Entergy Nuclear Operations, Inc.
1340 Echelon Parkway
Jackson, MS 39213
Tel 601-368-5573

Mandy K. Halter
Director, Nuclear Licensing

10 CFR 50.90

NL-19-013

April 15, 2019

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

Subject: Proposed Technical Specifications Change - Administrative Controls for Permanently Defueled Condition

Indian Point Nuclear Generating Units 2 and 3
NRC Docket Nos. 50-247 and 50-286
Renewed Facility Operating License Nos. DPR-26 and DPR-64

Reference:
1. Entergy Nuclear Operations, Inc. (Entergy) letter to U.S. Nuclear Regulatory Commission (NRC), "Notification of Permanent Cessation of Power Operations," dated February 8, 2017 (Letter NL-17-021) (ADAMS Accession No. ML17044A004)
2. Entergy letter to NRC, "Request for Approval of a Certified Fuel Handler Training and Retraining Program," dated April 15, 2019 (Letter Number: NL-19-012) (ADAMS Accession No. ML19105A632)

Dear Sir or Madam:

In accordance with Title 10 of the Code of Federal Regulations (CFR) Part 50, Section 50.90, "Application for amendment of license, construction permit, or early site permit," Entergy Nuclear Operations, Inc. (Entergy) is proposing an amendment to Renewed Facility Operating Licenses DPR-26 and DPR-64, Appendix A, Technical Specifications (TS) for Indian Point Nuclear Generating Units 2 (IP2) and 3 (IP3).

In Reference 1, Entergy notified the U.S. Nuclear Regulatory Commission (NRC) that it has decided to permanently cease operations of IP2 and IP3 no later than April 30, 2020 and April 30, 2021 respectively. Once certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel are submitted to the NRC in accordance with 10 CFR 50.82(a)(1)(i) and (ii), the 10 CFR Part 50 license will no longer permit operation of the reactor or placement of fuel in the reactor vessel, in accordance with 10 CFR 50.82(a)(2).

The basis for the proposed amendment is that certain administrative controls may be revised or removed to reflect the permanently defueled condition.

This request proposes changes to the staffing and training requirements for the IP2 and IP3 staff contained in Section 5.0, "Administrative Controls" of the IP2 and IP3 TS. Reference 2 proposed a Certified Fuel Handler Training and Retraining Program for NRC approval. Additional changes are also proposed to Sections 1.1 (Definitions), 4.0 (Design Features), and 5.0 (Administrative Controls) of the IP2 and IP3 TS that are no longer applicable to a permanently defueled facility once IP2, and subsequently IP3, is permanently defueled. Additional changes to Section 5.0 of the IP2 and IP3 TS will be made as part of the Defueled Technical Specifications scheduled for submittal later in 2019.

Entergy has reviewed the proposed amendment in accordance with 10 CFR 50.92 and concludes it does not involve a significant hazards consideration.

In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the New York State Department of Health and Emergency Management Agencies.

Enclosure 1 to this letter provides a detailed description and evaluation of the proposed changes for IP2. Attachment 1 to Enclosure 1 contains a markup of the current TS pages for IP2. Attachment 2 to Enclosure 1 contains the retyped TS pages for IP2. Enclosure 2 provides a detailed description and evaluation of the proposed changes for IP3. Attachment 1 to Enclosure 2 contains a markup of the current TS pages for IP3. Attachment 2 to Enclosure 2 contains the retyped TS pages for IP3.

Entergy requests review and approval of this proposed license amendment by April 29, 2020. Entergy requests that the approved amendments become effective following the docketing of the certifications required by 10 CFR 50.82(a)(1).

If you have any questions on this transmittal, please contact Mr. Robert W. Walpole at 914-254-6710.

There are no new regulatory commitments made in this letter.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 15, 2019.

Sincerely,

Mandy K. Halter
Director, Nuclear Licensing

MKH/rww/aye

Enclosure 1: Description and Evaluation of the Proposed Changes - Indian Point Nuclear Generating Station Unit 2

Attachments to Enclosure 1:

1. Markup of Technical Specifications (TS) Pages - Indian Point Nuclear Generating Station Unit 2

2. Clean Technical Specifications (TS) Pages - Indian Point Nuclear Generating Station Unit 2

Enclosure 2: Description and Evaluation of the Proposed Changes - Indian Point Nuclear Generating Station Unit 3

Attachments to Enclosure 2:

1. Markup of Technical Specifications (TS) Pages - Indian Point Nuclear Generating Station Unit 3

2. Clean Technical Specifications (TS) Pages - Indian Point Nuclear Generating Station Unit 3

cc: Regional Administrator, NRC Region I
NRC Senior Resident Inspector– Indian Point Nuclear Generating Station Units 2 and 3
Senior Project Manager, NRC/NRR/DORL
President and CEO, NYSERDA
New York State Public Service Commission
NYS Department of Health - Radiation Control Program
NYS Emergency Management Agency

ENCLOSURE 1

NL-19-013

Description and Evaluation of Proposed Changes

Indian Point Nuclear Generating Station Unit 2
NRC Docket No. 50-247
Renewed Facility Operating License DPR-26

(19 Pages)

1. SUMMARY DESCRIPTION

On February 8, 2017, Entergy Nuclear Operations, Inc. (Entergy) notified the U.S. Nuclear Regulatory Commission (NRC) that it would permanently cease power operations at Indian Point Nuclear Generating Station Unit No. 2 (IP2) no later than April 30, 2020 (Reference 1).

This evaluation supports a request to amend Renewed Facility Operating License DPR-26 for IP2. The proposed changes would revise and remove certain requirements contained within Sections 1.1, 4.0 and 5.0 of the IP2 Technical Specifications (TS) by deleting the portions of the TS that are no longer applicable to a permanently defueled facility, while modifying the other sections to correspond to the permanently defueled condition once IP2 is permanently defueled. Once the certifications that IP2 has permanently ceased power operations and fuel has been permanently removed from the reactor vessel are docketed, the 10 CFR Part 50 license for IP2 will no longer authorize operation of the reactor or placement of fuel in the reactor vessel or emplacement or retention of fuel in the reactor vessel in accordance with 10 CFR 50.82(a)(2).

The changes proposed by this amendment would not be effective until the certification of permanent removal of fuel from the reactor vessel has been submitted to the NRC, which is anticipated in May 2020, and NRC approval of the IP2 Certified Fuel Handler Training and Retraining Program, which was submitted in Reference 2.

2. DETAILED DESCRIPTION AND BASIS FOR THE CHANGES

Attachment 1 contains a markup of the current TS pages. Attachment 2 contains the retyped TS pages, including administrative changes to spacing to address the revised content. IP2 proposes to modify the TSs listed in the following tables. In addition, IP2 is providing a description and basis for each of the proposed changes.

Proposed Change to IP2 TS Section 1.0, Definitions	
Current Definition There is no current definition for Certified Fuel Handler.	Proposed Definition CERTIFIED FUEL HANDLER is an individual who complies with the provisions of the CERTIFIED FUEL HANDLER Training and Retraining Program required by TS 5.3.2.
Current Definition There is no current definition for Non-Certified Operator.	Proposed Definition NON-CERTIFIED OPERATOR is a non-licensed operator who complies with the qualification requirements of Specification 5.3.1, but is not a CERTIFIED FUEL HANDLER.
Basis	
Entergy proposes to add definitions for Certified Fuel Handler and Non-Certified Operator. This ensures that these positions are consistently utilized throughout the TS.	

Proposed Change to IP2 TS Section 4.0, Design Features

Current TS 4.2, Reactor Core	Proposed TS 4.2, Reactor Core
4.2.1 Fuel Assemblies The reactor shall contain 193 fuel assemblies. Each assembly shall consist of a matrix of Zircalloy-4 or ZIRLO fuel rods. Fuel shall have a U-235 enrichment of ≤ 5.0 weight percent. Limited substitutions of Zircalloy-4, ZIRLO or stainless steel filler rods for fuel rods, in accordance with approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with applicable NRC staff approved codes and methods and shown by tests or analyses to comply with all fuel safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in nonlimiting core regions. 4.2.2 Control Rod Assemblies The reactor core shall contain 53 control rod assemblies. The control rod material shall be silver indium cadmium, clad with stainless steel, as approved by the NRC.	Deleted

Basis

Entergy proposes to delete TS 4.2, Reactor Core, because it will no longer apply in the permanently defueled condition. Once the certifications required by 10 CFR 50.82(a)(1) have been docketed, fuel assemblies (thus control rod assemblies will not be required) will no longer be authorized to be retained or emplaced in the IP2 reactor vessel, pursuant to 10 CFR 50.82(a)(2).

Proposed Changes to IP2 TS Section 5.0, Administrative Controls	
5.1 Responsibility	
Current TS 5.1.1 The plant manager shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during his absence…	Proposed TS 5.1.1 The plant manager shall be responsible for overall facility operation and shall delegate in writing the succession to this responsibility during his absence…
Current TS 5.1.2 The shift supervisor (SS) shall be responsible for the control room command function. During any absence of the SS from the control room while the unit is in MODE 1, 2, 3, or 4, an individual with an active Senior Reactor Operator (SRO) license shall be designated to assume the control room command function. During any absence of the SS from the control room while the unit is in MODE 5 or 6, an individual with an active SRO license or Reactor Operator license shall be designated to assume the control room command function.	Proposed TS 5.1.2 The shift manager (SM) shall be responsible for the shift command function.
Basis	
This section identifies the responsibilities for the control room command function associated with Modes of plant operation, and is based on personnel positions and qualifications for an operating plant. It identifies the need for a delegation of authority for command in an operating plant when the principal assignee leaves the control room. TS 5.1.1 - The term "unit" is changed to "facility." This is an administrative change that reflects IP2 will be permanently shutdown and defueled. The term "facility" is a more appropriate description of a site that is undergoing decommissioning. This change is proposed throughout this license amendment request. In all cases that this change is made, overall management and staff responsibilities and the description of the facility are unchanged. TS 5.1.2 - Entergy proposes to change this TS to eliminate the Mode dependency for this function and personnel qualifications associated with an operating plant. The proposed change establishes the shift manager as having command of the shift. Delegation of command is unnecessary once IP2 is in the permanently defueled condition with fuel in the spent fuel pool. Any event involving loss of spent fuel pool cooling would evolve slowly enough that no immediate response would be required to protect the health and safety of the public or facility personnel.	

5.2 Organization	
Current TS 5.2.1, 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 safety of the nuclear power plant. a. Lines of authority, responsibility, and communication shall be defined and established throughout highest management levels, intermediate levels, and all operating organization positions. These relationships shall be documented and updated, as appropriate, in organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements including the plant-specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications shall be documented in the UFSAR, b. The plant manager shall be responsible for overall safe operation of the plant and shall have control over those onsite activities necessary for safe operation and maintenance of the plant, c. The corporate officer with direct responsibility for the plant 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, and	Proposed TS 5.2.1, Onsite and Offsite Organizations Onsite and offsite organizations shall be established for facility staff and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting safety of the nuclear fuel. a. Lines of authority, responsibility, and communication shall be defined and established throughout highest management levels, intermediate levels, and all decommissioning organization positions. These relationships shall be documented and updated, as appropriate, in organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements including the facility-specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications shall be documented in the UFSAR, b. The plant manager shall be responsible for overall safe maintenance of the facility and shall have control over those onsite activities necessary for safe storage and maintenance of nuclear fuel; c. The corporate officer with direct responsibility for IP2 shall have corporate responsibility for the safe storage and handling of nuclear fuel and shall take any measures needed to ensure acceptable performance of the staff in maintaining and providing technical support to the facility to ensure safe management of nuclear fuel, and

d. The individuals who train the operating staff, carry out health physics, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their independence from operating pressures.	d. The individuals who train the CERTIFIED FUEL HANDLERS, carry out health physics, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their ability to perform their assigned functions.

Basis

The introduction to this section identifies that organizational positions are established that are responsible for the safety of the nuclear plant. This is changed to require that positions be established that are responsible for the safe handling and storage of nuclear fuel. This change removes the implication that IP2 can return to operation once the certifications required by 10 CFR 50.82(a)(1) are docketed.

The term "unit operation" is changed to "facility staff." In addition, the term "plant" is changed to "facility" or "IP2" in several locations. These are administrative changes that reflect that IP2 will be permanently shutdown and defueled. The term "facility" is a more appropriate description of a site that is undergoing decommissioning. This change is proposed throughout this license amendment request. In all cases that this change is made, overall management and staff responsibilities and the description of the facility are unchanged.

The terms "safe storage and maintenance of the nuclear fuel," "safe management of the nuclear fuel," and "the safe storage and handling of the nuclear fuel" are considered analogous to "nuclear safety" for a facility that will be in the permanently defueled condition. Proposed changes to replace "nuclear safety" with one of these analogues serves to narrow the focus of nuclear safety concerns to the nuclear fuel.

TS 5.2.1.a - This section identifies the lines of authority, responsibility and communication. The change from "Operating" organization to "Decommissioning" organization is for a facility that will be in the permanently defueled condition and undergoes decommissioning. The change from "plant-specific" to "facility-specific" is administrative.

TS 5.2.1.b – This section identifies the organizational position responsible for the safe operation of the plant, and for control of activities necessary for the safe operation and maintenance of the plant.

To reflect the change in safety concerns from an operating plant to a permanently defueled facility, the responsibility for control of activities necessary for the safe operation and maintenance of the facility is changed to the responsibility for safe storage and maintenance of the nuclear fuel. The change from "plant" to "facility" is administrative.

TS 5.2.1.c - This section identifies the organizational position responsible for overall nuclear plant safety.

To reflect the change in safety concerns from an operating plant to a permanently defueled facility, Entergy proposes to change the responsibility from "for overall plant nuclear safety" to "the safe storage and handling of nuclear fuel," and the responsibility for providing technical support to "the plant to ensure nuclear safety" is changed to "the facility to ensure safe management of nuclear fuel." The word "operating" was removed as the facility would not be in operation once permanently defueled.

TS 5.2.1.d - This TS addresses the requirement for organizational independence of the personnel who train the operations staff, health physics personnel and quality assurance personnel from operating pressures.

This is changed to replace "operating staff' with "Certified Fuel Handlers" and to replace "their independence from operating pressures" to "their ability to perform their assigned functions." These changes reflect the changed function of the previous operating staff to a focus on safe handling and storage of nuclear fuel, and to remove the implication that IP2 can return to operation once the certifications required by 10 CFR 50.82(a)(1) are docketed.

Current TS 5.2.2, Unit Staff	Proposed TS 5.2.2, Facility Staff
The unit staff organization shall include the following:	The facility staff organization shall include the following:
a. A non-licensed operator shall be assigned to each reactor containing fuel and an additional non-licensed operator shall be assigned for each control room from which a reactor is operating in MODES 1, 2, 3, or 4.	a. Each duty shift shall be composed of at least one shift manager and one NON-CERTIFIED OPERATOR. The NON-CERTIFIED OPERATOR position may be filled by a CERTIFIED FUEL HANDLER. At least one person qualified to stand watch in the control room (NON-CERTIFIED OPERATOR or CERTIFIED FUEL HANDLER) shall be present in the control room when nuclear fuel is stored in the spent fuel pool.
b. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 5.2.2.a and 5.2.2.f for a period of time not to exceed 2 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.	b. Shift crew composition may be less than the minimum requirement of 5.2.2.a for a period of time not to exceed 2 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 and all of the following conditions are met: 1) No fuel movements are in progress; 2) No movement of loads over fuel are in progress; and

	3) No unmanned shift positions during shift turnover shall be permitted while the shift crew is less than the minimum.
c. A radiation protection technician shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.	c. An individual qualified in radiation protection procedures shall be on site during fuel handling operations and during movement of heavy loads over the fuel storage racks. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.
d. Not Used.	d. Not Used.
e. The operations manager or assistant operations manager shall hold an SRO license.	e. The shift manager shall be a CERTIFIED FUEL HANDLER.
f. When in MODES 1, 2, 3 or 4 an individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by ANSI/ANS 3.1-1993 as endorsed by RG 1.8, Rev. 3, 2000.	f. Deleted.

