

February 20, 2004

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555-0001

**DOCKETS 50-155 AND 72-043 - LICENSE DPR-6 - BIG ROCK POINT PLANT –  
LICENSE AMENDMENT REQUEST – ADDITIONAL INFORMATION**

On August 6, 2003, Big Rock Point submitted a request for proposed changes to amend the Facility Operating License and Appendix A to the Operating License, Big Rock Point Defueled Technical Specifications pursuant to 10 CFR 50.90. This request was amended on December 1, 2003, to re-insert the requirements for the Offsite Dose Calculation Manual (ODCM) and the Process Control Program (PCP).

As an oversight, the definitions for the ODCM and PCP were not re-inserted in the December 1, 2003 letter. We consider this an editorial addition, as it re-inserts previous information.

Further NRC review revealed missing justification for the deletion of the Cold Weather Protection Program (former section 6.6.2.8.)

The proposed section for deletion is:

"6.6.2.8 Cold Weather Protection Program

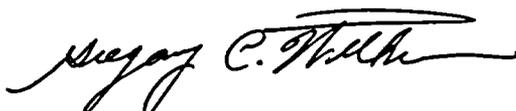
This program provides administrative controls to ensure that appropriate measures are implemented and maintained during cold weather to protect the facility against cold temperatures which could impact safe storage of irradiated fuel or result in unplanned or unmonitored radioactive material release."

This section may be deleted as all spent fuel has been permanently removed from wet storage in the Spent Fuel Pool (SFP) and placed into dry storage on the Independent Spent Fuel Storage Installation (ISFSI). The Liquid Radioactive Waste System (LRWS) has been removed. Any releases of liquid Radwaste shall be released in accordance with the ODCM methods, and no plant system remains for this function.

nmss01

The determination of no significant hazards consideration remains unchanged from Big Rock Point letters submitted August 6, 2003 and December 1, 2003.

Nuclear Regulatory Commission prompt review in this matter is appreciated. Once approved, the License amendment will be implemented immediately. Should you have any questions concerning this letter, please contact Mr. Gregory C. Withrow at (231) 547-8176.

A handwritten signature in black ink, appearing to read "Gregory C. Withrow". The signature is fluid and cursive, with a long horizontal stroke at the end.

Gregory C. Withrow  
Acting Site General Manager

cc: Administrator, Region III, USNRC  
NRC Decommissioning Inspector - Big Rock Point  
NRC NMSS Project Manager – James C. Shepherd  
NRC NMSS Reviewer – Bill Huffman

**Attachment 1**

**Consumers Energy  
BIG ROCK POINT  
Docket Numbers 50-155 and 72-043**

**LICENSE AMENDMENT REQUEST – ADDITIONAL INFORMATION  
Statement of Signature Under Oath and Affirmation  
February 20, 2004**

**1 Page**

Consumers Energy  
Big Rock Point Plant

LICENSE AMENDMENT REQUEST – ADDITIONAL INFORMATION

Docket Numbers 50-155 and 72-043

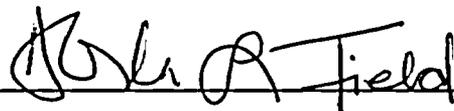
License No DPR-6

At the request of the Commission and pursuant to the Atomic Energy Act of 1954, and the Energy Reorganization Act of 1974, as amended and the Commission's Rules and Regulations thereunder, Consumers Energy submits proposed additional information for amendment 125. This document submits additional information supplementing our submittals dated August 6, 2003 and December 1, 2003. It includes editorial changes (re-insertion of definitions) and deletion of the Cold Weather Protection Program. Consumers Energy's response is dated February 20, 2004.

Consumers Energy

By:   
Gregory C. Withrow  
Acting Site General Manger

Sworn and subscribed before me this 20th day of February 2004.



Dorla L. Field, Notary Public  
Emmet County, Michigan

My Commission expires July 2006.



