNIT 1</u> <u>REMOVE</u>	<u>UNIT 2</u> <u>REMOVE</u>	<u>INSERT</u>
6.1-1	6.1-1	6-1
6.1-2	6.1-2	6-2
6.1-3	6.1-3	6-3
6.1-4	6.1-4	6-4
6.1-5	6.1-5	6-5
6.1-6	6.1-6	6-6
6.1-7	6.1-7	6-7
6.1-8	6.1-8	6-8
6.1-9	6.1-9	6-9
6.1-10	6.1-10	6-10
6.1-11	6.1-11	6-11
Figure 6.1-3	Figure 6.1-3	6-12
-	-	6-12a
6.2-1	6.2-1	6-13
6.2-2	6.2-2	6-14
6.2-3	6.2-3	6-15
6.3-1	6.3-1	6-16
6.4-1	6.4-1	6-17
6.5-1	6.5-1	6-18
6.5-2	6.6-1	6-19
6.6-1	6.6-2	6-20
6.6-2	6.6-2a	6-21
6.6-3	6.6-3	6-22
6.6-4	6.6-4	---
6.6-5	6.6-5	---
6.6-6	6.7-1	---
6.7-1	6.8-1	---
6.8-1	6.9-1	---
6.9-1	6.10-1	---
6.10-1	6.11-1	---
6.11-1	6.12-1	---
6.12-1	---	---

ADMINISTRATIVE CONTROLS

6.1 RESPONSIBILITY

- 6.1.A The Station Manager shall be responsible for overall facility operation and shall delegate in writing the succession to this responsibility during his absence.

- 6.1.B The Shift Engineer shall be responsible for directing and commanding the safe overall operation of the facility under all conditions.

ADMINISTRATIVE CONTROLS

6.2 ORGANIZATION

6.2.A Onsite and Offsite Organizations

Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safety of the nuclear power plant.

1. Lines of authority, responsibility, and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated, as appropriate, in the form of organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in the Quality Assurance Manual.
2. The Station Manager shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for safe operation and maintenance of the plant.
3. The Chief Nuclear Officer (CNO) shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure nuclear safety.
4. The individuals who train the operating staff and those who carry out health physics and quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their independence from operating pressures.

ADMINISTRATIVE CONTROLS

6.2.B Unit Staff

The unit staff shall include the following:

1. Three non-licensed operators shall be on site at all times.
2. At least one licensed Reactor Operator shall be present in the control room when fuel is in the reactor. In addition, while the unit is in MODE(s) 1, 2, 3 or 4, at least one licensed Senior Reactor Operator shall be present in the control room.
3. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 6.2.B.1 and 6.2.C for a period of time not to exceed two hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.
4. A Radiation Protection Technician shall be on site when fuel is in the reactor. The position may be vacant for not more than two hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.
5. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety-related functions; e.g, senior reactor operators, reactor operators, health physicists, auxiliary operators, and key maintenance personnel.

The amount of overtime worked by unit staff members performing safety-related functions shall be limited in accordance with the NRC Policy Statement on working hours (Generic Letter 82-12).

6. The Operations Manager or Shift Operations Supervisor shall hold a Senior Reactor Operator License.

6.2.C Shift Technical Advisor

The Shift Technical Advisor (STA) shall provide technical advisory support to the Unit Supervisor in the areas of thermal hydraulics, reactor engineering and plant analysis with regard to the safe operation of the facility. In addition, the STA shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift. A single STA may fulfill this function for both units.

ADMINISTRATIVE CONTROLS

6.3 UNIT STAFF QUALIFICATIONS

Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971, "Selection and Training of Nuclear Plant Personnel", dated March 8, 1971, except for the Rad/Chem Superintendent or Lead Health Physicist, who shall meet or exceed the qualifications of the Radiation Protection Manager as specified in Regulatory Guide 1.8, September 1975, and the Shift Technical Advisor who shall have a bachelor's degree or equivalent in a scientific or engineering discipline with specific training in plant design and response and analysis of the plant for transients and accidents.

ADMINISTRATIVE CONTROLS

6.4 TRAINING

A retraining and replacement program for the unit staff shall be maintained under the direction of the appropriate on site manager. Training shall be in accordance with ANSI N18.1-1971 and 10 CFR 55 for appropriate designated positions and shall include familiarization with relevant industry operational experience.