Basis

As discussed above, the change from "unit" to "facility" in the title of this section is administrative.

TS 5.2.2.a - This TS stipulates when non-licensed operators must be onsite or assigned to the operating shift, based on status of fuel in the reactor, or operational mode.

Once certifications for permanent cessation of operations and permanent removal of fuel from the IP2 reactor vessel as required by 10 CFR 50.82(a)(1) are docketed, the minimum requirement is changed to a minimum crew compliment of one shift manager and one Non-Certified Operator. This reflects the reduced number of systems, compared to an operating reactor, required to provide and support spent fuel pool cooling and monitor spent fuel pool parameters, such as spent fuel pool level and temperature, while still maintaining the ability to ensure spent fuel handling operations are carried out in a safe manner. Moreover, the spectrum of credible

accidents and operational events, and the quantity and complexity of activities required for safety will be greatly reduced from that at an operating plant. The shift manager will be qualified as a Certified Fuel Handler in accordance with revised TS 5.2.2.e. In this position, this individual will retain command and control responsibility for operational decisions and will be responsible for the functions required for event reporting and emergency response.

This change also reflects the requirement for having one qualified watch stander (either a Non-Certified Operator or Certified Fuel Handler) in the control room when fuel is stored in the spent fuel pool. This reflects the reduced requirement for control room personnel training and qualification for a plant authorized for nuclear fuel storage only. Entergy submitted a Certified Fuel Handler Training and Retraining Program for NRC approval in Reference 2. The training and qualification for the Non-Certified Operator will be determined in accordance with the systems approach to training (SAT) as defined in 10 CFR 55.4. This process ensures that the Non-Certified Operator will be qualified to perform the functions necessary to monitor and ensure safe storage of fuel. The SAT process requires: (1) systematic analysis of the jobs to be performed; (2) learning objectives derived from the analysis which describe desired performance after training; (3) training design and implementation based on the learning objectives; (4) evaluation of trainee mastery of the objectives during training; and (5) evaluation and revision of the training based on the performance of trained personnel in the job setting. There will be a sufficient number of individuals qualified as Certified Fuel Handlers to staff the plant twenty-four hours a day, seven days a week. Additional on-shift staffing will be provided to satisfy applicable security, fire protection, and emergency preparedness requirements.

The control room will remain the physical center of the command function. However, since control of activities may be performed either remotely from the control room or locally in the facility, the location of the command center is functionally where the shift manager is located in accordance with proposed TS 5.1.2. Activities that could be performed from the control room that have the potential to affect forced cooling of spent nuclear fuel include starting and stopping cooling water pumps, as well as changing the electrical power distribution system alignment.

All spent fuel handling activities are performed locally at the spent fuel pool. A number of indications and/or alarms are also received in the control room that would be indicative of spent fuel pool abnormalities. The shift manager is responsible for directing response to those abnormalities, from either the control room or local to the spent fuel pool in accordance with applicable response procedures.

For any conditions, incidents, or events that occur when the Non-Certified Operator is in the control room alone and are not within the scope of qualifications that are possessed by the Non-Certified Operator, the shift manager will be immediately contacted for direction by phone, radio, and/or plant page system. This philosophy is deemed acceptable because the necessity to render immediate actions to protect the health and safety of the public is not challenged.

TS 5.2.2.b - This TS addresses the conditions under which the minimum shift compliment may be reduced. It allows for shift crew composition to be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and TS 5.2.2.a and TS 5.2.2.f for a period of time not to exceed 2 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

The reference to 10 CFR 50.54(m)(2)(i) is removed, because IP2 will not return to operation once the certifications required by 10 CFR 50.82(a)(1) are docketed, and the requirement for licensed

operating personnel will no longer be required to protect public health and safety. No exemption from 10 CFR 50.54(m)(2)(i) is needed or requested to support this change, based on the NRC's response to a similar request from Vermont Yankee Nuclear Power Station (VYNPS) in June 2014 (Reference 3).

Entergy proposes to remove the reference to TS 5.2.2.f to be consistent with the proposed change to delete that TS.

TS 5.2.2.c - This TS establishes the requirement for a person qualified in radiation protection procedures to be onsite when fuel is in the reactor. This TS also allows for the position to be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.

Entergy proposes to revise the condition of this TS so that an individual qualified in radiation protection procedures is present onsite during the movement of fuel and during the movement of loads over fuel, because fuel will not be able to be placed or stored in the reactor vessel once the certifications required by 10 CFR 50.82(a)(1) are docketed.

TS 5.2.2.d – No Change - Not Used.

TS 5.2.2.e - This TS establishes the requirement for the operations manager, or an assistant operations manager, to hold a Senior Reactor Operator (SRO) license.

Entergy proposes to revise this TS to replace the requirement with a requirement that the shift manager be a Certified Fuel Handler. Once the certifications required by 10 CFR 50.82(a)(1) have been docketed, the requirements of 10 CFR 50.54(m) will no longer be applicable because the IP2 10 CFR Part 50 license will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel. These certifications also obviate the need for the operators' licenses specified in 10 CFR Part 55. Therefore, there is no longer a need for operations management staff to hold a SRO license. Replacing this with a requirement that the shift manager be a Certified Fuel Handler ensures that the senior individual on shift is appropriately trained and qualified in accordance with the NRC-approved Certified Fuel Handler Training and Retraining Program, to supervise shift activities. As discussed above, no exemption from 10 CFR 50.54(m) is needed or requested to support this change.

The IP2 management structure will not require positions above the shift manager to be a Certified Fuel Handler or attend equivalent training. Entergy has determined that once the plant is permanently shutdown and defueled, the time available to mitigate credible events is expected to be greater than that for current design basis events. As such, management oversight of the facility can be performed by individuals meeting the applicable requirements of American National Standards Institute (ANSI) / American Nuclear Society (ANS) 3.1-1978 (as required by TS 5.3.1) and need not be qualified as Certified Fuel Handlers.

TS 5.2.2.f - This TS establishes the requirements for a technical advisor position.

Entergy proposes to delete this TS, because this position is only required for a plant authorized for power operations. Once the certifications required by 10 CFR 50.82(a)(1) have been docketed, the requirements of this TS will no longer be applicable because the IP2 10 CFR Part 50 license will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel.

5.3 Unit Staff Qualifications	
Current TS 5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions with exceptions specified in the Entergy Quality Assurance Program Manual (QAPM).	Proposed TS 5.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions with exceptions specified in the IPEC Quality Assurance Program Manual (QAPM).
Current TS 5.3.2 For the purpose of 10 CFR 55.4, a licensed Senior Reactor Operator (SRO) and a Licensed Reactor Operator (RO) are those individuals who, in addition to meeting the requirements of Specification 5.3.1, perform the functions described in 10 CFR 50.54(m).	Proposed TS 5.3.2 An NRC approved training and retraining program for CERTIFIED FUEL HANDLERS shall be maintained.
Basis	
As discussed above, the change from "unit" to "facility" in the title of this section is administrative. TS 5.3.1 - This TS specifies the minimum qualifications for the IP2 staff. The change from "unit" to "facility" in this TS is an administrative change. In addition, IP2 proposes to revise the title of the QAPM by removing specific reference to the Entergy corporate QAPM. This change will allow IP2 to transition from the Entergy corporate QAPM to a site-specific QAPM during the decommissioning process. No change to the qualification standards or exceptions to the standards are proposed. Accordingly, this change is administrative only. TS 5.3.2 - This TS defines SROs and ROs as the individuals who perform the functions defined in 10 CFR 50.54(m). Entergy proposes to delete this TS, because neither 10 CFR 50.54(m) nor the requirement for licensed operators per 10 CFR 55 apply following submittal of the certifications required by 10 CFR 50.82(a)(1). As discussed above, no exemption from 10 CFR 50.54(m) is needed or requested to support this change. Entergy proposes to add a new TS 5.3.2 to require that an NRC approved training and retraining program for the Certified Fuel Handlers shall be maintained. The Certified Fuel Handler Training and Retraining Program ensures that the qualifications of Certified Fuel Handlers are commensurate with the tasks to be performed and the conditions requiring response. 10 CFR 50.120, "Training and qualification of nuclear power plant personnel," requires training programs to be derived using a SAT as defined in 10 CFR 55.4. Although the requirements of 10 CFR 50.120 apply to holders of an operating license issued under 10 CFR Part 50, and the IP2 license will no longer authorize operation following docketing of the certifications required by	

10 CFR 50.82(a)(1), the Certified Fuel Handler Training and Retraining Program nonetheless aligns with those requirements. The Certified Fuel Handler Training and Retraining Program provides adequate confidence that appropriate SAT based training of personnel who will perform the duties of a Certified Fuel Handler is conducted to ensure the facility is maintained in a safe and stable condition.

5.4 Procedures	
Current TS 5.4.1 Written procedures shall be established, implemented, and maintained covering the following activities: a. The applicable requirements and recommendations of Sections 5.2 and 5.3 of ANSI N18.7-1976 and Appendix A of Regulatory Guide 1.33, Revision 2 except as provided in the quality assurance program described or referenced in the Updated FSAR; b. The emergency operating procedures required to implement the requirements of NUREG-0737 and NUREG-0737, Supplement 1, as stated in Generic Letter 82-33;	Proposed TS 5.4.1 Written procedures shall be established, implemented, and maintained covering the following activities: a. The procedures applicable to the safe storage of nuclear fuel recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978 except as provided in the quality assurance program described or referenced in the Updated FSAR; b. Deleted

Basis

This TS provides a description and requirements regarding administration of written procedures. TS 5.4 will remain applicable with the reactor permanently defueled. As such, it is retained and revised to reflect a permanently defueled condition. Relevant procedures drawings and instructions will continue to be controlled per 10 CFR 50, Appendix B, Criterion VI, "Document Control." Activities involving security and emergency planning and preparedness will continue to be controlled by procedure.

TS 5.4.1.a - Entergy proposes to revise the applicability for this TS to procedures applicable to the safe storage of nuclear fuel recommended in Regulatory Guide 1.33, Revision 2, Appendix A. Since operating and refueling the reactor will both be prohibited by the 10 CFR Part 50 license once the certifications required by 10 CFR 50.82(a)(1) have been docketed, procedures associated with these activities will no longer need to be maintained. Procedures governing fuel handling operations will provide the guidance necessary to ensure safe handling of spent fuel in the spent fuel pool and transfer from the spent fuel pool to dry fuel storage casks. Procedures governing responses to fuel handling accidents, personnel injuries, spent fuel pool events and external events provide the necessary guidance to mitigate the consequences of such events. No change to IP2's actions in response to a fuel handling accident is proposed.

TS 5.4.1.b - This TS requires emergency operating procedures that implement the requirements of NUREG-0737 and NUREG-0737, Supplement 1, as stated in Generic Letter 82-33. This TS is proposed to be deleted as Generic Letter 82-33 was only addressed to licensees of operating reactors, applicants for operating licenses, and holders of construction permits, none of which will apply to IP2 in the permanently defueled condition. As discussed above, procedures governing the site response to accidents, events and injuries will provide the necessary guidance to mitigate the consequences of such events. There are no changes proposed to TS 5.4.1.c through f.

5.5 Programs and Manuals	
The following programs shall be established, implemented and maintained. Current TS 5.5.2 - Primary Coolant Sources Outside Containment This program provides controls to minimize leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to levels as low as practicable. The systems include: a. Residual Heat Removal System (RHR) b. Chemical and Volume Control System (CVCS) c. Safety Injection System (SIS), d. Primary Sampling System (PSS) / Post Accident Sampling System (PASS) (until such time that a modification eliminates the PASS as a potential leakage path); e. Post Accident Containment Air Sampling System (PACAS) (until such time that a modification eliminates the PASS as a potential leakage path); f. Post Accident Containment Vent System (PACVS); g. Gaseous Waste Disposal System (WDS); and	The following programs shall be established, implemented and maintained. Proposed TS 5.5.2 Deleted entire TS Section 5.5.2 text.

h. Secondary Boiler Blowdown Purification System (SBBPS) High Pressure Test. The program shall include the following: a. Preventive maintenance and periodic visual inspection requirements and b. Integrated leak test requirements for each system at least once per 24 months. The provisions of SR 3.0.2 are applicable.	

Basis

TS 5.5, Program and Manuals, provides a description and requirements regarding programs and manuals that are to be established, implemented, and maintained. TS 5.5 will remain applicable with the reactor permanently defueled. As such, it is retained and revised to reflect a permanently defueled condition.

TS 5.5.2 - Primary Coolant Sources Outside Containment - This program was established to minimize leakage from portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident. Entergy proposes to delete this program, because these conditions can no longer exist for a permanently defueled facility.

5.6 Reporting Requirements	
The following reports shall be submitted in accordance with 10 CFR 50.4. Current TS 5.6.2 – Annual Radiological Environmental Operating Report Note: A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station. …The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted by May 15 of each year…	The following reports shall be submitted in accordance with 10 CFR 50.4. Proposed TS 5.6.2 – Annual Radiological Environmental Operating Report Note: A single submittal may be made for a multiple unit/facility station. The submittal should combine sections common to all units/facilities at the station. …The Annual Radiological Environmental Operating Report covering the operation of the unit/facility during the previous calendar year shall be submitted by May 15 of each year…

Current TS 5.6.3 – Radioactive Effluent Release Report	Proposed TS 5.6.3 – Radioactive Effluent Release Report
Note: A single submittal may be made for a multiple unit station. The submittal shall combine sections common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit.	Note: A single submittal may be made for a multiple unit/facility station. The submittal shall combine sections common to all units/facilities at the station; however, for units/facilities with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit/facility.
…The Radioactive Effluent Release Report covering the operation of the unit shall be submitted in accordance with 10 CFR 50.36a by May 15th of each year…	…The Radioactive Effluent Release Report covering the operation of the facility shall be submitted in accordance with 10 CFR 50.36a by May 15th of each year…

Basis

TS 5.6.2 – Annual Radiological Environmental Operating Report – Entergy proposes to change the term "unit" to "unit/facility" and "units" to "units/facilities" in this TS as applicable. Since IP2 will be shutdown before IP3 does, one facility will be permanently defueled while the other unit will still be in operation. This is an administrative change.

TS 5.6.3 – Radioactive Effluent Release Report – Entergy proposes to change the term "unit" to "unit/facility" and "units" to "units/facilities" in this TS as applicable. Since IP2 will be shutdown before IP3 does, one facility will be permanently defueled while the other unit will still be in operation. This is an administrative change.

5.7 High Radiation Area

Current TS 5.7.1.c	Proposed TS 5.7.1.c
Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.	Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following facility radiation protection procedures for entry to, exit from, and work in such areas.