**Attachment 2**

**Consumers Energy  
BIG ROCK POINT  
Docket Numbers 50-155 and 72-043**

**LICENSE AMENDMENT REQUEST – ADDITIONAL INFORMATION  
Proposed Amendment 125**

**February 20, 2004**

**25 Pages**

BIG ROCK POINT

**DEFUELED TECHNICAL SPECIFICATIONS**

Amendment XXX  
Date

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BIG ROCK POINT PLANT

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Date

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, DC 20555

CONSUMERS ENERGY COMPANY

DOCKET NO 50-155

BIG ROCK POINT PLANT

FACILITY OPERATING LICENSE

License No DPR-6

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Consumers Power Company (renamed Consumers Energy Company by Amendment No. 119, the licensee) dated January 13, 1975, 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. Construction of the Big Rock Point Plant (the facility) has been substantially completed in conformity with Construction Permit No. CPPR-9 and the application, as amended, the provisions of the Act and the rules and regulations of the Commission;
  - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
  - D. There is reasonable assurance: (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission;
  - E. The licensee is technically and financially qualified to engage in the activities authorized by this operating license in accordance with the rules and regulations of the Commission;
  - F. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
  - G. The issuance of this operating license will not be inimical to the common defense and security or to the health and safety of the public; and

- H. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70, including 10 CFR Sections 30.33, 40.32, and 70.23 and 70.31.
2. Facility Operating License No. DPR-6, issued to the Consumers Energy Company, is hereby amended in its entirety to read as follows:
- A. This license applies to the Big Rock Point Plant (the facility) owned by Consumers Energy Company (the licensee). The facility is located in Charlevoix County, Michigan, and is described in the licensee's application dated January 14, 1960, and the Final Hazards Summary Report, as supplemented, updated, and amended by subsequent filings by the licensee.
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Consumers Energy Company:
    - B.(1) Pursuant to Section 104b of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities" to possess the facility at the designated location in Charlevoix County, Michigan, in accordance with the procedures and limitations set forth in this license;
    - B.(2) Pursuant to the Act and 10 CFR Part 70, "Domestic Licensing of Special Nuclear Material," to possess at any one time up to (a) 2500 kilograms of contained uranium 235 in fuel rods, (b) 10.32 grams of uranium 235 as contained in fission counters, (c) 150 kilograms of plutonium contained in PuO<sub>2</sub>-UO<sub>2</sub> fuel rods, and (d) 5 curies of plutonium encapsulated as a plutonium-beryllium neutron source;
      - (a) Deleted
      - (b) Deleted
      - (c) Deleted
      - (d) Deleted
      - (e) Deleted
      - (f) Deleted
      - (g) Deleted
    - (3) Pursuant to the Act and 10 CFR Part 30, "Rules of General Applicability to Domestic Licensing of By-product Material," to receive, possess and use at any one time up to 7000 curies of antimony-beryllium in the form of neutron sources, 3.7 curies of cobalt-60 as sealed sources, 45 curies of cesium-137 as sealed sources, 10 microcuries of miscellaneous alpha emitting material as sealed sources, and up to 500 millicuries per nuclide of any byproduct material between atomic numbers 1 and 83, inclusive, without restriction as to chemical and physical form;

2.B.(4) Pursuant to the Act and 10 CFR Part 40, "Domestic Licensing of Source Material," to possess at any one time up to 500 kilograms of depleted uranium dioxide contained in the facility's fuel assemblies;

(5) Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such by product and special nuclear materials as may be produced by the operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

C.(1) Reactor Operation

The reactor is not licensed for power operation. Fuel shall not be placed in the reactor vessel.

C.(2) Technical Specifications

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

C.(3) Physical Protection

The licensee shall fully implement and maintain in effect all provision of the physical security, guard training and qualification, and safeguards contingency plans approved by the Commission and all amendments and revisions to such plans made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p), as modified by NRC-approved exemptions. The plan, which contains Safeguards information protected under 10 CFR 73.21, is entitled: "Big Rock Point ISFSI Security Plan" Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.

2.C.(4) Deleted

2.C.(5) Deleted

2.C.(6) Deleted

2.C.(7) Deleted

- D. The license amendment is effective as of the date of its issuance and shall be implemented within 45 days of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Signature  
Name  
TITLE

Attachment:  
Change No. xxx to the  
Technical Specifications

Date of Issuance: DATE

# BIG ROCK POINT DEFUELED TECHNICAL SPECIFICATIONS

## DEFINITIONS

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### 1.1 ACTION

ACTION shall be that part of a specification which prescribes remedial measures required under designated conditions.