ADMINISTRATIVE CONTROLS

6.5 [INTENTIONALLY LEFT BLANK]

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ADMINISTRATIVE CONTROLS

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ADMINISTRATIVE CONTROLS

6.7 SAFETY LIMIT VIOLATION

6.7.A The following actions shall be taken in the event a Safety Limit is violated:

1. The NRC Operations Center shall be notified by telephone as soon as possible and in all cases within 1 hour. The Site Vice-President or his designated alternate shall be notified within 24 hours.
2. Within 30 days, a Licensee Event Report (LER) shall be prepared documenting the event pursuant to 10 CFR 50.73. The LER shall be submitted to the NRC.
3. Critical operation of the Unit shall not be resumed until authorized by the Commission.

ADMINISTRATIVE CONTROLS

6.8 PROCEDURES AND PROGRAMS

6.8.A Written procedures shall be established, implemented, and maintained covering the activities referenced below:

1. The applicable procedures recommended in Appendix A, of Regulatory Guide 1.33, Revision 2, February 1978,
2. The Emergency Operating Procedures required to implement the requirements of NUREG-0737 and Supplement 1 to NUREG-0737 as stated in Section 7.1 of Generic Letter No. 82-33,
3. Station Security Plan implementation,
4. Generating Station Emergency Response Plan implementation,
5. PROCESS CONTROL PROGRAM (PCP) implementation,
6. OFFSITE DOSE CALCULATION MANUAL (ODCM) implementation, and
7. Fire Protection Program implementation.

6.8.B Deleted

6.8.C Deleted

6.8.D The following programs shall be established, implemented, and maintained:

1. Reactor Coolant Sources Outside Primary Containment

This program provides controls to minimize leakage from those portions of systems outside primary containment that could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. The systems include CS, HPCI, LPCI, RCIC, process sampling, containment monitoring, and standby gas treatment systems. The program shall include the following:

- a. Preventive maintenance and periodic visual inspection requirements, and
- b. Leak test requirements for each system at a frequency of at least once per operating cycle.

ADMINISTRATIVE CONTROLS

2. In-Plant Radiation Monitoring

This program provides controls which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

- a. Training of personnel,
- b. Procedures for monitoring, and
- c. Provisions for maintenance of sampling and analysis equipment.

3. Post Accident Sampling

This program provides controls which will ensure the capability to obtain and analyze reactor coolant, radioactive iodines and particulates in plant gaseous effluents, and primary containment atmosphere samples under accident conditions. The program shall include the following:

- a. Training of personnel,
- b. Procedures for sampling and analysis,
- c. Provisions for maintenance of sampling and analysis equipment.

ADMINISTRATIVE CONTROLS

4. 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^{(a)(b)(c)(d)(e)} from radioactive effluents as low as reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by station procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- a. 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,
- b. Limitations on the instantaneous concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to ten (10) times the concentration values in 10 CFR Part 20, Appendix B, Table 2, Column 2 to 10 CFR Part 20.1001 - 20.2402,
- c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the ODCM,
- d. Limitations on the annual and quarterly doses to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each Unit conforming to Appendix I to 10 CFR Part 50,
- e. 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,

-
- a. A MEMBER OF THE PUBLIC shall be an individual in a CONTROLLED or UNRESTRICTED AREA. An individual is not a MEMBER OF THE PUBLIC during any period in which the individual receives an occupational dose.
 - b. The CONTROLLED AREA shall be an area, outside of a RESTRICTED AREA but inside the SITE BOUNDARY, access to which can be limited by the licensee for any reason.
 - c. An UNRESTRICTED AREA shall be any area, access to which is neither limited nor controlled by the licensee.
 - d. RESTRICTED AREA shall be an area, access to which is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials. RESTRICTED AREA(s) do not include areas used as residential quarters, but separate rooms in a residential building may be set apart as a RESTRICTED AREA.
 - e. The SITE BOUNDARY shall be that line beyond which the land is neither owned, nor leased, nor otherwise controlled by the licensee.

ADMINISTRATIVE CONTROLS

- f. 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 conforming to Appendix I to 10 CFR Part 50,
- g. Limitations on the dose rate resulting from radioactive materials released in gaseous effluents from the site to areas at or beyond the SITE BOUNDARY shall be limited to the following:
 - a) For noble gases: less than or equal to a dose rate of 500 mrem/yr to the whole body and less than or equal to a dose rate of 3000 mrem/yr to the skin, and
 - b) For Iodine-131, Iodine-133, tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: less than or equal to a dose rate of 1500 mrem/yr to any organ.
- h. 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,
- i. 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 conforming to Appendix I to 10 CFR Part 50,
- j. 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.