Current TS 5.7.2.c	Proposed TS 5.7.2.c
Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.	Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following facility radiation protection procedures for entry to, exit from, and work in such areas.
Basis	
TS 5.7.1.c - Entergy proposes to replace the term "plant" with the term "facility." As previously discussed, the term "facility" better represents a site undergoing decommissioning. This is an administrative change. TS 5.7.2.c - Entergy proposes to replace the term "plant" with the term "facility." As previously discussed, the term "facility" better represents a site undergoing decommissioning. This is an administrative change.	

3. REGULATORY EVALUATION

3.1 APPLICABLE REGULATORY REQUIREMENT/CRITERIA

10 CFR 50.82(a)(1) requires that when a licensee has determined to permanently cease operations the licensee shall, within 30 days, submit a written certification to the NRC, consistent with the requirements of 10 CFR 50.4(b)(8), and once fuel has been permanently removed from the reactor vessel, the licensee shall submit a written certification to the NRC that meets the requirements of 10 CFR 50.4(b)(9). On February 8, 2017, Entergy notified the NRC that IP2 would permanently cease operations no later than April 30, 2020 (Reference 1). Entergy recognizes that approval of these proposed changes is contingent upon the submittal of the certifications required by 10 CFR 50.82(a)(1).

10 CFR 50.82(a)(2) states: "Upon docketing of the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel, or when a final legally effective order to permanently cease operations has come into effect, the 10 CFR Part 50 license no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel."

10 CFR 50.36 establishes the requirements for TS. 10 CFR 50.36(c)(5), Administrative Controls, identifies that an Administrative Controls section shall be included in the TS and shall include provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner. This license amendment request is proposing changes to the Administrative Controls section, with conforming changes proposed to additional sections, consistent with the pending decommissioning status of the plant. This request applies the principles identified in 10 CFR 50.36(c)(6), Decommissioning, for a facility which has submitted certifications required by 50.82(a)(1) and proposes changes to the Administrative

Controls appropriate for the IP2 permanently defueled condition. As 10 CFR 50.36(c)(6) states, this type of change should be considered on a case-by-case basis.

10 CFR 50.54(m) establishes the requirements for having Reactor Operators and SROs licensed in accordance with 10 CFR Part 55 based on plant conditions. Given the impending permanent cessation of operation for IP2, the requirements of this section will no longer apply once the certifications required by 10 CFR 50.82(a)(1) have been docketed and it will be permissible to remove those positions from the TS.

3.2 NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Pursuant to 10 CFR 50.92, Entergy has reviewed the proposed changes and concludes that the changes do not involve a significant hazards consideration since the proposed changes satisfy the criteria in 10CFR50.92(c). These criteria require that operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

The proposed changes would revise and remove certain requirements contained within Sections 1.1 (Definitions), 4.0 (Design Features) and 5.0 (Administrative Controls) of the IP2 TS. The TS requirements being changed would not be applicable until the certifications required by 10 CFR 50.82(a)(1) have been docketed and the Certified Fuel Handler Training and Retraining Program is approved by the NRC. Once the certifications for permanent cessation of operations and permanent fuel removal are made, the 10 CFR Part 50 license for IP2 will no longer authorize operation of the reactor or placement of fuel in the reactor vessel in accordance with 10 CFR 50.82(a)(2).

The discussion below addresses each of these criteria and demonstrates that the proposed amendment does not constitute a significant hazard.

1. <u>Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?</u>

   Response: No.

   The proposed amendment would not take effect until IP2 has permanently ceased operation and entered a permanently defueled condition and the Certified Fuel Handler Training and Retraining Program is approved by the NRC. The proposed amendment would modify the IP2 TS by deleting the portions of the TS that are no longer applicable to a permanently defueled facility, while modifying the other sections to correspond to the permanently defueled condition.

   The deletion and modification of provisions of the administrative controls do not directly affect the design of structures, systems, and components (SSCs) necessary for safe storage of irradiated fuel or the methods used for handling and storage of such fuel in the spent fuel pool. The changes to the administrative controls are administrative in nature and do not affect any accidents applicable to the safe management of irradiated fuel or the

permanently shutdown and defueled condition of the reactor. Thus, the consequences of an accident previously evaluated are not increased.

In a permanently defueled condition, the only credible accidents are the fuel handling accident (FHA) and those involving radioactive waste systems remaining in service. The probability of occurrence of previously evaluated accidents is not increased, because extended operation in a defueled condition will be the only operation allowed. This mode of operation is bounded by the existing analyses. Additionally, the occurrence of postulated accidents associated with reactor operation is no longer credible in a permanently defueled reactor. This significantly reduces the scope of applicable accidents.

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

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

Response: No.

The proposed changes have no impact on facility SSCs affecting the safe storage of irradiated fuel, or on the methods of operation of such SSCs, or on the handling and storage of irradiated fuel itself. The administrative removal or modifications of the TS that are related only to administration of the facility cannot result in different or more adverse failure modes or accidents than previously evaluated because the reactor will be permanently shutdown and defueled and IP2 will no longer be authorized to operate the reactor or retain or place fuel in the reactor vessel.

The proposed changes to the IP2 TS do not affect systems credited in the accident analysis for the FHA or radioactive waste system upsets at IP2. The proposed TS will continue to require proper control and monitoring of safety significant parameters and activities.

The proposed amendment does not result in any new mechanisms that could initiate damage to the remaining relevant safety barriers for defueled plants (fuel cladding and spent fuel cooling). Extended operation in a defueled condition will be the only operation allowed, and it is bounded by the existing analyses, such a condition does not create the possibility of a new or different kind of accident.

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

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

Response: No.

Since the 10 CFR Part 50 license for IP2 will no longer authorize operation of the reactor or emplacement or retention of fuel into the reactor vessel once the certifications required by 10 CFR 50.82(a)(1) are docketed, as specified in 10 CFR 50.82(a)(2), the occurrence of postulated accidents associated with reactor operation is no longer credible. The only remaining credible accidents are a FHA and those involving radioactive waste systems remaining in service. The proposed amendment does not adversely affect the inputs or assumptions of any of the design basis analyses that impact these analyzed conditions.

The proposed changes are limited to those portions of the TS that are not related to the safe storage of irradiated fuel. The requirements that are proposed to be revised or deleted from the IP2 TS are not credited in the existing accident analysis for the remaining applicable postulated accident; and as such, do not contribute to the margin of safety associated with the accident analysis. Postulated design basis accidents involving the reactor are no longer possible because the reactor will be permanently shutdown and defueled and IP2 will no longer be authorized to operate the reactor or retain or place fuel in the reactor vessel.

Therefore, the proposed change does not involve a significant reduction in the margin of safety.

Based on the above, Entergy concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

3.3 PRECEDENT

The proposed changes are based on the Administrative Controls TSs for Pilgrim Nuclear Power Station (PNPS) reflecting a permanently defueled condition, which were submitted on February 2, 2017 (Reference 4), supplemented on May 25, 2017 (Reference 5), and approved by the NRC on July 10, 2017 (Reference 6.)

3.4 CONCLUSION

Based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

4. ENVIRONMENTAL CONSIDERATIONS

This amendment request meets the eligibility criteria for categorical exclusion from environmental review set forth in 10 CFR 51.22(c)(9) as follows:

(i) The amendment involves no significant hazards consideration.

As described in Section 3.2 of this evaluation, the proposed change involves no significant hazards consideration.

(ii) There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

The proposed amendment does not involve any physical alterations to the facility configuration that could lead to a change in the type or amount of effluent release offsite.

(iii) There is no significant increase in individual or cumulative occupational radiation exposure.

The proposed amendment does not involve a significant increase in individual or cumulative occupational radiation exposure.

Based on the above, Entergy concludes that the proposed change meets the eligibility criteria for categorical exclusion as set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

5. REFERENCES

1. Entergy Nuclear Operations, Inc. (Entergy) to U.S. Nuclear Regulatory Commission (NRC), "Notification of Permanent Cessation of Power Operations," dated February 8, 2017 (Letter NL-17-021) (ADAMS Accession No. ML17044A004)

2. Entergy letter to NRC, "Request for Approval of Certified Fuel Handler Training and Retraining Program," dated April 15, 2019 (Letter Number: NL-19-012) (ADAMS Accession No. ML19105A632)

3. NRC letter to Entergy, "Vermont Yankee Nuclear Power Station - Request for Exemption from the Requirements of 10 CFR 50.54(m) (TAC No. MF2990)," dated June 18, 2014 (ADAMS Accession No. ML14147A216)

4. Entergy letter to NRC, "Technical Specifications Proposed Change – Administrative Controls for Permanently Defueled Condition," dated February 14, 2017 (ADAMS Accession No. ML17053A468)

5. Entergy letter to NRC, "Supplement to Technical Specifications Proposed Change – Administrative Controls for Permanently Defueled Condition," dated May 25, 2017 (ADAMS Accession ML17163A181)

6. Letter, NRC to Entergy Nuclear Operations, Inc., "Pilgrim Nuclear Power Station - Issuance of Amendment Regarding Administrative Controls for Permanently Defueled Condition (CAC NO. MF3904)," dated July 10, 2017. (ML17066A130)

ATTACHMENT 1 to ENCLOSURE 1

NL-19-013

Markup of Technical Specifications (TS) Pages

Indian Point Nuclear Generating Station Unit 2
NRC Docket No. 50-247
Renewed Facility Operating License DPR-26

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1.0 USE AND APPLICATION

1.1 Definitions

- NOTE -

The defined terms of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases.

Term	Definition
ACTIONS	ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
ACTUATION LOGIC TEST	An ACTUATION LOGIC TEST shall be the application of various simulated or actual input combinations in conjunction with each possible interlock logic state required for OPERABILITY of a logic circuit and the verification of the required logic output. The ACTUATION LOGIC TEST, as a minimum, shall include a continuity check of output devices.
AXIAL FLUX DIFFERENCE (AFD)	AFD shall be the difference in normalized flux signals between the top and bottom halves of a two section excore neutron detector.
CERTIFIED FUEL HANDLER	A CERTIFIED FUEL HANDLER is an individual who complies with the provisions of the CERTIFIED FUEL HANDLER Training and Retraining Program required by TS 5.3.2.
CHANNEL CALIBRATION	A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps.
CHANNEL CHECK	A CHANNEL CHECK shall be the qualitative assessment, by observation, of channel behavior during operation. This determination shall include, where possible, comparison of the channel indication and status to other indications or status

1.1 Definitions

NON-CERTIFIED OPERATOR	A NON-CERTIFIED OPERATOR is a non-licensed operator who complies with the qualification requirements of Specification 5.3.1, but is not a CERTIFIED FUEL HANDLER.
OPERABLE - OPERABILITY	A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).
PHYSICS TESTS	PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation. These tests are: a. Described in UFSAR Chapter 13, "Tests and Operations," b. Authorized under the provisions of 10 CFR 50.59, or c. Otherwise approved by the Nuclear Regulatory Commission.
QUADRANT POWER TILT RATIO (QPTR)	QPTR shall be the ratio of the maximum upper excore detector calibrated output to the average of the upper excore detector calibrated outputs, or the ratio of the maximum lower excore detector calibrated output to the average of the lower excore detector calibrated outputs, whichever is greater.
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3216 MWt.

4.0 DESIGN FEATURES

4.1 Site Location

Indian Point 2 is located on the East bank of the Hudson River at Indian Point, Village of Buchanan, in upper Westchester County, New York. The site is approximately 24 miles north of the New York City boundary line. The nearest city is Peekskill which is 2.5 miles northeast of Indian Point.

The minimum distance from the reactor center line to the boundary of the site exclusion area and the outer boundary of the low population zone, as defined in 10 CFR 100.3, is 520 meters and 1100 meters, respectively. For the purpose of satisfying 10 CFR Part 20, the "Restricted Area" is the same as the "Exclusion Area" shown in UFSAR, Figure 2.2-2.

4.2 ~~Reactor Core~~

~~4.2.1 Fuel Assemblies~~

~~The reactor shall contain 193 fuel assemblies. Each assembly shall consist of a matrix of Zircalloy-4 or ZIRLO fuel rods. Fuel shall have a U-235 enrichment of ≤ 5.0 weight percent. Limited substitutions of Zircalloy-4, ZIRLO or stainless steel filler rods for fuel rods, in accordance with approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with applicable NRC staff approved codes and methods and shown by tests or analyses to comply with all fuel safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in nonlimiting core regions.~~

~~4.2.2 Control Rod Assemblies~~

~~The reactor core shall contain 53 control rod assemblies. The control rod material shall be silver indium cadmium, clad with stainless steel, as approved by the NRC.~~

4.3 Fuel Storage

4.3.1 Criticality

4.3.1.1 The spent fuel storage racks are designed and shall be maintained with:

a. Fuel assemblies having a maximum U-235 enrichment of 5.0 weight percent,

5.0 ADMINISTRATIVE CONTROLS

5.1 Responsibility

facility

5.1.1 The plant manager shall be responsible for overall ~~unit~~ operation and shall delegate in writing the succession to this responsibility during his absence.

The plant manager or his designee shall approve, prior to implementation, each proposed test, experiment or modification to systems or equipment that affect nuclear safety.

~~5.1.2 The shift supervisor (SS) shall be responsible for the control room command function. During any absence of the SS from the control room while the unit is in MODE 1, 2, 3, or 4, an individual with an active Senior Reactor Operator (SRO) license shall be designated to assume the control room command function. During any absence of the SS from the control room while the unit is in MODE 5 or 6, an individual with an active SRO license or Reactor Operator license shall be designated to assume the control room command function.~~

5.1.2 The shift manager (SM) shall be responsible for the shift command function

5.0 ADMINISTRATIVE CONTROLS

INSERT 1

5.2 Organization

5.2.1 ~~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 safety of the nuclear power plant.~~

~~a. Lines of authority, responsibility, and communication shall be defined and established throughout highest management levels, intermediate levels, and all operating organization positions. These relationships shall be documented and updated, as appropriate, in organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements including the plant-specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications shall be documented in the UFSAR.~~

~~b. The plant manager shall be responsible for overall safe operation of the plant and shall have control over those onsite activities necessary for safe operation and maintenance of the plant.~~

~~c. The corporate officer with direct responsibility for the plant 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, and~~

~~d. The individuals who train the operating staff, carry out health physics, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their independence from operating pressures.~~

Facility

5.2.2 ~~Unit~~ Staff

facility

The ~~unit~~ staff organization shall include the following:

~~a. A non-licensed operator shall be assigned to each reactor containing fuel and an additional non-licensed operator shall be assigned for each control room from which a reactor is operating in MODES 1, 2, 3, or 4.~~

a. Each duty shift shall be composed of at least one shift manager and one NON-CERTIFIED OPERATOR. The NON-CERTIFIED OPERATOR position may be filled by a CERTIFIED FUEL HANDLER.

Facility

Insert 2

5.2 Organization

5.2.2 ~~Unit~~ Staff (continued)

~~b. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 5.2.2.a and 5.2.2.f for a period of time not to exceed 2 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.~~

~~c. A radiation protection technician shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.~~

~~d. Not Used~~

~~e. The operations manager or assistant operations manager shall hold an SRO license.~~

~~f. When in MODES 1, 2, 3 or 4 an individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by ANSI/ANS 3.1-1993 as endorsed by RG 1.8, Rev. 3, 2000.~~

Facility

Facility

5.0 ADMINISTRATIVE CONTROLS

5.3 ~~Unit~~ Staff Qualifications

facility

IPEC

5.3.1 Each member of the ~~unit~~ staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions with exceptions specified in the ~~Entergy~~ Quality Assurance Program Manual (QAPM).