### 1.2 CHANNEL CALIBRATION

A CHANNEL CALIBRATION is the adjustment as necessary, of the channel output such that the channel responds with the necessary range and accuracy to known values of the parameter which the channel monitors. The CHANNEL CALIBRATION shall encompass the entire channel including the sensor and alarm and/or trip functions, and includes the CHANNEL FUNCTIONAL TEST. The CHANNEL CALIBRATION may be performed by any series of sequential, overlapping, or total channel steps such that the entire channel is calibrated.

### 1.3 CHANNEL CHECK

A CHANNEL CHECK is the qualitative assessment of channel behavior during operation by observation. This assessment shall include, where possible comparison of the channel indication and/or status with other indications and/or status derived from independent instrumentation channels measuring the same parameter.

### 1.4 CHANNEL FUNCTIONAL TEST

A CHANNEL FUNCTIONAL TEST is the injection of a simulated signal into the channel as close to the sensor as practicable to verify performance, including alarm and trip functions.

### 1.5 IMMEDIATELY

When "IMMEDIATELY" is used as a completion time for a required ACTION, the ACTION should be pursued without delay and in a controlled manner.

### 1.6 OFFSITE DOSE CALCULATION MANUAL (ODCM)

The OFFSITE DOSE CALCULATION MANUAL (ODCM) contains the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring alarm and trip setpoints, and in the conduct of the Radiological Environmental Monitoring Program. The ODCM shall also contain (1) the Radioactive Effluent Controls and Radiological Environmental Monitoring programs required by Sections 6.5.2.4 and 6.5.2.5 and (2) descriptions of the information that should be included in the Annual Radiological Environmental

# BIG ROCK POINT DEFUELED TECHNICAL SPECIFICATIONS

## DEFINITIONS

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Operating and Annual Radioactive Effluent Release Reports required by Specifications 6.6.2 and 6.6.3.

1.7 PROCESS CONTROL PROGRAM (PCP)

The PROCESS CONTROL PROGRAM contains the methods and determinations which ensure that the processing and packaging of wet solid radioactive wastes will be accomplished in such a way as to assure compliance with 10 CFR Parts 20, 61 and 71, State regulations, burial ground requirements, and other requirements governing the disposal of solid radioactive waste.

1.8 REPORTABLE EVENT

A REPORTABLE EVENT is any of those conditions specified as reportable in Specification 6.8.

## BIG ROCK POINT DEFUELED TECHNICAL SPECIFICATIONS

### SAFETY LIMITS AND LIMITING SAFETY SYSTEM SETTINGS

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There are no safety limits or limiting safety system settings applicable to the permanently defueled condition.

# BIG ROCK POINT DEFUELED TECHNICAL SPECIFICATIONS

## 3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

### 3/4.0 APPLICABILITY

#### LIMITING CONDITIONS FOR OPERATION

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- 3.0.1 Compliance with the Limiting Conditions for Operation contained in the succeeding specifications is required during the conditions specified therein; except that upon failure to meet the Limiting Conditions for Operation, the associated ACTION requirements shall be met.
- 3.0.2 Noncompliance with a specification shall exist when the requirements of the Limiting Condition for Operation and associated ACTION requirements are not met within the specified time intervals. If the Limiting Condition for Operation is restored prior to expiration of the specified time intervals, completion of the ACTION requirements is not required.
- 3.0.3 Unless otherwise specified, entry into an applicability condition shall not be made unless the conditions of the associated Limiting Condition for Operation are met without reliance on provisions contained in the ACTION statements.

#### SURVEILLANCE REQUIREMENTS

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- 4.0.1 Unless specified otherwise, Surveillance Requirements shall be applicable during the specified applicable conditions for the associated Limiting Conditions for Operation.
- 4.0.2 Each Surveillance Requirement shall be performed within the specified surveillance interval with a maximum allowable extension not to exceed 25 percent of the specified surveillance interval.
- 4.0.3 Unless specified otherwise, performance of a Surveillance Requirement within the specified time interval including the maximum allowable extension shall constitute compliance with associated ACTION statements.
- 4.0.4 Unless specified otherwise, entry into a specified applicable condition shall not be made unless the Surveillance Requirements associated with the Limiting Condition for Operation have been performed within the stated surveillance interval including the maximum allowable extension.

