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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 180 TO FACILITY OPERATING LICENSE NO. DPR-39

AND AMENDMENT NO. 167 TO FACILITY OPERATING LICENSE NO. DPR-48

COMMONWEALTH EDISON COMPANY

ZION NUCLEAR POWER STATION, UNITS 1 AND 2

DOCKET NOS. 50-295 AND 50-304

1.0 INTRODUCTION

By application dated October 2, 1998, and supplemented by letters dated April 13, 1999, and September 15, 1999, Commonwealth Edison Company (ComEd) requested changes to the Technical Specifications (Appendix A to Facility Operating License Nos. DPR-39 and DPR-48) for the Zion Nuclear Power Station, Units 1 and 2 (ZNPS). The requested changes would replace in their entirety the current custom Technical Specifications with Permanently Defueled Technical Specifications. ComEd developed the Permanently Defueled Technical Specifications (PDTS), to reflect the permanently shutdown and defueled status of the station. Changes are proposed in the definitions, limiting conditions for operations, limiting conditions for operation, surveillance, and administrative control sections. ComEd correspondence dated August 30, 1999 and July 8, 1999, provided in support of an exemption from offsite emergency planning and approved by the Commission in a letter dated August 31, 1999, were also considered by the staff in the course of its review of this amendment. The information supplied in ComEd letters of July 8, 1999, August 30, 1999, and September 15, 1999, provided clarifying information and did not expand the scope of the original Federal Register notice dated June 2, 1999, and did not change the staff's proposed no significant hazards finding.

2.0 BACKGROUND

ZNPS was shut down permanently in February 1997. ComEd certified the permanent shutdown on February 13, 1998, and certified that all fuel had been removed from the reactor vessels on March 9, 1998. In a letter dated May 4, 1998, the Nuclear Regulatory Commission (NRC) acknowledged that pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 licenses for ZNPS, Units 1 and 2 no longer authorized operation of the reactor or emplacement or retention of fuel in the reactor vessel. The ZNPS PDTS reflects the shutdown and defueled status of the plant.

In 10 CFR 50.36, the Commission established its regulatory requirements related to the content of technical specifications (TS). In doing so, the Commission placed emphasis on those matters related to the prevention of accidents and mitigation of accident consequences; the Commission noted that applicants were expected to incorporate into their TS "those items that are directly related to maintaining the integrity of the physical barriers designed to contain

radioactivity." Statement of Consideration, "Technical Specifications for Facility Licenses; Safety Analysis Reports," 33 FR 18610 (December 17, 1968). Pursuant to 10 CFR 50.36, TS are required to include items in the following five specific categories: (1) safety limits, limiting safety system settings and limiting control settings; (2) limiting conditions for operation (LCOs); (3) surveillance requirements (SR); (4) design features; and (5) administrative controls. However, the rule does not specify the particular requirements to be included in a plant's TS.

In September 1992, the Commission issued NUREG-1431, which was developed using the guidance and criteria contained in the Commission's Interim Policy Statement. Standard Technical Specifications (STS) were established as a model for developing improved TS for Westinghouse plants in general. STS reflect the results of a detailed review of the application of the interim policy statement criteria to generic system functions, which was published in a "Split Report" issued to the Nuclear Steam System Supplier (NSSS) Owners Groups in May 1988. STS also reflect the results of extensive discussions concerning various drafts of STS, so that the application of the TS criteria and the Writer's Guide would consistently reflect detailed system configurations and operating characteristics for all NSSS designs. As such, the generic Bases presented in NUREG-1431 provide an abundance of information regarding the extent to which the STS present requirements that are necessary to protect public health and safety.

On July 22, 1993, the Commission issued its Final Policy Statement, indicating that satisfying the guidance in the policy statement also satisfies Section 182a of the Act and 10 CFR 50.36 (58 FR 39132). The Final Policy Statement described the safety benefits of the improved STS, and encouraged licensees to use the improved STS as the basis for plant-specific TS amendments, and for complete conversions to improved STS. Further, the Final Policy Statement gave guidance for evaluating the required scope of the TS and defined the guidance criteria to be used in determining which of the LCOs and associated surveillances should remain in the TS.

The final Commission Policy Statement established four criteria to define the scope of equipment and parameters to be included in the improved Standard Technical Specifications. These criteria were developed for licenses authorizing operation (i.e., operating reactors) and focused on instrumentation to detect degradation of the reactor coolant system pressure boundary; process variables and equipment, design features, or operating restrictions that affect the integrity of fission product barriers during design bases accidents or transients. A fourth criterion refers to the use of operating experience and probabilistic risk assessment to identify and include in the technical specifications structures, systems, and components shown to be significant to public health and safety. These criteria, which were subsequently codified in 10 CFR 50.36, also pertain to the technical specification requirements for safe storage of spent fuel. A general discussion of these considerations is provided below.