5.3.2 ~~For the purpose of 10 CFR 55.4, a licensed Senior Reactor Operator (SRO) and a licensed reactor operator (RO) are those individuals who, in addition to meeting the requirements of TS 5.3.1, perform the functions described in 10 CFR 50.54(m).~~

An NRC approved training and retraining program for CERTIFIED FUEL HANDLERS shall be maintained.

5.0 ADMINISTRATIVE CONTROLS

5.4 Procedures

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

a. ~~The applicable requirements and recommendations of Sections 5.2 and 5.3 of ANSI N18.7-1976 and Appendix A of Regulatory Guide 1.33, Revision 2 except as provided in the quality assurance program described or referenced in the Updated~~ FSAR;

b. ~~The emergency operating procedures required to implement the requirements of NUREG-0737 and NUREG-0737, Supplement 1, as stated in Generic Letter 82-33;~~

c. Quality assurance for effluent and environmental monitoring;

d. Fire Protection Program implementation;

e. All programs specified in Technical Specification 5.5; and

f. Personnel radiation protection consistent with the requirements of 10 CFR 20.

The procedures applicable to the safe storage of nuclear fuel recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978 except as provided in the quality assurance program described or referenced in the Updated FSAR;

5.5 Programs and Manuals

5.5.2 Primary Coolant Sources Outside Containment

~~This program provides controls to minimize leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to levels as low as practicable. The systems include:~~

~~a. Residual Heat Removal System (RHR);~~

~~b. Chemical and Volume Control System (CVCS);~~

~~c. Safety Injection System (SIS);~~

~~d. Primary Sampling System (PSS) / Post Accident Sampling System (PASS) (until such time that a modification eliminates the PASS as a potential leakage path);~~

~~e. Post Accident Containment Air Sampling System (PACAS) (until such time that a modification eliminates the PASS as a potential leakage path);~~

~~f. Post Accident Containment Vent System (PACVS);~~

~~g. Gaseous Waste Disposal System (WDS); and~~

~~h. Secondary Boiler Blowdown Purification System (SBBPS) High Pressure Test.~~

~~The program shall include the following:~~

~~a. Preventive maintenance and periodic visual inspection requirements and~~

~~b. Integrated leak test requirements for each system at least once per 24 months.~~

~~The provisions of SR 3.0.2 are applicable.~~

5.5.3 Radioactive Effluent Controls Program

This program conforms to 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the ODCM, shall be implemented by procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

:

5.6 Reporting Requirements

5.0 ADMINISTRATIVE CONTROLS

5.6 Reporting Requirements

The following reports shall be submitted in accordance with 10 CFR 50.4.

5.6.1 Not Used

/facilities

5.6.2 Annual Radiological Environmental Operating Report

/facility

- NOTE -

A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station.

The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted by May 15 of each year. The report shall include summaries, interpretations, and analyses 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 the Offsite Dose Calculation Manual (ODCM), and in 10 CFR 50, Appendix I, Sections IV.B.2, IV.B.3, and IV.C.

A full listing of the information to be contained in the Annual Radiological Environmental Operating Report is provided in the ODCM.

/facility

5.6 Reporting Requirements

/facilities

/facility

/facilities

5.6.3 Radioactive Effluent Release Report

- NOTE -

A single submittal may be made for a multiple unit station. The submittal shall combine sections common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit.

/facility

/facility.

The Radioactive Effluent Release Report covering the operation of the unit in the previous year shall be submitted prior to May 1 of each year in accordance with 10 CFR 50.36a. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. The material provided shall be consistent with the objectives outlined in the ODCM and Process Control Program and in conformance with 10 CFR 50.36a and 10 CFR Part 50, Appendix I, Section IV.B.1.

/facility.

5.6.4 Not Used

5.6.5 CORE OPERATING LIMITS REPORT (COLR)

a. Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the COLR for the following:

1. Technical Specification 2.1, Safety Limits (SL);
2. Technical Specification 3.1.1, SHUTDOWN MARGIN (SDM);
3. Technical Specification 3.1.3, Moderator Temperature Coefficient (MTC);
4. Technical Specification 3.1.5, Shutdown Bank Insertion Limits;
5. Technical Specification 3.1.6, Control Bank Insertion Limits;
6. Technical Specification 3.2.1, Heat Flux Hot Channel Factor ($F_Q(Z)$);
7. Technical Specification 3.2.2, Nuclear Enthalpy Rise Hot Channel Factor;

5.0 ADMINISTRATIVE CONTROLS

5.7 High Radiation Area

As provided in paragraph 20.1601(c) of 10 CFR Part 20, the following controls shall be applied to high radiation areas in place of the controls required by paragraph 20.1601(a) and (b) of 10 CFR Part 20:

5.7.1 High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation

a. Each entryway to such an area shall be barricaded and conspicuously posted as a high radiation area. Such barricades may be opened as necessary to permit entry or exit of personnel or equipment.

b. Access to, and activities in, each such area shall be controlled by means of Radiation Work Permit (RWP) or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following ~~plant~~ facility radiation protection procedures for entry to, exit from, and work in such areas.

d. Each individual or group entering such an area shall possess:

1. A radiation monitoring device that continuously displays radiation dose rates in the area; or

2. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

3. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area, or

5.7 High Radiation Area

5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation (continued)

b. Access to, and activities in, each such area shall be controlled by means of an RWP or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

facility

c. Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following ~~plant~~ radiation protection procedures for entry to, exit from, and work in such areas.

d. Each individual or group entering such an area shall possess:

1. A radiation monitoring device that continuously integrates the radiation rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

2. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area with the means to communicate with and control every individual in the area, or

3. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,

(i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or

(ii) Be under the surveillance as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with and control every individual in the area.

INSERT 1

Onsite and Offsite Organizations

Onsite and offsite organizations shall be established for facility staff and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting safety of the nuclear fuel.

a. Lines of authority, responsibility, and communication shall be defined and established throughout highest management levels, intermediate levels, and all decommissioning organization positions. These relationships shall be documented and updated, as appropriate, in organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements including the facility-specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications shall be documented in the UFSAR,

b. The plant manager shall be responsible for overall safe maintenance of the facility and shall have control over those onsite activities necessary for storage and maintenance of nuclear fuel.

c. The corporate officer with direct responsibility for IP2 shall have corporate responsibility for the safe storage and handling of nuclear fuel and shall take any measures needed to ensure acceptable performance of the staff in maintaining and providing technical support to the facility to ensure safe management of nuclear fuel, and

d. The individuals who train the CERTIFIED FUEL HANDLERS, carry out health physics, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their ability to perform their assigned functions.

INSERT 2:

At least one person qualified to stand watch in the control room (NON-CERTIFIED OPERATOR or CERTIFIED FUEL HANDLER) shall be present in the control room when nuclear fuel is stored in the spent fuel pool.

b. Shift crew composition may be less than the minimum requirement of 5.2.2.a for a period of time not to exceed 2 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 and all of the following conditions are met:

1) No fuel movements are in progress;

2) No movement of loads over fuel are in progress; and

3) No unmanned shift positions during shift turnover shall be permitted while the shift crew is less than the minimum.

c. An individual qualified in radiation protection procedures shall be on site during fuel handling operations and during movement of heavy loads over the fuel storage racks. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.

d. Not Used.

e. The shift manager shall be a CERTIFED FUEL HANDLER.

f. Deleted.

ATTACHMENT 2 to ENCLOSURE 1

NL-19-013

Clean Technical Specifications Pages

Indian Point Nuclear Generating Station Unit 2
NRC Docket No. 50-247
Renewed Facility Operating License DPR-26

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1.0 USE AND APPLICATION

1.1 Definitions

- NOTE -

The defined terms of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases.

Term	Definition
ACTIONS	ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
ACTUATION LOGIC TEST	An ACTUATION LOGIC TEST shall be the application of various simulated or actual input combinations in conjunction with each possible interlock logic state required for OPERABILITY of a logic circuit and the verification of the required logic output. The ACTUATION LOGIC TEST, as a minimum, shall include a continuity check of output devices.
AXIAL FLUX DIFFERENCE (AFD)	AFD shall be the difference in normalized flux signals between the top and bottom halves of a two section excore neutron detector.
CERTIFIED FUEL HANDLER	A CERTIFIED FUEL HANDLER is an individual who complies with the provisions of the CERTIFIED FUEL HANDLER Training and Retraining Program required by TS 5.3.2.
CHANNEL CALIBRATION	A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps.
CHANNEL CHECK	A CHANNEL CHECK shall be the qualitative assessment, by observation, of channel behavior during operation. This determination shall include, where possible, comparison of the channel indication and status to other indications or status

1.1 Definitions

	derived from independent instrument channels measuring the same parameter.
CHANNEL OPERATIONAL TEST (COT)	A COT shall be the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY of all devices in the channel required for channel OPERABILITY. The COT shall include adjustments, as necessary, of the required alarm, interlock, and trip setpoints required for channel OPERABILITY such that the setpoints are within the necessary range and accuracy. The COT may be performed by means of any series of sequential, overlapping, or total channel steps.
CORE ALTERATION	CORE ALTERATION shall be the movement of any fuel, sources, or reactivity control components, within the reactor vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe position.
CORE OPERATING LIMITS REPORT (COLR)	The COLR is the unit specific document that provides cycle specific parameter limits for the current reload cycle. These cycle specific parameter limits shall be determined for each reload cycle in accordance with Specification 5.6.5. Plant operation within these limits is addressed in individual Specifications.
DOSE EQUIVALENT I-131	DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microcuries per gram) that alone would produce the same dose when inhaled as the combined activities of iodine isotopes I-131, I-132, I-133, I-134, and I-135 actually present. If a specific isotope is not detected, it should be assumed to be present at the minimum detectable activity. The determination of DOSE EQUIVALENT I-131 shall be performed using Committed Effective Dose Equivalent (CEDE) dose conversion factors from Table 2.1 of EPA Federal Guidance Report No. 11, 1988.
DOSE EQUIVALENT XE-133	DOSE EQUIVALENT XE-133 shall be that concentration of Xe-133 (microcuries per gram) that alone would produce the same acute dose to the whole body as the combined activities of noble gas nuclides Kr-85m, Kr-85, Kr-87, Kr-88, Xe-131m, Xe-133m, Xe-133, Xe-135m, Xe-135, and Xe-138 actually present. If a specific noble gas nuclide is not detected, it should be assumed to be present at the minimum detectable activity. The determination of DOSE Equivalent XE-133 shall be performed using effective dose conversion factors for air submersion listed

1.1 Definitions

in Table III.1 of EPA Federal Guidance Report No. 12, 1993, "External Exposure to Radionuclides in Air, Water, and Soil."

LEAKAGE

LEAKAGE shall be:

a. Identified LEAKAGE

1. LEAKAGE, such as that from pump seals or valve packing (except reactor coolant pump (RCP) seal water injection or leakoff), that is captured and conducted to collection systems or a sump or collecting tank,

2. LEAKAGE into the containment atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems or not to be pressure boundary LEAKAGE, or

3. Reactor Coolant System (RCS) LEAKAGE through a steam generator to the Secondary System (primary to secondary LEAKAGE);

b. Unidentified LEAKAGE

All LEAKAGE (except RCP seal water injection or leakoff) that is not identified LEAKAGE, and

c. Pressure Boundary LEAKAGE

LEAKAGE (except primary to secondary LEAKAGE) through a nonisolable fault in an RCS component body, pipe wall, or vessel wall.

MASTER RELAY TEST

A MASTER RELAY TEST shall consist of energizing each required master relays in the channel required for channel OPERABILITY and verifying the OPERABILITY of each required master relay. The MASTER RELAY TEST may be performed by means of any series of sequential, overlapping, or total steps.

MODE

A MODE shall correspond to any one inclusive combination of core reactivity condition, power level, average reactor coolant temperature, and reactor vessel head closure bolt tensioning specified in Table 1.1-1 with fuel in the reactor vessel.

1.1 Definitions

NON-CERTIFIED OPERATOR	A NON-CERTIFIED OPERATOR is a non-licensed operator who complies with the qualification requirements of Specification 5.3.1, but is not a CERTIFIED FUEL HANDLER.
OPERABLE - OPERABILITY	A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).
PHYSICS TESTS	PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation. These tests are: a. Described in UFSAR Chapter 13, "Tests and Operations," b. Authorized under the provisions of 10 CFR 50.59, or c. Otherwise approved by the Nuclear Regulatory Commission.
QUADRANT POWER TILT RATIO (QPTR)	QPTR shall be the ratio of the maximum upper excore detector calibrated output to the average of the upper excore detector calibrated outputs, or the ratio of the maximum lower excore detector calibrated output to the average of the lower excore detector calibrated outputs, whichever is greater.
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3216 MWt.

4.0 DESIGN FEATURES

4.1 Site Location

Indian Point 2 is located on the East bank of the Hudson River at Indian Point, Village of Buchanan, in upper Westchester County, New York. The site is approximately 24 miles north of the New York City boundary line. The nearest city is Peekskill which is 2.5 miles northeast of Indian Point.

The minimum distance from the reactor center line to the boundary of the site exclusion area and the outer boundary of the low population zone, as defined in 10 CFR 100.3, is 520 meters and 1100 meters, respectively. For the purpose of satisfying 10 CFR Part 20, the "Restricted Area" is the same as the "Exclusion Area" shown in UFSAR, Figure 2.2-2.

4.2 Deleted

4.3 Fuel Storage

4.3.1 Criticality

4.3.1.1 The spent fuel storage racks are designed and shall be maintained with:

a. Fuel assemblies having a maximum U-235 enrichment of 5.0 weight percent,

5.0 ADMINISTRATIVE CONTROLS

5.1 Responsibility

5.1.1 The plant manager shall be responsible for overall facility operation and shall delegate in writing the succession to this responsibility during his absence.

The plant manager or his designee shall approve, prior to implementation, each proposed test, experiment or modification to systems or equipment that affect nuclear safety.

5.1.2 The Shift manager (SM) shall be responsible for the shift command function.

5.0 ADMINISTRATIVE CONTROLS

5.2 Organization

5.2.1 Onsite and Offsite Organizations

Onsite and offsite organizations shall be established for facility staff and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting safety of the nuclear fuel.

a. Lines of authority, responsibility, and communication shall be defined and established throughout highest management levels, intermediate levels, and all decommissioning organization positions. These relationships shall be documented and updated, as appropriate, in organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements including the facility-specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications shall be documented in the UFSAR,

b. The plant manager shall be responsible for overall safe maintenance of the facility and shall have control over those onsite activities necessary for storage and maintenance of nuclear fuel.

c. The corporate officer with direct responsibility for IP2 shall have corporate responsibility for the safe storage and handling of nuclear fuel and shall take any measures needed to ensure acceptable performance of the staff in maintaining and providing technical support to the facility to ensure safe management of nuclear fuel, and

d. The individuals who train the CERTIFIED FUEL HANDLERS, carry out health physics, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their ability to perform their assigned functions.

5.2.2 Facility Staff

The facility staff organization shall include the following:

a. Each duty shift shall be composed of at least one shift manager and one NON-CERTIFIED OPERATOR. The NON-CERTIFIED OPERATOR position may be filled by a CERTIFIED FUEL HANDLER.