# BIG ROCK POINT DEFUELED TECHNICAL SPECIFICATIONS

## 3/4.1 SEALED SOURCE CONTAMINATION

### LIMITING CONDITIONS FOR OPERATION

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- 3.4.1 Each sealed source containing more than 100 microcuries of beta and/or gamma emitting material, or more than 5 microcuries of alpha emitting material shall not have removable contamination which equals or exceeds 0.005 microcuries.

APPLICABILITY: At all times.

- ACTION:
1. Each sealed source with removable contamination in excess of the above limits shall be IMMEDIATELY withdrawn from use and either decontaminated and repaired, or disposed of in accordance with NRC regulations.
    - a. A special report shall be submitted to the NRC as indicated by Specification 6.6.4.a.

### SURVEILLANCE REQUIREMENTS

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- 4.4.1 Except for: 1) sealed sources which are stored and not in use, and 2) start up sources and fission detectors previously subjected to core neutron flux, sealed sources containing radioactive materials in any form other than gas and with a half-life greater than 30 days (excluding  ${}^3\text{H}$ ) shall be tested for contamination and/or leakage at least once per six months by the licensee or other person specifically authorized by the NRC or an Agreement State to perform such services. The test method shall have a detection sensitivity of at least 0.005 microcuries per test sample. The test sample shall be taken from the sealed source or from the surfaces of the device in which the sealed source is permanently mounted or stored, on which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the NRC.
- a. Sealed sources requiring testing by this section, but exempted on the basis of not being in use, shall have been tested within 6 months prior to being transferred or put into use.

# BIG ROCK POINT DEFUELED TECHNICAL SPECIFICATIONS

## **5.0 DESIGN FEATURES**

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### 5.1 SITE

#### 5.1.1 LOCATION AND BOUNDARIES

The plant site is located in Charlevoix County, Michigan, about 4 miles northeast of Charlevoix, Michigan, and about 11 miles west of Petoskey, Michigan.

# BIG ROCK POINT DEFUELED TECHNICAL SPECIFICATIONS

## **6.0 ADMINISTRATIVE CONTROLS**

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### **6.1 RESPONSIBILITY AND AUTHORITY**

#### **6.1.1 SENIOR NUCLEAR OFFICER**

The Senior Nuclear Officer shall be the Senior Vice President - Nuclear, Fossil, and Hydro Operations and shall be responsible for the overall operation, maintenance and decommissioning of the Big Rock Point nuclear power plant.

#### **6.1.2 SITE GENERAL MANAGER**

The Site General Manager shall be responsible for overall facility operation, maintenance and decommissioning and for periods of absence shall delegate in writing the succession to this responsibility. Unless otherwise specified, the Site General Manager's delegate has authority to perform all actions and grant approvals assigned by these specifications to the Site General Manager. The Site General Manager may delegate specific tasks to other individuals who may perform those tasks whether the Site General Manager is absent or present at the site.

### **6.2 ORGANIZATION**

#### **6.2.1 REPORTING RELATIONSHIPS**

Onsite organization and corporate reporting relationship shall be established as described in the Quality Program Description for Nuclear Power Plants Part 1 - Big Rock Point (CPC-2A).

#### **6.2.2 FACILITY ORGANIZATION**

The Site General Manager or his designate shall verify that required security staffing and Dry Fuel Storage Technical Specification surveillance(s) have been met.

# BIG ROCK POINT DEFUELED TECHNICAL SPECIFICATIONS

## **6.0 ADMINISTRATIVE CONTROLS**

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### **6.3 STAFF QUALIFICATIONS**

Each member of the facility management and supervisory staff shall meet the minimum requirements of ANSI N18.1-1971 for comparable positions. The individual responsible for radiation protection functions shall meet the minimum requirements of Regulatory Guide 1.8, September 1975.<sup>1</sup>

### **6.4 REVIEW AND AUDIT**

Requirements for onsite and offsite reviews and audits are described in the Quality Program Description for Nuclear Power Plants Part 1- Big Rock Point (CPC-2A).