Criterion 1 of 10 CFR 50.36(c)(2)(ii)(A) states that technical specification limiting conditions for operation must be established for "installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary." Since no fuel is present in the reactor or reactor coolant system at the ZNPS facility, this criterion is not applicable.

Criterion 2 of 10 CFR 50.36(c)(2)(ii)(B) states that technical specification limiting conditions for operation must be established for a "process variable, design feature, or operating restriction that is an initial condition of a design basis accident [DBA] or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier." The purpose of this criterion is to capture those process variables that have initial values assumed in the design basis accident and transient analyses, and which are monitored and controlled during power operation. While this criterion was developed for operating reactors, there are some design basis accidents which continue to apply to a plant authorized only to handle, store, and possess nuclear fuel. The scope of DBAs applicable to a plant with a reactor that is permanently shut down and defueled is markedly reduced from those postulated for an operating plant. The DBAs for the ZNPS are discussed below.

Criterion 3 of 10 CFR 50.36(c)(2)(ii)(C) states that technical specification limiting conditions for operation must be established for structures, systems, or components (SSC) that are part of the primary success path and which function or actuate to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. The intent of this criterion is to capture into technical specifications only those SSC that are part of the primary success path of a safety sequence analysis. Also captured by this criterion are those support and actuation systems that are necessary for items in the primary success path to successfully function. The primary success path of a safety sequence analysis consists of the combination and sequences of equipment needed to operate (including consideration of the single failure criterion), so that the plant response to design basis accidents and transients limits the consequences of these events to within the appropriate acceptance criteria. While there are no transients which continue to apply to ZNPS, there are some design basis accidents which continue to apply to a plant authorized only to handle, store, and possess nuclear fuel. The scope of DBAs applicable to a plant with a reactor which is permanently shut down and defueled is markedly reduced from those postulated for an operating plant. The scope of DBAs applicable to ZNPS is discussed in more detail below.

Criterion 4 of 10 CFR 50.36(c)(2)(ii)(D) states that technical specification limiting conditions for operation must be established for SSC which operating experience or probabilistic risk assessment has shown to be significant to public health and safety. The intent of this criterion is that risk insights and operating experience be factored into the establishment of technical specification limiting conditions for operation. All of the accident sequences that previously dominated risk at Zion Station are no longer applicable with the reactor in the permanently shutdown and defueled condition.

On December 19, 1997, the NRC issued a set of technical specification for ZNPS Units 1 and 2 based on NUREG-1431, Revision 1, "Standard Technical Specifications - Westinghouse Plants." These Improved Technical Specifications (ITS) were to replace the ZNPS Custom Technical Specifications (CTS) in their entirety. However, on March 30, 1998, the licensee filed a license amendment requesting the CTS and the license conditions be reinstated to facilitate ZNPS activities following the decision not to restart and to decommission the Zion Units. On July 24, 1998, the NRC issued an amendment reinstating the CTS. In the following sections analyzing the changes to the CTS, reference is made to the ITS in order to demonstrate that the change under consideration is consistent with a change previously accepted by the NRC for the ZNPS.

3.0 EVALUATION

3.1 Accident Analysis

Section 15 of the Updated FSAR described the DBA scenarios that were applicable to ZNPS during power operations. However, as a result of the certifications submitted by ComEd in accordance with 10 CFR 50.82(a)(1), and the consequent removal of authorization to operate the reactor or to place or retain fuel in the reactor in accordance with 10 CFR 50.82(a)(2), most of the accident scenarios postulated in the Updated FSAR are no longer possible. ComEd has revised the Updated FSAR and retitled it as the Defueled Safety Analysis Report (DSAR) (November 10, 1998) to reflect the current facility status. The postulated accidents contained in the DSAR Section 5 are discussed below.

3.1.1 Applicable Accidents

ComEd plans to place the units in a condition designated as SAFSTOR in which most fluid systems are drained and the plant is left in a stable condition until final dismantlement. The irradiated fuel will be stored in the spent fuel pool (SFP) until it is shipped off site sometime in the future. In this configuration, the spent fuel pool and its systems have been isolated and are dedicated only to spent fuel storage. In this condition the spectrum of credible accidents is much smaller than for an operational plant. Chapter 15 of the Final Safety Analysis Report (FSAR) describes the design basis accident scenarios that are applicable to ZNPS during power operations. ZNPS is shutdown with the fuel permanently removed from the reactors and stored in the SFP. With no fuel in the reactor, most of the accident scenarios postulated in the FSAR are no longer possible. The DSAR reflects the current facility status.