5.2 Organization

5.2.2 Facility Staff (continued)

At least one person qualified to stand watch in the control room (NON-CERTIFIED OPERATOR or CERTIFIED FUEL HANDLER) shall be present in the control room when nuclear fuel is stored in the spent fuel pool.

b. Shift crew composition may be less than the minimum requirement of 5.2.2.a for a period of time not to exceed 2 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 and all of the following conditions are met:

   1) No fuel movements are in progress;

   2) No movement of loads over fuel are in progress; and

   3) No unmanned shift positions during shift turnover shall be permitted while the shift crew is less than the minimum.

c. An individual qualified in radiation protection procedures shall be on site during fuel handling operations and during movement of heavy loads over the fuel storage racks. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.

d. Not Used.

e. The shift manager shall be a CERTIFED FUEL HANDLER.

f. Deleted.

5.0 ADMINISTRATIVE CONTROLS

5.3 Facility Staff Qualifications

5.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions with exceptions specified in the IPEC Quality Assurance Program Manual (QAPM).

5.3.2 An NRC approved training and retraining program for CERTIFIED FUEL HANDLERS shall be maintained.

5.0 ADMINISTRATIVE CONTROLS

5.4 Procedures

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

a. The procedures applicable to the safe storage of nuclear fuel recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978 except as provided in the quality assurance program described or referenced in the Updated FSAR;

b. Deleted;

c. Quality assurance for effluent and environmental monitoring;

d. Fire Protection Program implementation;

e. All programs specified in Technical Specification 5.5; and

f. Personnel radiation protection consistent with the requirements of 10 CFR 20.

5.5 Programs and Manuals

5.5.2 Primary Coolant Sources Outside Containment

Deleted

5.5.3 Radioactive Effluent Controls Program

This program conforms to 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the ODCM, shall be implemented by procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

5.6 Reporting Requirements

5.0 ADMINISTRATIVE CONTROLS

5.6 Reporting Requirements

The following reports shall be submitted in accordance with 10 CFR 50.4.

5.6.1 Not Used

5.6.2 Annual Radiological Environmental Operating Report

- NOTE -
A single submittal may be made for a multiple unit/facility station. The submittal should combine sections common to all units/facilities at the station.

The Annual Radiological Environmental Operating Report covering the operation of the unit/facility during the previous calendar year shall be submitted by May 15 of each year. The report shall include summaries, interpretations, and analyses 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 the Offsite Dose Calculation Manual (ODCM), and in 10 CFR 50, Appendix I, Sections IV.B.2, IV.B.3, and IV.C.

A full listing of the information to be contained in the Annual Radiological Environmental Operating Report is provided in the ODCM.

5.6 Reporting Requirements

5.6.3 Radioactive Effluent Release Report

- NOTE -

A single submittal may be made for a multiple unit/facility station. The submittal shall combine sections common to all units/facilities at the station; however, for units/facilities with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit/facility.

The Radioactive Effluent Release Report covering the operation of the unit/facility in the previous year shall be submitted prior to May 1 of each year in accordance with 10 CFR 50.36a. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit/facility. The material provided shall be consistent with the objectives outlined in the ODCM and Process Control Program and in conformance with 10 CFR 50.36a and 10 CFR Part 50, Appendix I, Section IV.B.1.

5.6.4 Not Used

5.6.5 CORE OPERATING LIMITS REPORT (COLR)

a. Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the COLR for the following:

1. Technical Specification 2.1, Safety Limits (SL);
2. Technical Specification 3.1.1, SHUTDOWN MARGIN (SDM);
3. Technical Specification 3.1.3, Moderator Temperature Coefficient (MTC);
4. Technical Specification 3.1.5, Shutdown Bank Insertion Limits;
5. Technical Specification 3.1.6, Control Bank Insertion Limits;
6. Technical Specification 3.2.1, Heat Flux Hot Channel Factor ($F_Q(Z)$);
7. Technical Specification 3.2.2, Nuclear Enthalpy Rise Hot Channel Factor;

5.0 ADMINISTRATIVE CONTROLS

5.7 High Radiation Area

As provided in paragraph 20.1601(c) of 10 CFR Part 20, the following controls shall be applied to high radiation areas in place of the controls required by paragraph 20.1601(a) and (b) of 10 CFR Part 20:

5.7.1 High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation

a. Each entryway to such an area shall be barricaded and conspicuously posted as a high radiation area. Such barricades may be opened as necessary to permit entry or exit of personnel or equipment.

b. Access to, and activities in, each such area shall be controlled by means of Radiation Work Permit (RWP) or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following facility radiation protection procedures for entry to, exit from, and work in such areas.

d. Each individual or group entering such an area shall possess:

1. A radiation monitoring device that continuously displays radiation dose rates in the area; or

2. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

3. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area, or

5.7 High Radiation Area

5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation (continued)

b. Access to, and activities in, each such area shall be controlled by means of an RWP or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following facility radiation protection procedures for entry to, exit from, and work in such areas.

d. Each indivi-dual or group entering such an area shall possess:

1. A radiation monitoring device that continuously integrates the radiation rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

2. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area with the means to communicate with and control every individual in the area, or

3. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,

(i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or

(ii) Be under the surveillance as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with and control every individual in the area.

ENCLOSURE 2

NL-19-013

Description and Evaluation of Proposed Changes

Indian Point Nuclear Generating Station Unit 3
NRC Docket No. 50-286
Renewed Facility Operating License DPR-64

(20 Pages)

1. SUMMARY DESCRIPTION

On February 8, 2017, Entergy Nuclear Operations, Inc. (Entergy) notified the U.S. Nuclear Regulatory Commission (NRC) that it would permanently cease power operations at Indian Point Nuclear Generating Station Unit No. 3 (IP3) no later than April 30, 2021 (Reference 1).

This evaluation supports a request to amend Renewed Facility Operating License DPR-64 for IP3. The proposed changes would revise and remove certain requirements contained within Sections 1.1, 4.0 and 5.0 of the IP3 Technical Specifications (TS) by deleting the portions of the TS that are no longer applicable to a permanently defueled facility, while modifying the other sections to correspond to the permanently defueled condition once IP3 is permanently defueled. Once the certifications that IP2 has permanently ceased power operations and fuel has been permanently removed from the reactor vessel are docketed, the 10 CFR Part 50 license for IP3 will no longer authorize operation of the reactor or placement of fuel in the reactor vessel or emplacement or retention of fuel in the reactor vessel in accordance with 10 CFR 50.82(a)(2).

The changes proposed by this amendment would not be effective until the certification of permanent removal of fuel from the reactor vessel has been submitted to the NRC (anticipated around May 2021) and the NRC approval of the IP3 Certified Fuel Handler Training and Retraining Program submitted in Reference 2 has been received.

2. DETAILED DESCRIPTION AND BASIS FOR THE CHANGES

Attachment 5 contains a markup of the current TS pages. Attachment 6 contains the retyped TS pages, including administrative changes to spacing to address the revised content. IP3 proposes to modify the TSs listed in the following tables. In addition, IP3 is providing a description and basis for each of the proposed changes.

Proposed Change to IP3 TS Section 1.0, Definitions	
Current Definition There is no current definition for Certified Fuel Handler.	Proposed Definition CERTIFIED FUEL HANDLER is an individual who complies with the provisions of the CERTIFIED FUEL HANDLER Training and Retraining Program required by TS 5.3.2.
Current Definition There is no current definition for Non-Certified Operator.	Proposed Definition NON-CERTIFIED OPERATOR is a non-licensed operator who complies with the qualification requirements of Specification 5.3.1, but is not a CERTIFIED FUEL HANDLER.
Basis	
Entergy proposes to add definitions for Certified Fuel Handler and Non-Certified Operator. This ensures that these positions are consistently utilized throughout the TS.	

Proposed Change to IP3 TS Section 4.0, Design Features	
Current TS 4.2, Reactor Core 4.2.1 Fuel Assemblies The reactor shall contain 193 fuel assemblies. Each assembly shall consist of a matrix of Zircalloy or ZIRLO clad fuel rods with an initial composition of natural or slightly enriched uranium dioxide (UO_2) as fuel material. Reload fuel will have a U-235 enrichment of ≤ 5.0 weight percent. Limited substitutions of zirconium alloy or stainless steel filler rods, in accordance with approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with applicable NRC staff approved codes and methods and shown by tests or analyses to comply with all fuel safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in nonlimiting core regions. 4.2.2 Control Rod Assemblies The reactor core shall contain 53 control rod assemblies. The control material shall be silver indium cadmium, as approved by the NRC.	Proposed TS 4.2, Reactor Core Deleted
Basis	
Entergy proposes to delete TS 4.2, Reactor Core, because it will no longer apply in the permanently defueled condition. Once the certifications required by 10 CFR 50.82(a)(1) have been docketed, fuel assemblies (thus control rod assemblies will not be required) will no longer be authorized to be retained or emplaced in the IP3 reactor vessel, pursuant to 10 CFR 50.82(a)(2).	

Proposed Changes to IP3 TS Section 5.0, Administrative Controls	
5.1 Responsibility	
Current TS 5.1.1 The plant manager shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during his absence. The plant manager or his designee shall…	Proposed TS 5.1.1 The plant manager shall be responsible for overall facility operation and shall delegate in writing the succession to this responsibility during his absence… The plant manager or his designee shall…
Current TS 5.1.2 The shift supervisor (SS) shall be responsible for the control room command function. During any absence of the SS from the control room while the unit is in MODE 1, 2, 3, or 4, an individual with an active Senior Reactor Operator (SRO) license shall be designated to assume the control room command function. During any absence of the SS from the control room while the unit is in MODE 5 or 6, an individual with an active SRO license or Reactor Operator license shall be designated to assume the control room command function.	Proposed TS 5.1.2 The shift manager (SM) shall be responsible for the shift command function.
Basis	
This section identifies the responsibilities for the control room command function associated with Modes of plant operation, and is based on personnel positions and qualifications for an operating plant. It identifies the need for a delegation of authority for command in an operating plant when the principal assignee leaves the control room. TS 5.1.1 - The term "unit" is changed to "facility." This is an administrative change that reflects IP3 will be permanently shutdown and defueled. The term "facility" is a more appropriate description of a site that is undergoing decommissioning. This change is proposed throughout this license amendment request. In all cases that this change is made, overall management and staff responsibilities and the description of the facility are unchanged. TS 5.1.2 - Entergy proposes to change this TS to eliminate the Mode dependency for this function and personnel qualifications associated with an operating plant. The proposed change establishes the shift manager as having command of the shift. Delegation of command is	

unnecessary once IP3 is in the permanently defueled condition with fuel in the spent fuel pool. Any event involving loss of spent fuel pool cooling would evolve slowly enough that no immediate response would be required to protect the health and safety of the public or facility personnel.

5.2 Organization	
Current TS 5.2.1, 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 safety of the nuclear power plant. a. Lines of authority, responsibility, and communication shall be defined and established throughout highest management levels, intermediate levels, and all operating organization positions. These relationships shall be documented and updated, as appropriate, in organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements including the plant specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications, shall be documented in the FSAR and Quality Assurance Plan, as appropriate; b. The plant manager shall be responsible for overall safe operation of the plant and shall have control over those onsite activities necessary for safe operation and maintenance of the plant, c. The corporate officer with direct responsibility for the plant shall have	Proposed TS 5.2.1, Onsite and Offsite Organizations Onsite and offsite organizations shall be established for facility staff and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting safety of the nuclear fuel. a. Lines of authority, responsibility, and communication shall be defined and established throughout highest management levels, intermediate levels, and all decommissioning organization positions. These relationships shall be documented and updated, as appropriate, in organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements including the facility specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications, shall be documented in the FSAR and Quality Assurance Plan, as appropriate; b. The plant manager shall be responsible for overall safe operation of the facility and shall have control over those onsite activities necessary for safe storage and maintenance of nuclear fuel; c. The corporate officer with direct responsibility for IP3 shall have corporate responsibility for the safe storage and

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, and	handling of nuclear fuel and shall take any measures needed to ensure acceptable performance of the staff in maintaining and providing technical support to the facility to ensure safe management of nuclear fuel, and
d. The individuals who train the operating staff, carry out health physics, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their independence from operating pressures.	d. The individuals who train the CERTIFIED FUEL HANDLERS, carry out health physics, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their ability to perform their assigned functions.

Basis

The introduction to this section identifies that organizational positions are established that are responsible for the safety of the nuclear plant. This is changed to require that positions be established that are responsible for the safe handling and storage of nuclear fuel. This change removes the implication that IP3 can return to operation once the certifications required by 10 CFR 50.82(a)(1) are docketed.

The term "unit operation" is changed to "facility staff." In addition, the term "plant" is changed to "facility" or "IP3" in several locations. These are administrative changes that reflect that IP3 will be permanently shutdown and defueled. The term "facility" is a more appropriate description of a site that is undergoing decommissioning. This change is proposed throughout this license amendment request. In all cases that this change is made, overall management and staff responsibilities and the description of the facility are unchanged.

The terms "safe storage and maintenance of the nuclear fuel," "safe management of the nuclear fuel," and "the safe storage and handling of the nuclear fuel" are considered analogous to "nuclear safety" for a facility that will be in the permanently defueled condition. Proposed changes to replace "nuclear safety" with one of these analogues serves to narrow the focus of nuclear safety concerns to the nuclear fuel.

TS 5.2.1.a - This section identifies the lines of authority, responsibility and communication. The change from "Operating" organization to "Decommissioning" organization is for a facility that will be in the permanently defueled condition and undergoes decommissioning. The change from "plant specific" to "facility specific" is administrative.

TS 5.2.1.b – This section identifies the organizational position responsible for the safe operation of the plant, and for control of activities necessary for the safe operation and maintenance of the plant.

To reflect the change in safety concerns from an operating plant to a permanently defueled facility, the responsibility for control of activities necessary for the safe operation and maintenance

of the facility is changed to the responsibility for safe storage and maintenance of the nuclear fuel. The change from "plant" to "facility" is administrative.

TS 5.2.1.c - This section identifies the organizational position responsible for overall nuclear plant safety.

To reflect the change in safety concerns from an operating plant to a permanently defueled facility, IP3 proposes to change the responsibility from "for overall plant nuclear safety" to "the safe storage and handling of nuclear fuel," and the responsibility for providing technical support to "the plant to ensure nuclear safety" is changed to "the facility to ensure safe management of nuclear fuel." The word "operating" was removed as the facility would not be in operation once permanently defueled.

TS 5.2.1.d - This TS addresses the requirement for organizational independence of the personnel who train the operations staff, health physics personnel and quality assurance personnel from operating pressures.

This is changed to replace "operating staff' with "Certified Fuel Handlers" and to replace "their independence from operating pressures" to "their ability to perform their assigned functions." These changes reflect the changed function of the previous operating staff to a focus on safe handling and storage of nuclear fuel, and to remove the implication that IP3 can return to operation once the certifications required by 10 CFR 50.82(a)(1) are docketed.