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<sup>1</sup> As applied to this specification, "equivalent," as used in Regulatory Guide 1.8 for the bachelor's degree requirement, may be met with four years of any one or combination of the following: (a) formal training in science engineering or (b) operational or technical experience and training in nuclear power.

# BIG ROCK POINT DEFUELED TECHNICAL SPECIFICATIONS

## 6.0 ADMINISTRATIVE CONTROLS

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### 6.5 PROCEDURES AND PROGRAMS

#### 6.5.1 PROCEDURES

##### 6.5.1.1 Scope

Written procedures shall be established, implemented and maintained for quality related activities defined in the Big Rock Point Decommissioning Quality List and shall meet or exceed the requirements described by the Quality Program Description (CPC-2A).

Written procedures shall also be established, implemented, and maintained covering the following activities:

- a. ISFSI Security Plan;
- b. Emergency Plan;
- c. Fire Protection Plan;
- d. Quality Program Description (CPC-2A); and
- e. Radiation Protection Program.

##### 6.5.1.2 Review and Approval

Requirements for review and approval of procedures (and revisions thereto) required by this section are described in CPC-2A, Quality Program Description.

##### 6.5.1.3 Temporary Changes

Requirements for making temporary changes to procedures which fall within the scope of this section are described in CPC-2A, Quality Program Description.

#### 6.5.2 PROGRAMS

The following programs shall be established, implemented and maintained in accordance with written procedures meeting the requirements contained in Specification 6.5.1.

##### 6.5.2.1 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.

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DATE

# **BIG ROCK POINT DEFUELED TECHNICAL SPECIFICATIONS**

## **6.0 ADMINISTRATIVE CONTROLS**

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### **6.5.2.1.1 High Radiation Area**

#### **6.5.2.1.1.1 Dose Rates less than or equal to 1000 Millirem per Hour**

In lieu of the "control device" or "alarm signal" required by Paragraph 20.1601(a) of 10 CFR Part 20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than or equal to 1000 mrem/hr at 30 cm (12 inches) from the radiation source or from any surface which the radiation penetrates shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by the use of a Radiation Work Permit (RWP). Radiation protection qualified personnel or personnel continuously escorted by radiation protection qualified personnel may be exempt from working under an RWP during the performance of their assigned radiation protection duties in high radiation areas with exposure rates of less than or equal to 1000 mrem/hr, provided they are otherwise following facility radiation protection procedures for entry into such high radiation areas. Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

- a. A radiation monitoring device which continuously indicates the radiation dose rate in the area, or
- b. 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 may be made after the dose rate levels in the area have been established and personnel have been made knowledgeable of them, or
- c. A radiation protection qualified individual (e.g., Radiation Protection Technician) with a radiation dose rate monitoring device, responsible or providing positive control over the activities within the area.

#### **6.5.2.1.1.2 Dose Rates greater than 1000 Millirem per Hour**

In addition to the requirements of 6.5.2.1.1.1, areas accessible to personnel with radiation levels greater than 1000 mrem/hr at 30 cm (12 inches) but less than 500 rad/hr at 1 meter from the radiation source or from any surface which the radiation penetrates shall be provided with locked doors to prevent unauthorized entry, and the keys shall be maintained under administrative controls specified in the facility administrative procedures. Doors shall remain locked except during periods of access by personnel under an approved RWP which shall specify the dose rate levels in the immediate work areas and the maximum allowable stay time for individuals in that area. In lieu of a stay time specification, direct or remote (such as closed circuit TV cameras)

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# BIG ROCK POINT DEFUELED TECHNICAL SPECIFICATIONS

## **6.0 ADMINISTRATIVE CONTROLS**

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continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities being performed within the area.

For individual high radiation areas accessible to personnel with radiation levels greater than 1000 mrem/hr that are located within large areas where no enclosure exists for purposes of locking, and no enclosure can be reasonably constructed around the individual areas, then that individual area shall be barricaded, conspicuously posted, and a flashing light shall be activated as a warning device.

### **6.5.2.2 Process Control Program (PCP)**

#### **6.5.2.2.1 Changes to the PCP**

Changes to the PCP shall become effective after approval by the Site General Manager.