During normal power operations, the forced flow of water through the reactor coolant system (RCS) removes the heat generated by the reactor. The RCS, operating at high temperatures and pressures, transfers this heat through the steam generator tubes to the secondary system. The most severe postulated accidents for nuclear power plants involve damage to the nuclear reactor core and the release of large quantities of fission products to the reactor coolant system. Many of the accident scenarios postulated in the FSAR involve failures or malfunctions of systems, which could affect the reactor core. With the termination of reactor operations at ZNPS and the permanent removal of the fuel from the reactor core in each unit, such accidents are no longer possible. The irradiated fuel is now stored in the SFP and, for both units, the reactor, RCS and secondary system are no longer in operation and have no function related to the storage of the irradiated fuel. Therefore, the postulated accidents involving failure or malfunction of the reactor, RCS or secondary system are no longer applicable. The analyzed accidents and operational events applicable to ZNPS in the permanently shut down and defueled condition discussed in the DSAR are a fuel handling accident in the fuel handling building, a low level radioactive waste handling accident, and SFP operational events.

3.1.2 Fuel Handling and Waste Handling Accident

Radioactive Waste Handling Accident

Decontamination of systems during decommissioning and dismantlement operations is expected to generate significant quantities of radioactive waste in the form of contaminated demineralizer resins. The licensee has postulated a bounding accident for the release of radioactivity: the dropping of a high integrity container in the interim radwaste storage facility (IRSF) such that the entire contents of radioactive, dewatered demineralizer resin escapes. A fraction of the escaped resin is non-mechanistically assumed to be released as airborne radioactivity and pass from the IRSF directly to the environment. The analysis indicates that an individual at the exclusion area boundary (EAB) could receive up to 0.918 rem total effective dose equivalent (TEDE) from this event. This projected dose is less than the Environmental Protection Agency (EPA) early phase Protective Action Guideline (PAG) of 1.0 rem.

The staff notes that the licensee did not postulate a resin fire accident as done by several other licensees for their decommissioning accident analyses. There is no requirement to postulate a resin fire. The licensee did assume the release consists of the worst case mix of fission products that contribute to dose consequences (100% Co-60) and the solid-to-aerosol release fraction is the worst case non-mechanistic, mechanically initiated release fraction (0.1%). The release fraction assumption is the same fraction of material expected to be released by a fire and is consistent with the release fraction listed in the Schedule C to 10 CFR 30.72 for Co-60. The calculational methods and assumptions used in this analysis are acceptable to the staff.

Fuel Handling Accident in the Fuel Building

The licensee performed an analysis evaluating the drop of a spent fuel assembly onto the SFP floor. The licensee assumed one year of decay time, all fuel rods in the dropped assembly break, and all the radioactivity in the gap between the fuel and cladding is released directly to the environment (i.e., no credit for the charcoal absorbers in the fuel building ventilation system). The licensee's results are given below, along with the acceptance criteria. The results are much less than 10 CFR Part 50, Appendix A, General Design Criterion (GDC) 19 and the NUREG-0800 Standard Review Plan (SRP) acceptance criteria of well within (10% of) the limits given in 10 CFR Part 100. The staff performed a confirmatory calculation which approximated licensee results. The staff reviewed the licensee's calculational methods and assumptions for this evaluation and found them acceptable.

Projected Dose Following a Fuel Handling Accident				
	EAB (rem)	SRP Acceptance Criterion (rem)	Control Room Air Intake (rem)	GDC-19 (rem)
Whole Body Dose	8.8e-01	25	2.59e-01	5
Thyroid Dose	3.9e-09	300	Not analyzed	30