Current TS 5.2.2, Unit Staff	Proposed TS 5.2.2, Facility Staff
The unit staff organization shall include the following:	The facility staff organization shall include the following:
a. A non-licensed operator shall be assigned to each reactor containing fuel and an additional non-licensed operator shall be assigned for each control room from which a reactor is operating in MODES 1, 2, 3, or 4.	a. Each duty shift shall be composed of at least one shift manager and one NON-CERTIFIED OPERATOR. The NON-CERTIFIED OPERATOR position may be filled by a CERTIFIED FUEL HANDLER. At least one person qualified to stand watch in the control room (NON-CERTIFIED OPERATOR or CERTIFIED FUEL HANDLER) shall be present in the control room when nuclear fuel is stored in the spent fuel pool.
b. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 5.2.2.a and 5.2.2.f for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore	b. Shift crew composition may be less than the minimum requirement of 5.2.2.a for a period of time not to exceed 2 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 and all

the shift crew composition to within the minimum requirements.	of the following conditions are met: 1) No fuel movements are in progress; 2) No movement of loads over fuel are in progress; and 3) No unmanned shift positions during shift turnover shall be permitted while the shift crew is less than the minimum.
c. A radiation protection technician shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.	c. An individual qualified in radiation protection procedures shall be on site during fuel handling operations and during movement of heavy loads over the fuel storage racks. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.
d. Not Used.	d. Not Used.
e. The operations manager or assistant operations manager shall hold an SRO license.	e. The shift manager shall be a CERTIFIED FUEL HANDLER.
f. When in MODES 1, 2, 3 or 4 an individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by ANSI/ANS 3.1-1993 as endorsed by RG 1.8, Rev. 3, 2000.	f. Deleted.

Basis

As discussed above, the change from "unit" to "facility" in the title of this section is administrative.

TS 5.2.2.a - This TS stipulates when non-licensed operators must be onsite or assigned to the operating shift, based on status of fuel in the reactor or operational mode.

Once certifications for permanent cessation of operations and permanent removal of fuel from the IP2 reactor vessel as required by 10 CFR 50.82(a)(1) are docketed, the minimum requirement is

changed to a minimum crew compliment of one shift manager and one Non-Certified Operator. This reflects the reduced number of systems, compared to an operating reactor, required to provide and support spent fuel pool cooling and monitor spent fuel pool parameters, such as spent fuel pool level and temperature, while still maintaining the ability to ensure spent fuel handling operations are carried out in a safe manner. Moreover, the spectrum of credible accidents and operational events, and the quantity and complexity of activities required for safety will be greatly reduced from that at an operating plant. The shift manager will be qualified as a Certified Fuel Handler in accordance with revised TS 5.2.2.e. In this position, this individual will retain command and control responsibility for operational decisions and will be responsible for the functions required for event reporting and emergency response.

This change also reflects the requirement for having one qualified watch stander (either a Non-Certified Operator or Certified Fuel Handler) in the control room when fuel is stored in the spent fuel pool. This reflects the reduced requirement for control room personnel training and qualification for a plant authorized for nuclear fuel storage only. IP3 submitted a Certified Fuel Handler Training and Retraining Program for NRC approval in Reference 2. The training and qualification for the Non-Certified Operator will be determined in accordance with the systems approach to training (SAT) as defined in 10 CFR 55.4. This process ensures that the Non-Certified Operator will be qualified to perform the functions necessary to monitor and ensure safe storage of fuel. The SAT process requires: (1) systematic analysis of the jobs to be performed; (2) learning objectives derived from the analysis which describe desired performance after training; (3) training design and implementation based on the learning objectives; (4) evaluation of trainee mastery of the objectives during training; and (5) evaluation and revision of the training based on the performance of trained personnel in the job setting. There will be a sufficient number of individuals qualified as Certified Fuel Handlers to staff the plant twenty-four hours a day, seven days a week. Additional on-shift staffing will be provided to satisfy applicable security, fire protection, and emergency preparedness requirements.

The control room will remain the physical center of the command function. However, since control of activities may be performed either remotely from the control room or locally in the facility, the location of the command center is functionally where the shift manager is located in accordance with proposed TS 5.1.2. Activities that could be performed from the control room that have the potential to affect forced cooling of spent nuclear fuel include starting and stopping cooling water pumps, as well as changing the electrical power distribution system alignment.

All spent fuel handling activities are performed locally at the spent fuel pool. A number of indications and/or alarms are also received in the control room that would be indicative of spent fuel pool abnormalities. The shift manager is responsible for directing response to those abnormalities, from either the control room or local to the spent fuel pool in accordance with applicable response procedures.

For any conditions, incidents, or events that occur when the Non-Certified Operator is in the control room alone and are not within the scope of qualifications that are possessed by the Non-Certified Operator, the shift manager will be immediately contacted for direction by phone, radio, and/or plant page system. This philosophy is deemed acceptable because the necessity to render immediate actions to protect the health and safety of the public is not challenged.

TS 5.2.2.b - This TS addresses the conditions under which the minimum shift compliment may be reduced. It allows for shift crew composition to be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and TS 5.2.2.a and TS 5.2.2.f for a period of time not to exceed 2 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

The reference to 10 CFR 50.54(m)(2)(i) is removed, because IP3 will not return to operation once the certifications required by 10 CFR 50.82(a)(1) are docketed, and the requirement for licensed operating personnel will no longer be required to protect public health and safety. No exemption from 10 CFR 50.54(m)(2)(i) is needed or requested to support this change, based on the NRC's response to a similar request from Vermont Yankee Nuclear Power Station (VYNPS) in June 2014 (Reference 3).

Entergy proposes to remove the reference to TS 5.2.2.f to be consistent with the proposed change to delete that TS.

TS 5.2.2.c - This TS establishes the requirement for a person qualified in radiation protection procedures to be onsite when fuel is in the reactor. This TS also allows for the position to be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.

IP3 proposes to revise the condition of this TS so that an individual qualified in radiation protection procedures is present onsite during the movement of fuel and during the movement of loads over fuel, because fuel will not be able to be placed or stored in the reactor vessel once the certifications required by 10 CFR 50.82(a)(1) are docketed.

TS 5.2.2.d – No Change. Not Used.

TS 5.2.2.e - This TS establishes the requirement for the operations manager, or an assistant operations manager, to hold a Senior Reactor Operator (SRO) license.

Entergy proposes to revise this TS to replace the requirement with a requirement that the shift manager be a Certified Fuel Handler. Once the certifications required by 10 CFR 50.82(a)(1) have been docketed, the requirements of 10 CFR 50.54(m) will no longer be applicable because the IP3 10 CFR Part 50 license will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel. These certifications also obviate the need for the operators' licenses specified in 10 CFR Part 55. Therefore, there is no longer a need for operations management staff to hold a SRO license. Replacing this with a requirement that the shift manager be a Certified Fuel Handler ensures that the senior individual on shift is appropriately trained and qualified in accordance with the NRC-approved Certified Fuel Handler Training and Retraining Program, to supervise shift activities. As discussed above, no exemption from 10 CFR 50.54(m) is needed or requested to support this change.

The IP3 management structure will not require positions above the shift manager to be a Certified Fuel Handler or attend equivalent training. Entergy has determined that once the plant is permanently shutdown and defueled, the time available to mitigate credible events is expected to be greater than that for current design basis events. As such, management oversight of the facility can be performed by individuals meeting the applicable requirements of American National Standards Institute (ANSI) / American Nuclear Society (ANS) 3.1-1978 (as required by TS 5.3.1) and need not be qualified as Certified Fuel Handlers.

TS 5.2.2.f - This TS establishes the requirements for a technical advisor position.

Entergy proposes to delete this TS, because this position is only required for a plant authorized for power operations. Once the certifications required by 10 CFR 50.82(a)(1) have been docketed, the requirements of this TS will no longer be applicable because the IP3 10 CFR Part 50 license will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel.

5.3 Unit Staff Qualifications

Current TS 5.3, Unit Staff Qualifications	Proposed TS 5.3, Facility Staff Qualifications
5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions with exceptions specified in the Entergy Quality Assurance Program Manual (QAPM).	5.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions with exceptions specified in the IPEC Quality Assurance Program Manual (QAPM).
5.3.2 For the purpose of 10 CFR 55.4, a licensed Senior Reactor Operator (SRO) and a Licensed Reactor Operator (RO) are those individuals who, in addition to meeting the requirements of Specification 5.3.1, perform the functions described in 10 CFR 50.54(m).	5.3.2 An NRC approved training and retraining program for CERTIFIED FUEL HANDLERS shall be maintained.

Basis

As discussed above, the change from "unit" to "facility" in the title of this section is administrative.

TS 5.3.1 - This TS specifies the minimum qualifications for the IP3 staff. The change from "unit" to "facility" in this TS is an administrative change. In addition, IP3 proposes to revise the title of the QAPM by removing specific reference to the Entergy corporate QAPM. This change will allow IP3 to transition from the Entergy corporate QAPM to a site-specific QAPM during the decommissioning process. No change to the qualification standards or exceptions to the standards are proposed. Accordingly, this change is administrative only.

TS 5.3.2 - This TS defines SROs and ROs as the individuals who perform the functions defined in 10 CFR 50.54(m).

Entergy proposes to delete this TS, because neither 10 CFR 50.54(m) nor the requirement for licensed operators per 10 CFR 55 apply following submittal of the certifications required by 10 CFR 50.82(a)(1). As discussed above, no exemption from 10 CFR 50.54(m) is needed or requested to support this change.

Entergy proposes to add a new TS 5.3.2 to require that an NRC approved training and retraining program for the Certified Fuel Handlers shall be maintained. The Certified Fuel Handler Training and Retraining Program ensures that the qualifications of Certified Fuel Handlers are commensurate with the tasks to be performed and the conditions requiring response.
10 CFR 50.120, "Training and qualification of nuclear power plant personnel," requires training programs to be derived using a SAT as defined in 10 CFR 55.4. Although the requirements of 10 CFR 50.120 apply to holders of an operating license issued under 10 CFR Part 50, and the IP3 license will no longer authorize operation following docketing of the certifications required by 10 CFR 50.82(a)(1), the Certified Fuel Handler Training and Retraining Program nonetheless aligns with those requirements. The Certified Fuel Handler Training and Retraining Program provides adequate confidence that appropriate SAT based training of personnel who will perform the duties of a Certified Fuel Handler is conducted to ensure the facility is maintained in a safe and stable condition.

5.4 Procedures

Current TS 5.4.1	Proposed TS 5.4.1
Written procedures shall be established, implemented, and maintained covering the following activities: a. The applicable procedure recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978; b. The emergency operating procedures required to implement the requirements of NUREG-0737 and to NUREG-0737, Supplement 1, as stated in Generic Letter 82-33;	Written procedures shall be established, implemented, and maintained covering the following activities: a. The procedures applicable to the safe storage of nuclear fuel recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978; b. Deleted

Basis

This TS provides a description and requirements regarding administration of written procedures. TS 5.4 will remain applicable with the reactor permanently defueled. As such, it is retained and revised to reflect a permanently defueled condition. Relevant procedures drawings and instructions will continue to be controlled per 10 CFR 50, Appendix B, Criterion VI, "Document Control." Activities involving security and emergency planning and preparedness will continue to be controlled by procedure.

TS 5.4.1.a - Entergy proposes to revise the applicability for this TS to procedures applicable to the safe storage of nuclear fuel recommended in Regulatory Guide 1.33, Revision 2, Appendix A. Since operating and refueling the reactor will both be prohibited by the 10 CFR Part 50 license

once the certifications required by 10 CFR 50.82(a)(1) have been docketed, procedures associated with these activities will no longer need to be maintained. Procedures governing fuel handling operations will provide the guidance necessary to ensure safe handling of spent fuel in the spent fuel pool and transfer from the spent fuel pool to dry fuel storage casks. Procedures governing responses to fuel handling accidents, personnel injuries, spent fuel pool events and external events provide the necessary guidance to mitigate the consequences of such events. No change to IP3's actions in response to a fuel handling accident is proposed.

TS 5.4.1.b - This TS requires emergency operating procedures that implement the requirements of NUREG-0737 and NUREG-0737, Supplement 1, as stated in Generic Letter 82-33. This TS is proposed to be deleted as Generic Letter 82-33 was only addressed to licensees of operating reactors, applicants for operating licenses, and holders of construction permits, none of which will apply to IP3 in the permanently defueled condition. As discussed above, procedures governing the site response to accidents, events and injuries will provide the necessary guidance to mitigate the consequences of such events.

There are no changes proposed to TS 5.4.1.c through e.

5.5 Programs and Manuals	
The following programs shall be established, implemented and maintained. Current TS 5.5.2 - Primary Coolant Sources Outside Containment This program provides controls to minimize leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to levels as low as practicable. The systems include: a. Residual Heat Removal System; b. Cross Connect Between Low Head Recirculation System and High Head Safety Injection System; c. High Head Safety Injection System (partial); d. Reactor Coolant Sampling System; e. Post Accident Containment Air Sampling System; f. Volume Control Tank (including Reactor Coolant Pump seal return line;	The following programs shall be established, implemented and maintained. Proposed TS 5.5.2 Deleted

g. Containment Hydrogen Monitoring system; The program shall include the following: a. Preventive maintenance and periodic visual inspection requirements; and b. Integrated leak test requirements for each system at refueling cycle intervals or less.	

Basis

TS 5.5, Program and Manuals, provides a description and requirements regarding programs and manuals that are to be established, implemented, and maintained. TS 5.5 will remain applicable with the reactor permanently defueled. As such, it is retained and revised to reflect a permanently defueled condition.

TS 5.5.2 - Primary Coolant Sources Outside Containment - This program was established to minimize leakage from portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident. IP3 proposes to delete this program, because these conditions can no longer exist for a permanently defueled facility.

5.6 Reporting Requirements	
The following reports shall be submitted in accordance with 10 CFR 50.4. Current TS 5.6.2 – Annual Radiological Environmental Operating Report Note: A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station. The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted by May 15 of each year…	The following reports shall be submitted in accordance with 10 CFR 50.4. Proposed TS 5.6.2 – Annual Radiological Environmental Operating Report Note: A single submittal may be made for a multiple unit/facility station. The submittal should combine sections common to all units/facilities at the station. The Annual Radiological Environmental Operating Report covering the operation of the unit/facility during the previous calendar year shall be submitted by May 15 of each year…

Current TS 5.6.3 – Radioactive Effluent Release Report	Proposed TS 5.6.3 – Radioactive Effluent Release Report
Note: A single submittal may be made for a multiple unit station. The submittal shall combine sections common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit. …The Radioactive Effluent Release Report covering the operation of the unit in the previous year shall be submitted prior to May 1 of each year in accordance with 10 CFR 50.36a. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit…	Note: A single submittal may be made for a multiple unit/facility station. The submittal shall combine sections common to all units/facilities at the station; however, for units/facilities with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit/facility. …The Radioactive Effluent Release Report covering the operation of the facility shall be submitted prior to May 1 of each year in accordance with 10 CFR 50.36a. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit/facility…

Basis

TS 5.6.2 – Annual Radiological Environmental Operating Report – IP3 proposes to change the term "unit" to "unit/facility" and "units" to "units/facilities" in this TS as applicable. Since IP2 will be shutdown before IP3 does, so one facility will be permanently defueled while the other unit will still be in operation. This is an administrative change.

TS 5.6.3 – Radioactive Effluent Release Report – IP3 proposes to change the term "unit" to "unit/facility" and "units" to "units/facilities" in this TS as applicable. Since IP2 will be shutdown before IP3 does, so one facility will be permanently defueled while the other unit will still be in operation. This is an administrative change.

5.7 High Radiation Area	
Current TS 5.7.1.c Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.	Proposed TS 5.7.1.c Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following facility radiation protection procedures for entry to, exit from, and work in such areas.
Current TS 5.7.2.c Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.	Proposed TS 5.7.2.c Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following facility radiation protection procedures for entry to, exit from, and work in such areas.
Basis	
TS 5.7.1.c - Entergy proposes to replace the term "plant" with the term "facility." As previously discussed, the term "facility" better represents a site undergoing decommissioning. This is an administrative change. TS 5.7.2.c - Entergy proposes to replace the term "plant" with the term "facility." As previously discussed, the term "facility" better represents a site undergoing decommissioning. This is an administrative change.	