#### **6.5.2.2.2 Reports**

Changes to the PCP shall be submitted to the Commission in the Radioactive Effluent Release Report for the period in which the changes were made effective. This submittal shall contain sufficiently detailed information to support the rationale for each change and a determination that the change did not reduce the overall conformance of the solidified waste product to existing criteria for solid wastes.

### **6.5.2.3 Offsite Dose Calculation Manual (ODCM)**

#### **6.5.2.3.1 Changes to the ODCM**

Changes to the ODCM shall become effective after approval by the Site General Manager.

#### **6.5.2.3.2 Reports**

Changes to the ODCM shall be submitted to the Commission in the Radioactive Effluent Release Report for the period in which the changes were made effective. This submittal shall contain sufficiently detailed information to support the rationale for each change and a determination that the change did not reduce the accuracy or reliability of dose calculations or setpoint determinations.

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# BIG ROCK POINT DEFUELED TECHNICAL SPECIFICATIONS

## **6.0 ADMINISTRATIVE CONTROLS**

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### **6.5.2.4 Radioactive Effluent Controls Program**

A program, conforming with 10 CFR 50.36a, for the control of radioactive effluents and for maintaining doses from radioactive effluents to members of the public as low as reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by facility procedures, and (3) shall include remedial actions to be taken whenever 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 conforming to 10 times the concentration values specified in Appendix B, Table 2, Column 2, to 10 CFR 20.1001 - 20.2402 for the radioactive material release in liquid effluents to unrestricted areas.
- 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 conforming to Appendix I to 10 CFR Part 50 on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from the facility to unrestricted areas;
- 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;
- 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 or dose commitment conforming to Appendix I to 10 CFR Part 50.
- g. The dose rate due to 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 500 mrems/yr to the total body and less than or equal to 3000 mrems/yr to the skin, and

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# BIG ROCK POINT DEFUELED TECHNICAL SPECIFICATIONS

## **6.0 ADMINISTRATIVE CONTROLS**

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- (b) For tritium and for all radionuclides in particulate form with half lives greater than 8 days: Less than or equal to 1500 mrems/yr to any organ.
  
- h. Limitations conforming to Appendix I to 10 CFR Part 50 on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from the facility to areas beyond the site boundary; and
  
- i. Limitations conforming to 40 CFR Part 190 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.
  
- j. The dose to a member of the public from tritium and all radionuclides in particulate form with half lives greater than 8 days in gaseous effluents released to areas at or beyond the site boundary shall be limited to the following:
  - (a) During any calender quarter: Less than or equal to 7.5 mrems to any organ, and
  - (b) During any calender year: Less than or equal to 15 mrems to any organ.

### **6.5.2.5 Radiological Environmental Monitoring Program**

A program shall be provided to monitor the radiation and radionuclides in the environs of the facility. 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:

- a. Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM;
  
- b. 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, or alternatively, that critical receptors are assumed to exist at the site boundary or offsite location of highest dose consequence; and

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- c. Participation in a 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.

### **6.6 REPORTING REQUIREMENTS**

The reports identified in this section shall be submitted in accordance with 10 CFR 50.4.

#### **6.6.1 ANNUAL OCCUPATIONAL RADIATION EXPOSURE REPORT**

An annual report of radiation exposures received during the previous calendar year shall be submitted prior to March 1 of each year. This report shall tabulate the numbers of facility, utility and other personnel (including contractors) receiving exposures greater than 100 millirem during the year, along with their associated dose according to work and job functions, for example, operations and surveillance, routine maintenance, special maintenance (identify), and waste processing. The dose assignments to various duty functions may be estimated based on pocket dosimeter, TLD or film badge measurements. Small exposures totaling less than 20 percent of the individual total dose need not be accounted for. In the aggregate, at least 80 percent of the total whole body dose received from external sources should be assigned to specific major work functions.

#### **6.6.2 ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT**

An annual radiological environmental operating report covering operation of the facility during the previous calendar year shall be submitted prior to May 1 of each year. The report shall include summaries, interpretations, and statistical evaluation of the results of the Radiological Environmental Monitoring Program for the reporting period. The material provided shall be consistent with the objectives outlined in the ODCM and Sections IV.B.2, IV.B.3 and IV.C of Appendix I to 10 CFR 50.