3.1.3 Spent Fuel Pool Operational Events

Loss of Spent Fuel Pool Inventory and Cooling

For the loss of SFP inventory and cooling, the licensee evaluated the duration of the event to the time when radiation exposure in the SFP building becomes unacceptable to personnel. The licensee determined that 3.9 feet of water shielding was required for adequate shielding to personnel in the SFP building. A decrease in level to eight feet above the fuel due to a pipe rupture of the SFP cooling water pump return line and a boiloff of the remaining water to 3.9 feet above the fuel were used in the evaluation. The licensee calculated that it would require 3.2 days to boil off the SFP water from 8 feet to 3.9 feet above the fuel. The SFP has a low level alarm at the 614-foot 4-inch elevation. In a letter dated August 30, 1999, submitted in support of an exemption from offsite emergency planning and approved by the Commission in a letter dated August 31, 1999, the licensee confirmed that the low water level alarm in the control room will alert personnel to the reduction in water level and instruct personnel via the abnormal operation procedure on the various means to restore water level in the pool to the normal elevation. The licensee stated that at least two sources of water would be available for the SFP makeup. In a letter dated July 8, 1999, submitted in support of an exemption from offsite emergency planning and approved by the Commission in a letter dated August 31, 1999, the licensee proposed a station unusual event status if the level decreased to the 613-foot elevation. Additionally, radiation monitors, as described in the SAR, will alert personnel to a low water level in the SFP. The diverse alert signals that occur at varying times, procedures that instruct operators on various means to restore level, and the long time period required to reduce the level to an unacceptable level will provide sufficient time and capability to restore cooling and/or water level to the SFP.

Although the fuel onsite has decayed for nearly three years, a significant quantity of radioactive material remains in the SFP. Water and the concrete pool structure provide radiation shielding at the sides of the pool. However, water alone provides the majority of shielding above the spent fuel. A loss of shielding above the fuel could increase the radiation levels at the EAB because of the scattering of gamma rays streaming up out of the pool. The licensee calculated the offsite radiological impact of a postulated complete loss of SFP water (a beyond-design-basis event). The licensee concluded that with spent fuel decay time through October 1, 1998 (just over 19 months), the gamma radiation dose rate at the EAB would be 0.00294 rad per hour at an outside air temperature of 21°C. It is reasonable to assume that the licensee would be able to take effective corrective actions or protective actions or both within the 14 days it would take to exceed the EPA early-phase PAG of 1.0 rem. The staff reviewed the licensee's analysis and determined that the calculational methods and assumptions are acceptable.

3.1.4 Spent Fuel Pool Heatup

The licensee evaluated the beyond design basis accident of a complete loss of water inventory from the SFP. The pool is a Seismic Category I structure. The walls vary in thickness from three feet, five inches to nine feet. The walls are reinforced concrete with a seam-welded stainless steel liner. No piping or tubing exists below the top of the spent fuel. In the analysis, the licensee performed a calculation to determine the peak cladding temperature in the spent fuel under the assumption that all water had been lost from the pool and only air cooling was available. By a letter dated July 8, 1999, submitted in support of an exemption from offsite

emergency planning and approved by the Commission in a letter dated August 31, 1999, the licensee provided the results of the SFP heatup analysis. The licensee analyzed bundles with the highest burnups and the shortest decay time in order to determine the fuel bundle with the highest decay power using the ORIGEN2.1 computer code. The bundle burnup history was used in the ORIGEN2.1 calculation, and the decay heat was calculated to be 5.67 KW/MTU as of June 30, 1999, for the limiting bundle F50D. This calculation corresponds to a total decay power of 2.6 KW for bundle F50D. The building temperature was calculated using the KITTY-1S code to be 139°C on the basis of a decay heat level of 5.5E6 BTU/hr for the pool. The pool decay heat level was determined from experimental determination of the pool heat balance. The COBRA-SFS code was used to perform the peak cladding temperature calculation using a detailed subchannel model of the highest power fuel bundle and assuming adiabatic boundary conditions on the outside of the fuel channel. The peak temperature was found to be 482°C which is below the clad rupture criteria of 565°C. The staff finds this analysis and the calculated temperatures acceptable. The staff concludes that as of June 30, 1999, it is no longer possible for a complete loss of water from the ZNPS SFP to result in an offsite release that exceeds the EPA early-phase PAGs.

3.2 Facility Operating License

License Conditions

The licensee proposed the deletion of the following license conditions.

2.C.(1) (Maximum Power Level)

> Commonwealth Edison Company is authorized to operate the Zion Nuclear Power Station Unit No. 1 [2] at steady state reactor core power levels not to exceed 3250 megawatts thermal.

The licensee proposes that this license condition be eliminated because it is no longer needed to assure safety because the reactors will no longer be fueled or operating. The staff finds this change to be acceptable.

2.C.(4) (Operation With Less Than Four Loops)

> The licensee shall not operate the reactor in Mode 1 or 2 (as defined in Technical Specification Table 1.1) with less than four (4) reactor coolant loops in operation until safety analyses for less than four loop operation have been submitted and approval for less than four loop operation in Mode 1 or 2 has been granted by the Commission by amendment to this license.

The licensee proposed that this license condition be eliminated because it is no longer needed to assure safety because the reactors will no longer be fueled or operating. The staff finds this change to be acceptable.