3. REGULATORY EVALUATION

3.1 APPLICABLE REGULATORY REQUIREMENT/CRITERIA

10 CFR 50.82(a)(1) requires that when a licensee has determined to permanently cease operations the licensee shall, within 30 days, submit a written certification to the NRC, consistent with the requirements of 10 CFR 50.4(b)(8), and once fuel has been permanently removed from the reactor vessel, the licensee shall submit a written certification to the NRC that meets the requirements of 10 CFR 50.4(b)(9). On February 8, 2017, Entergy notified the NRC that IP3 would permanently cease operations no later than April 30, 2021 (Reference 1). Entergy recognizes that approval of these proposed changes is contingent upon the submittal of the certifications required by 10 CFR 50.82(a)(1).

10 CFR 50.82(a)(2) states: "Upon docketing of the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel, or when a final legally effective order to permanently cease operations has come into effect, the 10 CFR Part 50 license no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel."

10 CFR 50.36 establishes the requirements for TS. 10 CFR 50.36(c)(5), Administrative Controls, identifies that an Administrative Controls section shall be included in the TS and shall include provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner. This license amendment request is proposing changes to the Administrative Controls section, with conforming changes proposed to additional sections, consistent with the pending decommissioning status of the plant. This request applies the principles identified in 10 CFR 50.36(c)(6), Decommissioning, for a facility which has submitted certifications required by 50.82(a)(1) and proposes changes to the Administrative Controls appropriate for the IP3 permanently defueled condition. As 10 CFR 50.36(c)(6) states, this type of change should be considered on a case-by-case basis.

10 CFR 50.54(m) establishes the requirements for having Reactor Operators and SROs licensed in accordance with 10 CFR Part 55 based on plant conditions. Given the impending permanent cessation of operation for IP3, the requirements of this section will no longer apply once the certifications required by 10 CFR 50.82(a)(1) have been docketed and it will be permissible to remove those positions from the TS.

3.2 NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Pursuant to 10 CFR 50.92, Entergy has reviewed the proposed changes and concludes that the changes do not involve a significant hazards consideration since the proposed changes satisfy the criteria in 10CFR50.92(c). These criteria require that operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

The proposed changes would revise and remove certain requirements contained within Sections 1.1 (Definitions), 4.0 (Design Features) and 5.0 (Administrative Controls) of the IP3 TS. The TS requirements being changed would not be applicable until the certifications

required by 10 CFR 50.82(a)(1) have been docketed and the Certified Fuel Handler Training and Retraining Program is approved by the NRC. Once the certifications for permanent cessation of operations and permanent fuel removal are made, the 10 CFR Part 50 license for IP3 will no longer authorize operation of the reactor or placement of fuel in the reactor vessel in accordance with 10 CFR 50.82(a)(2).

The discussion below addresses each of these criteria and demonstrates that the proposed amendment does not constitute a significant hazard.

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

   Response: No.

   The proposed amendment would not take effect until IP3 has permanently ceased operation and entered a permanently defueled condition and the Certified Fuel Handler Training and Retraining Program is approved by the NRC. The proposed amendment would modify the IP3 TS by deleting the portions of the TS that are no longer applicable to a permanently defueled facility, while modifying the other sections to correspond to the permanently defueled condition.

   The deletion and modification of provisions of the administrative controls do not directly affect the design of structures, systems, and components (SSCs) necessary for safe storage of irradiated fuel or the methods used for handling and storage of such fuel in the spent fuel pool. The changes to the administrative controls are administrative in nature and do not affect any accidents applicable to the safe management of irradiated fuel or the permanently shutdown and defueled condition of the reactor. Thus, the consequences of an accident previously evaluated are not increased.

   In a permanently defueled condition, the only credible accidents are the fuel handling accident (FHA) and those involving radioactive waste systems remaining in service. The probability of occurrence of previously evaluated accidents is not increased, because extended operation in a defueled condition will be the only operation allowed. This mode of operation is bounded by the existing analyses. Additionally, the occurrence of postulated accidents associated with reactor operation is no longer credible in a permanently defueled reactor. This significantly reduces the scope of applicable accidents.

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

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

Response: No.

The proposed changes have no impact on facility SSCs affecting the safe storage of irradiated fuel, or on the methods of operation of such SSCs, or on the handling and storage of irradiated fuel itself. The administrative removal or modifications of the TS that are related only to administration of the facility cannot result in different or more adverse failure modes or accidents than previously evaluated because the reactor will be permanently shutdown and defueled and IP3 will no longer be authorized to operate the reactor or retain or place fuel in the reactor vessel.

The proposed changes to the IP3 TS do not affect systems credited in the accident analysis for the FHA or radioactive waste system upsets at IP3. The proposed TS will continue to require proper control and monitoring of safety significant parameters and activities.

The proposed amendment does not result in any new mechanisms that could initiate damage to the remaining relevant safety barriers for defueled plants (fuel cladding and spent fuel cooling). Extended operation in a defueled condition will be the only operation allowed, and it is bounded by the existing analyses, such a condition does not create the possibility of a new or different kind of accident.

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

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

Response: No.

Since the 10 CFR Part 50 license for IP3 will no longer authorize operation of the reactor or emplacement or retention of fuel into the reactor vessel once the certifications required by 10 CFR 50.82(a)(1) are docketed, as specified in 10 CFR 50.82(a)(2), the occurrence of postulated accidents associated with reactor operation is no longer credible. The only remaining credible accidents are a FHA and those involving radioactive waste systems remaining in service. The proposed amendment does not adversely affect the inputs or assumptions of any of the design basis analyses that impact these analyzed conditions.

The proposed changes are limited to those portions of the TS that are not related to the safe storage of irradiated fuel. The requirements that are proposed to be revised or deleted from the IP3 TS are not credited in the existing accident analysis for the remaining applicable postulated accident; and as such, do not contribute to the margin of safety associated with the accident analysis. Postulated design basis accidents involving the reactor are no longer possible because the reactor will be permanently shutdown and

defueled and IP3 will no longer be authorized to operate the reactor or retain or place fuel in the reactor vessel.

Therefore, the proposed change does not involve a significant reduction in the margin of safety.

Based on the above, Entergy concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

3.3 PRECEDENT

The proposed changes are based on the Administrative Controls TSs for Pilgrim Nuclear Power Station (PNPS) reflecting a permanently defueled condition, which were submitted on February 2, 2017 (Reference 4), supplemented on May 25, 2017 (Reference 5), and approved by the NRC on July 10, 2017 (Reference 6).

3.4 CONCLUSION

Based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

4. ENVIRONMENTAL CONSIDERATIONS

This amendment request meets the eligibility criteria for categorical exclusion from environmental review set forth in 10 CFR 51.22(c)(9) as follows:

(i) The amendment involves no significant hazards consideration.

As described in Section 3.2 of this evaluation, the proposed change involves no significant hazards consideration.

(ii) There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

The proposed amendment does not involve any physical alterations to the facility configuration that could lead to a change in the type or amount of effluent release offsite.

(iii) There is no significant increase in individual or cumulative occupational radiation exposure.

The proposed amendment does not involve a significant increase in individual or cumulative occupational radiation exposure.

Based on the above, Entergy concludes that the proposed change meets the eligibility criteria for categorical exclusion as set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no

environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

5. REFERENCES

1. Entergy Nuclear Operations, Inc. (Entergy) letter to U.S. Nuclear Regulatory Commission (NRC), "Notification of Permanent Cessation of Power Operations," dated February 8, 2017 (Letter NL-17-021) (ADAMS Accession No. ML17044A004)

2 Entergy letter to NRC, "Request for Approval of Certified Fuel Handler Training and Retraining Program," dated April 15, 2019 (Letter Number: NL-19-012) (ADAMS Accession No. ML19105A632)

3. NRC letter to Entergy, "Vermont Yankee Nuclear Power Station - Request for Exemption from the Requirements of 10 CFR 50.54(m) (TAC No. MF2990)," dated June 18, 2014 (ADAMS Accession No. ML14147A216)

4. Entergy letter to NRC, "Technical Specifications Proposed Change – Administrative Controls for Permanently Defueled Condition," dated February 14, 2017 (ADAMS Accession No. ML17053A468)

5. Entergy letter to NRC, "Supplement to Technical Specifications Proposed Change – Administrative Controls for Permanently Defueled Condition," dated May 25, 2017 (ADAMS Accession No. ML17163A181)

6. NRC letter to Entergy, "Pilgrim Nuclear Power Station - Issuance of Amendment Regarding Administrative Controls for Permanently Defueled Condition (CAC NO. MF3904)," dated July 10, 2017. (ADAMS Accession No. ML17066A130)

ATTACHMENT 1 to ENCLOSURE 2

NL-19-013

Markup of Technical Specifications (TS) Pages

Indian Point Nuclear Generating Station Unit 3
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5.7 High Radiation Area

1.0 USE AND APPLICATION

---NOTE---
The defined terms of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases.

Term	Definition
ACTIONS	ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
ACTUATION LOGIC TEST	An ACTUATION LOGIC TEST shall be the application of various simulated or actual input combinations in conjunction with each possible interlock logic state and the verification of the required logic output. The ACTUATION LOGIC TEST, as a minimum, shall include a continuity check of output devices.
AXIAL FLUX DIFFERENCE (AFD)	AFD shall be the difference in normalized flux signals between the top and bottom halves of a two section excore neutron detector.
CERTIFIED FUEL HANDLER (CFH)	A CERTIFIED FUEL HANDLER is an individual who complies with the provisions of the CERTIFIED FUEL HANDLER Training and Retraining Program required by TS 5.3.2.
CHANNEL CALIBRATION	A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel so that it responds within the required range and accuracy to known input. The CHANNEL CALIBRATION shall encompass the entire channel, including the required sensor, alarm, interlock, display, and trip functions. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. Whenever a sensing element is replaced, the next required CHANNEL CALIBRATION shall include an inplace cross calibration that compares the other sensing elements with the

(continued)

1.1 Definitions

MODE (continued)	vessel head closure bolt tensioning specified in Table 1.1-1 with fuel in the reactor vessel.
NON-CERTIFIED OPERATOR	A NON-CERTIFIED OPERATOR is a non-licensed operator who complies with the qualification requirements pf Specification 5.3.1, but is not a CERTIFIED FUEL HANDLER.
OPERABLE-OPERABILITY	A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).
PHYSICS TESTS	PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation. These tests are: a. Described in FSAR Chapter 13, Initial Tests and Operations; b. Authorized under the provisions of 10 CFR 50.59; or c. Otherwise approved by the Nuclear Regulatory Commission.
QUADRANT POWER TILT RATIO (QPTR)	QPTR shall be the ratio of the maximum upper excore detector calibrated output to the average of the upper excore detector calibrated outputs, or the ratio of the maximum lower excore detector calibrated output to the average of the lower excore detector calibrated outputs, whichever is greater.
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3216 MWt.

(continued)

4.0 DESIGN FEATURES

4.1 Site Location

Indian Point 3 is located on the east bank of the Hudson River at Indian Point, Village of Buchanan, in upper Westchester County, New York. The site is approximately 24 miles north of the New York City boundary line. The nearest city is Peekskill which is 2.5 miles northeast of Indian Point.

The minimum distance from the reactor center line to the boundary of the site exclusion area and the outer boundary of the low population zone as defined in 10 CFR 100.3 is 350 meters and 1100 meters, respectively.

4.2 ~~Reactor Core~~

~~4.2.1 Fuel Assemblies~~

~~The reactor shall contain 193 fuel assemblies. Each assembly shall consist of a matrix of Zircalloy or ZIRLO clad fuel rods with an initial composition of natural or slightly enriched uranium dioxide (UO_2) as fuel material. Reload fuel will have a U-235 enrichment of $\leq$ 5.0 weight percent. Limited substitutions of zirconium alloy or stainless steel filler rods for fuel rods, in accordance with approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with applicable NRC staff approved codes and methods and shown by tests or analyses to comply with all fuel safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in nonlimiting core regions.~~

~~4.2.2 Control Rod Assemblies~~

~~The reactor core shall contain 53 control rod assemblies. The control material shall be silver-indium-cadmium, as approved by the NRC.~~

(continued)

5.0 ADMINISTRATIVE CONTROLS

5.1 Responsibility

facility

5.1.1 The plant manager shall be responsible for overall ~~unit~~ operation and shall delegate in writing the succession to this responsibility during his absence.

The plant manager or his designee shall approve, prior to implementation, each proposed test, experiment or modification to systems or equipment that affect nuclear safety.

5.1.2 The ~~shift supervisor (SS) shall be responsible for the control room command function. During any absence of the SS from the control room while the unit is in MODE 1, 2, 3, or 4, an individual with an active Senior Reactor Operator (SRO) license shall be designated to assume the control room command function. During any absence of the SS from the control room while the unit is in MODE 5 or 6, an individual with an active SRO license or Reactor Operator license shall be designated to assume the control room command function.~~

Shift manager (SM) shall be responsible for the shift command function.

5.0 ADMINISTRATIVE CONTROLS

INSERT 1

5.2 Organization

5.2.1 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 safety of the nuclear power plant.~~

~~a. Lines of authority, responsibility, and communication shall be defined and established throughout highest management levels, intermediate levels, and all operating organization positions. These relationships shall be documented and updated, as appropriate, in organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements, including the plant specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications, shall be documented in the FSAR and Quality Assurance Plan, as appropriate;~~

~~b. The plant manager shall be responsible for overall safe operation of the plant and shall have control over those onsite activities necessary for safe operation and maintenance of the plant;~~

~~c. The corporate officer with direct responsibility for the plant 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; and~~

~~d. The individuals who train the operating staff, carry out health physics, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their independence from operating pressures.~~

(continued)

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facility

5.2 Organization

5.2.2 ~~Unit~~ Staff

The ~~unit~~ staff organization shall include the following:

~~a. A non-licensed operator shall be assigned to each reactor containing fuel and an additional non-licensed operator shall be assigned for each control room from which a reactor is operating in MODES 1, 2, 3, or 4.~~

~~b. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 5.2.2.a and 5.2.2.f for a period of time not to exceed 2 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.~~

~~c. A radiation protection technician shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.~~

~~d. Not Used~~

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(continued)

Facility

5.2 Organization

5.2.2 ~~Unit~~ Staff (continued)

~~e. The operations manager or assistant operations manager shall hold an SRO license.~~

~~f. When in MODES 1, 2, 3, or 4 an individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by ANSI/ANS 3.1-1993 as endorsed by RG 1.8, Rev.3, 2000.~~

e. The shift manager shall be a CERTIFIED FUEL HANDLER.

f. Deleted.

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5.0 ADMINISTRATIVE CONTROLS

Facility

5.3 ~~Unit~~ Staff Qualifications

5.3.1 Each member of the ~~unit~~ staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions with exceptions specified in the ~~Entergy~~ Quality Assurance Program Manual (QAPM).