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### **6.6.3 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

An annual radioactive effluent release report covering operation of the facility during the previous calendar year shall be submitted prior to May 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 consistent with the objectives outlined in the ODCM and the PROCESS CONTROL PROGRAM, and shall comply with the requirements of 10 CFR 50.36a and Section IV.B.1 of Appendix I to 10 CFR Part 50.

### **6.6.4 SPECIAL REPORTS**

The following special report shall be submitted to the NRC as indicated.

- a. If the sealed source contamination limits of Specification 3.4.1 are exceeded, a special report shall be submitted to the NRC within 30 days of identification of the existence of the excessive contamination. The report shall describe the equipment involved, the test results and corrective actions taken.

### **6.7 RECORDS**

Record retention requirements are described in the Quality Program Description for Nuclear Power Plants Part 1- Big Rock Point (CPC-2A).

### **6.8 REPORTABLE EVENTS**

A reportable event is any event or condition that must be reported to the NRC in accordance with 10 CFR 50.72, 10 CFR 50.73, 10 CFR 50.9(b), or 10 CFR 72.75.

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BASES FOR  
LIMITING CONDITIONS FOR OPERATION  
AND  
SURVEILLANCE REQUIREMENTS  
FOR THE  
BIG ROCK POINT  
DEFUELED TECHNICAL SPECIFICATIONS

NOTE

The bases contained in this section summarize the reasons for the Specifications in Section 3/4, but in accordance with 10 CFR 50.36, are not part of these Technical Specifications.

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## BIG ROCK POINT DEFUELED TECHNICAL SPECIFICATIONS

### 3/4.0 APPLICABILITY

#### BASES

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3.0.1 This specification defines specifically when the other specifications in Section 3/4 are applicable.

3.0.2 This specification defines those conditions which must be met in order to comply with the terms of a Limiting Condition of Operation and its associated ACTION requirement.

3.0.3 This specification provides that entry into a specified Applicability condition may be made only when all other parameters as specified in the Limiting Conditions for Operation are met without regard to allowable deviations and out of service provisions contained in the Action statements.

The intent of this provision is to ensure that activities are not initiated with required equipment specified limits being exceeded.

4.0.1 This specification establishes that, unless otherwise specified, surveillances must be performed during the specified applicable conditions for which the requirements of the Limiting Conditions for Operation apply. The purpose of this specification is to ensure that surveillances are performed to verify the operational status of systems and components and that parameters are within specified limits to ensure safe operation of the facility when the plant is in a specified Applicability condition. The specification also establishes that surveillance requirements do not need to be performed when the facility is in a condition for which the requirements of the associated Limiting Conditions for Operation do not apply.

4.0.2 This specification establishes how long the specified time interval for a surveillance requirements may be extended. The intent of providing this allowance is to facilitate surveillance scheduling to account for conditions that may not be suitable for conducting the surveillance. It is not intended that this provision be used repeatedly as a convenience to extend the surveillance intervals beyond those specified.

The allowable extension provided by Specification 4.0.2 is based on engineering judgment and the recognition that the most probable result of any particular surveillance is conformance with the surveillance requirement. These provisions are sufficient to ensure that the reliability demonstrated through surveillance activities is not significantly degraded as a result of an extended interval.

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## BIG ROCK POINT DEFUELED TECHNICAL SPECIFICATIONS

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### 3/4.0 APPLICABILITY

#### BASES (continued)

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- 4.0.3 This specification ensures that the surveillance activities associated with a Limiting Condition for Operation have been performed within the specified time interval, including the maximum allowable extension, prior to entry into specified applicability conditions. The intent of this provision is to ensure that surveillance activities have been satisfactorily demonstrated.

## BIG ROCK POINT DEFUELED TECHNICAL SPECIFICATIONS

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### 3/4.1            SEALED SOURCE CONTAMINATION

#### BASES

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3.4.1            The limitation on removable contamination for sources requiring leak testing meets the limits of 10 CFR 70.39 for sources containing plutonium. The limitation provides assurance that leakage from sealed sources covered by the specification will not exceed allowable intake values.

The ACTION ensures that sources exhibiting leakage are controlled in accordance with NRC regulations.

4.4.1            For purposes of testing, the specification categorizes sealed sources into two groups (in use, or stored and not in use), with surveillance requirements commensurate with the probability of damage to a source in that group.