ADMINISTRATIVE CONTROLS

5. Primary Containment Leakage Rate Testing Program

A program shall be established to implement the leakage rate testing of the primary containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemption. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Testing Program," dated September 1995.

The peak calculated primary containment internal pressure for the design basis loss of coolant accident, P_{a} , is 48 psig.

The maximum allowable primary containment leakage rate, L_{a} , at P_{a} , is 1% of primary containment air weight per day.

Leakage rate acceptance criteria are:

- a. Primary containment overall leakage rate acceptance criterion is $\leq 1.0 L_{\text{a}}$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $\leq 0.60 L_{\text{a}}$ for the combined Type B and Type C tests, and $\leq 0.75 L_{\text{a}}$ for Type A tests.
- b. Air lock testing acceptance criteria is the overall air lock leakage rate is $\leq 0.05 L_{\text{a}}$ when tested at $\geq P_{\text{a}}$.

The provisions of 4.0.B do not apply to the test frequencies specified in the Primary Containment Leakage Rate Testing Program.

The provisions of 4.0.C are applicable to the Primary Containment Leakage Rate Testing Program.

ADMINISTRATIVE CONTROLS

6.9 REPORTING REQUIREMENTS

In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following identified reports shall be submitted to the Regional Administrator of the appropriate Regional Office of the NRC unless otherwise noted.

6.9.A. Routine Reports

1. Deleted
2. Annual Report

Annual reports covering the activities of the Unit for the previous calendar year, as described in this section shall be submitted prior to March 1 of each year.

ADMINISTRATIVE CONTROLS

The reports required shall include:

- a. Tabulation of the number of station, utility, and other personnel (including contractors) receiving exposures greater than 100 mrem/year and their associated person rem exposure according to work and job functions, e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling. The dose assignments to various duty functions may be estimated based on pocket dosimeter or TLD. Small exposures totaling less than 20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the total whole body dose received from external sources should be assigned to specific major work functions.
 - b. The results of specific activity analysis in which the reactor coolant exceeded the limits of Specification 3.6.J. The following information shall be included: (1) Reactor power history starting 48 hours prior to the first sample in which the limit was exceeded; (2) results of the last isotopic analysis for radioiodine performed prior to exceeding the limit, results of analysis while limit was exceeded and results of one analysis after the radioiodine activity was reduced to less than the limit. Each result should include date and time of sampling and the radioiodine concentrations; (3) Clean-up system flow history starting 48 hours prior to the first sample in which the limit was exceeded; (4) Graph of the I-131 concentration and one other radioiodine isotope concentration in microcuries per gram as a function of time for the duration of the specific activity above the steady-state level; and (5) The time duration when the specific activity of the reactor coolant exceeded the radioiodine limit.
3. Annual Radiological Environmental Operating Report

The Annual Radiological Environmental Operating Report covering the operation of the Unit during the previous calendar year shall be submitted prior to May 1 of each year. The report shall include summaries, interpretations, and analysis of trends of the results of the Radiological Environmental Monitoring Program for the reporting period. The material provided shall be consistent with the objectives outlined in (1) the ODCM and (2) Sections IV.B.2, IV.B.3, and IV.C of Appendix I to 10 CFR Part 50.

ADMINISTRATIVE CONTROLS

4. Radioactive Effluent Release Report

The Radioactive Effluent Release Report covering the operation of the facility during the previous calendar year shall be submitted prior to April 1 of each year. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the facility. The material provided shall be (1) consistent with the objectives outlined in the ODCM and PCP and (2) in conformance with 10 CFR 50.36a and Section IV.B.1 of Appendix I to 10 CFR Part 50.

5. Monthly Operating Report

Routine reports of operating statistics and shutdown experience, including documentation of all challenges to safety valves or safety/relief valves, shall be submitted on a monthly basis to the Director, Office of Resource Management, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the Regional Administrator of the NRC Regional Office, no later than the 15th of each month following the calendar month covered by the report.

6. CORE OPERATING LIMITS REPORT

- a. Core operating limits shall be established and documented in the CORE OPERATING LIMITS REPORT before each reload cycle or any remaining part of a reload cycle for the following:
 - (1) The Control Rod Withdrawal Block Instrumentation for Table 3.2.E-1 of Specification 3.2.E.
 - (2) The Average Planar Linear Heat Generation Rate (APLHGR) Limit for Specification 3.11.A.
 - (3) The Linear Heat Generation Rate (LHGR) for Specification 3.11.D.
 - (4) The Minimum Critical Power Operating Limit (including 20% scram insertion time) for Specification 3.11.C. This includes rated and off-rated flow conditions.
- b. The analytical methods used to determine the operating limits shall be those previously reviewed and approved by the NRC in the latest approved revision or supplement of topical reports:
 - (1) NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel," (latest approved revision).
 - (2) Commonwealth Edison Topical Report NFSR-0085, "Benchmark of BWR Nuclear Design Methods," (latest approved revision).