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~~5.3.2 For the purpose of 10 CFR 55.4, a licensed Senior Reactor Operator (SRO) and a licensed Reactor Operator (RO) are those individuals who, in addition to meeting the requirements of TS 5.3.1, perform the functions described in 10 CFR 50.54(m).~~

5.3.2 An NRC approved training and retraining program for CERTIFIED FUEL HANDLER shall be maintained.

5.0 ADMINISTRATIVE CONTROLS

5.4 Procedures

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

a. ~~The applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978;~~

b. ~~The emergency operating procedures required to implement the requirements of NUREG-0737 and to NUREG-0737, Supplement 1, as stated in Generic Letter 82-33;~~

c. Quality assurance for effluent and environmental monitoring;

d. Fire Protection Program implementation; and

e. All programs specified in Specification 5.5.

The procedures applicable to the safe storage of nuclear fuel recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978 except as provided in the quality assurance program described or referenced in the Updated FSAR.

5.5 Programs and Manuals

5.5.1 Offsite Dose Calculation Manual (ODCM) (continued)

in which any change in the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (i.e., month and year) the change was implemented.

5.5.2 Primary Coolant Sources Outside Containment

~~This program provides controls to minimize leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to levels as low as practicable. The systems include the following:~~

~~a. Residual Heat Removal System;~~

~~b. Cross Connect Between Low Head Recirculation System and High Head Safety Injection System;~~

~~c. High Head Safety Injection system (partial);~~

~~d. Reactor Coolant Sampling System;~~

~~e. Post Accident Containment Air Sampling System;~~

~~f. Volume Control Tank (including Reactor Coolant Pump seal return line);~~

~~g. Containment Hydrogen Monitoring system.~~

~~The program shall include the following:~~

~~a. Preventive maintenance and periodic visual inspection requirements; and~~

~~b. Integrated leak test requirements for each system at refueling cycle intervals or less.~~

(continued)

5.0 ADMINISTRATIVE CONTROLS

5.6 Reporting Requirements

The following reports shall be submitted in accordance with 10 CFR 50.4.

5.6.1 Not Used

5.6.2 Annual Radiological Environmental Operating Report /facility

----------NOTE----------
-
A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station.
---------- /facility ---------- /facilities
-

The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted by May 15 of each year. The report shall include summaries, interpretations, and analyses 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 the Offsite Dose Calculation Manual (ODCM), and in 10 CFR 50, Appendix I, Sections IV.B.2, IV.B.3, and IV.C.

(continued)

5.6 Reporting Requirements

5.6.2 Annual Radiological Environmental Operating Report (continued)

A full listing of the information to be contained in the Annual Radiological Environmental Operating Report is provided in the ODCM.

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5.6.3 Radioactive Effluent Release Report

----------NOTE----------

A single submittal may be made for a multiple unit station. The submittal shall combine sections common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit.

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The Radioactive Effluent Release Report covering the operation of the unit in the previous year shall be submitted prior to May 1 of each year in accordance with 10 CFR 50.36a. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. The material provided shall be consistent with the objectives outlined in the ODCM and Process Control Program and in conformance with 10 CFR Part 50.36a and 10 CFR 50, Appendix I, Section IV.B.1.

/facility

5.6.4 Not Used

5.6.5 CORE OPERATING LIMITS REPORT (COLR)

a. Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the COLR for the following:

(continued)

5.0 ADMINISTRATIVE CONTROLS

5.7 High Radiation Area

As provided in paragraph 20.1601(c) of 10 CFR Part 20, the following controls shall be applied to high radiation areas in place of the controls required by paragraph 20.1601(a) and (b) of 10 CFR Part 20:

5.7.1 High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation

a. Each entryway to such an area shall be barricaded and conspicuously posted as a high radiation area. Such barricades may be opened as necessary to permit entry or exit of personnel or equipment.

b. Access to, and activities in, each such area shall be controlled by means of Radiation Work Permit (RWP) or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following ~~plant~~ facility radiation protection procedures for entry to, exit from, and work in such areas.

d. Each individual or group entering such an area shall possess:

1. A radiation monitoring device that continuously displays radiation dose rates in the area; or

2. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

3. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area, or

(continued)

5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation

a. Each entryway to such an area shall be conspicuously posted as a high radiation area and shall be provided with a locked or continuously guarded door or gate that prevents unauthorized entry, and, in addition:

1. All such door and gate keys shall be maintained under the administrative control of the shift supervisor, radiation protection manager, or his or her designee.

2. Doors and gates shall remain locked except during periods of personnel or equipment entry or exit.

b. Access to, and activities in, each such area shall be controlled by means of an RWP or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following ~~plant~~ radiation protection procedures for entry to, exit from, and work in such areas. facility

d. Each individual or group entering such an area shall possess:

1. A radiation monitoring device that continuously integrates the radiation rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

2. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area with the means to communicate with and control every individual in the area, or

(continued)

INSERT 1:

Onsite and offsite organizations shall be established for facility staff and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting safety of the nuclear fuel.

a. Lines of authority, responsibility, and communication shall be defined and established throughout highest management levels, intermediate levels, and all decommissioning organization positions. These relationships shall be documented and updated, as appropriate, in organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements, including the facility specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications, shall be documented in the FSAR and Quality Assurance Plan, as appropriate;

b. The plant manager shall be responsible for overall safe maintenance of the facility and shall have control over those onsite activities necessary for safe storage and maintenance of nuclear fuel;

c. The corporate officer with direct responsibility for IP3 shall have corporate responsibility for the safe storage and handling of nuclear fuel and shall take any measures needed to ensure acceptable performance of the staff in maintaining and providing technical support to the facility to ensure safe management of nuclear fuel; and

d. The individuals who train the CERTIFIED FUEL HANDLERS, carry out health physics, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their ability to perform their assigned functions.

INSERT 2

a. Each duty shift shall be composed of at least one shift manager and one NON-CERTIFIED OPERATOR. The NON-CERTIFIED OPERATOR position may be filled by a CERTIFIED FUEL HANDLER.

   At least one person qualified to stand watch in the control room (NON-CERTIFIED OPERATOR or CERTIFIED FUEL HANDLER) shall be present in the control room when nuclear fuel is stored in the spent fuel pool.

b. Shift crew composition may be less than the minimum requirement of 5.2.2.a for a period of time not to exceed 2 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 and all of the following conditions are met:

   1) No fuel movements are in progress;

   2) No movement of loads over fuel are in progress; and

   3) No unmanned shift positions during shift turnover shall be permitted while the shift crew is less than the minimum.

c. An individual qualified in radiation protection procedures shall be on site during fuel handling operations and during movement of heavy loads over the fuel storage racks. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.

d. Not Used.

ATTACHMENT 2 to ENCLOSURE 2

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1.0 USE AND APPLICATION

1.1 Definitions

----------NOTE----------
The defined terms of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases.

Term	Definition
ACTIONS	ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
ACTUATION LOGIC TEST	An ACTUATION LOGIC TEST shall be the application of various simulated or actual input combinations in conjunction with each possible interlock logic state and the verification of the required logic output. The ACTUATION LOGIC TEST, as a minimum, shall include a continuity check of output devices.
AXIAL FLUX DIFFERENCE (AFD)	AFD shall be the difference in normalized flux signals between the top and bottom halves of a two section excore neutron detector.
CERTIFIED FUEL HANDLER (CFH)	A CERTIFIED FUEL HANDLER is an individual who complies with the provisions of the CERTIFIED FUEL HANDLER training and retraining program required by TS 5.3.2.
CHANNEL CALIBRATION	A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel so that it responds within the required range and accuracy to known input. The CHANNEL CALIBRATION shall encompass the entire channel, including the required sensor, alarm, interlock, display, and trip functions. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. Whenever a sensing element is replaced, the next required CHANNEL CALIBRATION shall include an inplace cross calibration that compares the other sensing elements with the

(continued)

1.1 Definitions

MODE (continued)	vessel head closure bolt tensioning specified in Table 1.1-1 with fuel in the reactor vessel.
NON-CERTITIFIED OPERATOR	A NON-CERTIFIED OPERATOR is a non-licensed operator who complies with the qualification requirements of Specification 5.3.1, but is not a CERTIFIED FUEL HANDLER.
OPERABLE-OPERABILITY	A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).
PHYSICS TESTS	PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation. These tests are: a. Described in FSAR Chapter 13, Initial Tests and Operations; b. Authorized under the provisions of 10 CFR 50.59; or c. Otherwise approved by the Nuclear Regulatory Commission.
QUADRANT POWER TILT RATIO (QPTR)	QPTR shall be the ratio of the maximum upper excore detector calibrated output to the average of the upper excore detector calibrated outputs, or the ratio of the maximum lower excore detector calibrated output to the average of the lower excore detector calibrated outputs, whichever is greater.
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3216 MWt.

(continued)

4.0 DESIGN FEATURES

4.1 Site Location

Indian Point 3 is located on the east bank of the Hudson River at Indian Point, Village of Buchanan, in upper Westchester County, New York. The site is approximately 24 miles north of the New York City boundary line. The nearest city is Peekskill which is 2.5 miles northeast of Indian Point.

The minimum distance from the reactor center line to the boundary of the site exclusion area and the outer boundary of the low population zone as defined in 10 CFR 100.3 is 350 meters and 1100 meters, respectively.

4.2 Deleted

(continued)

5.0 ADMINISTRATIVE CONTROLS

5.1 Responsibility

5.1.1 The plant manager shall be responsible for overall facility operation and shall delegate in writing the succession to this responsibility during his absence.

The plant manager or his designee shall approve, prior to implementation, each proposed test, experiment or modification to systems or equipment that affect nuclear safety.

5.1.2 The Shift manager (SM) shall be responsible for the shift command function.

5.0 ADMINISTRATIVE CONTROLS

5.2 Organization

5.2.1 Onsite and Offsite Organizations

Onsite and offsite organizations shall be established for facility staff and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting safety of the nuclear fuel.

a. Lines of authority, responsibility, and communication shall be defined and established throughout highest management levels, intermediate levels, and all decommissioning organization positions. These relationships shall be documented and updated, as appropriate, in organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements, including the facility specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications, shall be documented in the FSAR and Quality Assurance Plan, as appropriate;

b. The plant manager shall be responsible for overall safe maintenance of the facility and shall have control over those onsite activities necessary for safe storage and maintenance of nuclear fuel;

c. The corporate officer with direct responsibility for IP3 shall have corporate responsibility for the safe storage and handling of nuclear fuel and shall take any measures needed to ensure acceptable performance of the staff in maintaining and providing technical support to the facility to ensure safe management of nuclear fuel; and

d. The individuals who train the CERTIFIED FUEL HANDLERS, carry out health physics, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their ability to perform their assigned functions.

(continued)

5.2 Organization

5.2.2 Facility Staff

The facility staff organization shall include the following:

a. Each duty shift shall be composed of at least one shift manager and one NON-CERTIFIED OPERATOR. The NON-CERTIFIED OPERATOR position may be filled by a CERTIFIED FUEL HANDLER.
At least one person qualified to stand watch in the control room (NON-CERTIFIED OPERATOR or CERTIFIED FUEL HANDLER) shall be present in the control room when nuclear fuel is stored in the spent fuel pool.

b. Shift crew composition may be less than the minimum requirement of 5.2.2.a for a period of time not to exceed 2 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 and all of the following conditions are met:

1) No fuel movements are in progress;

2) No movement of loads over fuel are in progress; and

3) No unmanned shift positions during shift turnover shall be permitted while the shift crew is less than the minimum.

c. An individual qualified in radiation protection procedures shall be on site during fuel handling operations and during movement of heavy loads over the fuel storage racks. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.

d. Not Used.

(continued)

5.2 Organization

5.2.2 Facility Staff (continued)

e. The shift manager shall be a CERTIFIED FUEL HANDLER.

f. Deleted.

5.0 ADMINISTRATIVE CONTROLS

5.3 Facility Staff Qualifications

5.3.1 Each member of the Facility staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions with exceptions specified in the IPEC Quality Assurance Program Manual (QAPM).

5.3.2 An NRC approved training and retraining program for CERTIFIED FUEL HANDLER shall be maintained.

5.0 ADMINISTRATIVE CONTROLS

5.4 Procedures

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

a. The procedures applicable to the safe storage of nuclear fuel recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978 except as provided in the quality assurance program described or referenced in the Updated FSAR.

b. Deleted

c. Quality assurance for effluent and environmental monitoring;

d. Fire Protection Program implementation; and

e. All programs specified in Specification 5.5.

5.5 Programs and Manuals

5.5.1 Offsite Dose Calculation Manual (ODCM) (continued)

in which any change in the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (i.e., month and year) the change was implemented.

5.5.2 Primary Coolant Sources Outside Containment

Deleted

(continued)

5.0 ADMINISTRATIVE CONTROLS

5.6 Reporting Requirements

The following reports shall be submitted in accordance with 10 CFR 50.4.

5.6.1 Not Used

5.6.2 Annual Radiological Environmental Operating Report

----------NOTE----------
-
A single submittal may be made for a multiple unit/facility station. The submittal should combine sections common to all units /facilities at the station.

-

The Annual Radiological Environmental Operating Report covering the operation of the unit/facility during the previous calendar year shall be submitted by May 15 of each year. The report shall include summaries, interpretations, and analyses 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 the Offsite Dose Calculation Manual (ODCM), and in 10 CFR 50, Appendix I, Sections IV.B.2, IV.B.3, and IV.C.

(continued)

5.6 Reporting Requirements

5.6.2 Annual Radiological Environmental Operating Report (continued)

A full listing of the information to be contained in the Annual Radiological Environmental Operating Report is provided in the ODCM.

5.6.3 Radioactive Effluent Release Report

----------NOTE----------

A single submittal may be made for a multiple unit/facility station. The submittal shall combine sections common to all units/facilities at the station; however, for units/facilities with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit/facility.

The Radioactive Effluent Release Report covering the operation of the unit/facility in the previous year shall be submitted prior to May 1 of each year in accordance with 10 CFR 50.36a. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit/facility. The material provided shall be consistent with the objectives outlined in the ODCM and Process Control Program and in conformance with 10 CFR Part 50.36a and 10 CFR 50, Appendix I, Section IV.B.1.

5.6.4 Not Used

5.6.5 CORE OPERATING LIMITS REPORT (COLR)

a. Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the COLR for the following:

(continued)

5.0 ADMINISTRATIVE CONTROLS

5.7 High Radiation Area

As provided in paragraph 20.1601(c) of 10 CFR Part 20, the following controls shall be applied to high radiation areas in place of the controls required by paragraph 20.1601(a) and (b) of 10 CFR Part 20:

5.7.1 High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation

a. Each entryway to such an area shall be barricaded and conspicuously posted as a high radiation area. Such barricades may be opened as necessary to permit entry or exit of personnel or equipment.

b. Access to, and activities in, each such area shall be controlled by means of Radiation Work Permit (RWP) or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following facility radiation protection procedures for entry to, exit from, and work in such areas.

d. Each individual or group entering such an area shall possess:

1. A radiation monitoring device that continuously displays radiation dose rates in the area; or

2. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

3. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area, or

(continued)

5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation

a. Each entryway to such an area shall be conspicuously posted as a high radiation area and shall be provided with a locked or continuously guarded door or gate that prevents unauthorized entry, and, in addition:

1. All such door and gate keys shall be maintained under the administrative control of the shift supervisor, radiation protection manager, or his or her designee.

2. Doors and gates shall remain locked except during periods of personnel or equipment entry or exit.

b. Access to, and activities in, each such area shall be controlled by means of an RWP or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following facility radiation protection procedures for entry to, exit from, and work in such areas.

d. Each individual or group entering such an area shall possess:

1. A radiation monitoring device that continuously integrates the radiation rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

2. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area with the means to communicate with and control every individual in the area, or

(continued)