ADMINISTRATIVE CONTROLS

- (3) Commonwealth Edison Topical Report NFSR-0085, Supplement 1, "Benchmark of BWR Nuclear Design Methods - Quad Cities Gamma Scan Comparisons," (latest approved revision).
 - (4) Commonwealth Edison Topical Report NFSR-0085, Supplement 2, "Benchmark of BWR Nuclear Design Methods - Neutronic Licensing Analyses," (latest approved revision).
- c. The core operating limits shall be determined so that all applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as shutdown margin, and transient and accident analysis limits) of the safety analysis are met. The CORE OPERATING LIMITS REPORT, including any mid-cycle revisions or supplements thereto, shall be provided upon issuance, for each reload cycle, to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector.

6.9.B Special Reports

Special reports shall be submitted to the Regional Administrator of the NRC Regional Office within the time period specified for each report.

ADMINISTRATIVE CONTROLS

6.10 [INTENTIONALLY LEFT BLANK]

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ADMINISTRATIVE CONTROLS

6.11 RADIATION PROTECTION PROGRAM

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.

ADMINISTRATIVE CONTROLS

6.12 HIGH RADIATION AREA

6.12.A Pursuant to 10 CFR 20.1601(c), in lieu of the requirements of paragraph 20.1601 of 10 CFR Part 20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr at 30 cm (12 in.) shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit (RWP)^(f) (or equivalent document). Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

1. A radiation monitoring device which continuously indicates the radiation dose rate in the area.
2. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate levels in the area have been established and personnel have been made knowledgeable of them; or
3. An individual qualified in radiation protection procedures with a radiation dose rate monitoring device, who is responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified in the RWP (or equivalent document).

6.12.B In addition to the requirements of 6.12.A, above, areas accessible to personnel with radiation levels greater than 1000 mrem/hr at 30 cm (12 in.) from the radiation source or from any surface which the radiation penetrates shall require the following:

1. Doors shall be locked to prevent unauthorized entry and shall not prevent individuals from leaving the area. In place of locking the door, direct or electronic surveillance that is capable of preventing unauthorized entry may be used. The keys shall be maintained under the administrative control of the Shift Engineer on duty and/or health physics supervision.
2. Personnel access and exposure control requirements of activities being performed within these areas shall be specified by an approved RWP (or equivalent document).

f Health Physics personnel or personnel escorted by health physics personnel shall be exempt from the RWP issuance requirements during the performance of their assigned radiation protection duties, provided they are otherwise following plant radiation protection procedures for entry into high radiation areas.

ADMINISTRATIVE CONTROLS

3. Each person entering the area shall be provided with an alarming radiation monitoring device that continuously integrates the radiation dose rate (such as an electronic dosimeter.) Surveillance and radiation monitoring by a Radiation Protection Technician may be substituted for an alarming dosimeter.

4. [THIS ITEM INTENTIONALLY LEFT BLANK].

5. For individual HIGH RADIATION AREAS accessible to personnel with radiation levels of greater than 1000 mrem/h at 30 cm (12 in.) that are located within large areas where no enclosure exists for purposes of locking, and where no enclosure can be reasonably constructed around the individual areas, then such individual areas shall be barricaded, conspicuously posted, and a flashing light shall be activated as a warning device.

ADMINISTRATIVE CONTROLS

6.13 PROCESS CONTROL PROGRAM (PCP)

6.13.A Changes to the PCP:

1. Shall be documented and records of reviews performed shall be retained. This documentation shall contain:
 - a. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and,
 - b. 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.
2. [THIS ITEM INTENTIONALLY LEFT BLANK].

ADMINISTRATIVE CONTROLS

6.14 OFFSITE DOSE CALCULATION MANUAL (ODCM)

6.14.A Changes to the ODCM:

1. Shall be documented and records of reviews performed shall be retained. This documentation shall contain:
 - a. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and,
 - b. 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.
2. [THIS ITEM INTENTIONALLY LEFT BLANK].
3. 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 Radioactive Effluent Report for the period of the report in which any change to the ODCM was made effective. 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.