2.C.(5) (Safe Shutdown Fire Protection Program)

> The license shall implement and maintain in effect all provisions of the approved Fire Protection Program as described in the (Updated) Final Safety Analysis Report for the Zion Nuclear Power Station and as approved in the SERs dated March 10, 1978, May 26, 1978, June 26, 1978, February 14, 1979, April 13, 1979, March 24, 1980, November 24, 1980, December 9, 1980, March 7, 1983, June 7, 1988, January 7, 1991, August 27, 1993, and August 31, 1993, subject to the following provision: The licensee may make changes to the approved Fire Protection Program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

The licensee proposes that this license condition be eliminated because it is no longer needed to assure safety by maintaining the ability to achieve and maintain safe shutdown in the event of a fire.

License Condition 2.C.(5), which is based on maintaining the ability to achieve and maintain safe shutdown in the event of a fire in accordance with 10 CFR 50.48(b)-(d), is no longer applicable to the operational fire protection program at ZNPS. However, many of the elements that are applicable for the operating plant fire protection program continue to be applicable during plant decommissioning. During the decommissioning process, a fire protection program is required by 10 CFR 50.48(f) to address the potential for fires which could result in a radiological hazard. However, the regulation is applicable regardless of whether the fire protection program is set out in the technical specifications. Therefore, a license condition requiring such a program for a permanently shutdown and defueled plant is not needed. On the basis of its evaluation, the staff concludes that the licensee's request to eliminate License Condition 2.C.(5) is acceptable.

2.C.(7)(b) (Control Of Loads Over the SFP)

> No loads heavier than the weight of a single spent fuel assembly plus the tool for moving that assembly shall be carried over fuel stored in the spent fuel. The spent fuel handling tool, the burnable poison tool, the rod cluster control changing fixture and the thimble plug shall not be carried at heights greater than two feet over fuel stored in the SFP.

The licensee proposed that this license condition be eliminated because the control of heavy loads requirements is being relocated to the DSAR. This does not affect safety since the requirements that were stated in the license condition will remain in effect in the DSAR, changes to which may only be made pursuant to 10 CFR 50.59.

During decommissioning, the frequency of handling heavy loads over or in the proximity of spent fuel is increased and, in the event of a dropped heavy load, the potential for offsite consequences to the population in areas surrounding the plant could be severe. License Condition 2.C(7)(b) restricts movement of heavy loads over the SFP to help limit the potential onsite and offsite consequences of heavy load drops. In the DSAR dated November 10, 1998,

the licensee analyzed the consequences of heavy load drops. DSAR Section 9.1.4.3.2, "Spent Fuel Cask Drop Accident," contains heavy loads analysis for the potential for a cask drop on spent fuel. The DSAR specifically states that no heavy loads shall be carried over fuel stored in the SFP. The analysis shows that a tipped cask will not fall onto the fuel because casks are moved into the cask loading area in one corner of the SFP with limited opportunity to drop over the SFP. The cask loading area is separated from the spent fuel area by guard walls. The guard walls surround the cask area, rise to the full height of the pool, and are structurally designed to withstand the impact of a falling spent fuel cask, the crane load block, hook, and lifting device.

The analysis also examined the integrity of the SFP floor if a cask is dropped from the highest possible lift elevation. The licensee considered the drag effects of the water in the SFP on the impact energy of the cask with the floor, and the effect of the concrete slab (9 feet thick) to distribute the impact energy to the foundation. The licensee concluded that no through-the-slab cracking would occur, and therefore, the possibility of SFP leakage leading to uncovering the fuel and offsite dose consequences is not credible.

Based on the existing provisions in the DSAR which restrict the movement of heavy loads over spent fuel, and the cask drop analysis that demonstrates that a potential accident resulting in offsite dose consequences is not credible, the staff finds that the licensee has sufficiently addressed the adequacy of its handling of heavy loads to limit the potential consequences of a dropped load. Therefore, the licensee's conclusion that the beyond design basis event (complete drain down of the water inventory in the SFP) would not occur as a result of a dropped spent fuel cask and the EPA Protective Action Guides limit of one rem for whole body and inhalation doses at the exclusion area boundary (offsite) will not be exceeded for this event.

Furthermore, because the licensee commits to implement the relocated requirements of the license condition in the DSAR, changes to which are controlled by 10 CFR 50.59, the staff finds that eliminating License Condition 2.C.(7)(b) and relocating its requirements to the DSAR is acceptable. The cask drop analysis adequately demonstrates that a cask drop will not damage fuel nor the pool floor sufficiently enough to result in a drain down of the SFP inventory that could produce any significant offsite dose consequences to individuals at the exclusion area boundary. Furthermore, relocating the requirements of the license condition to the DSAR does not change the requirements specified in the license condition nor the existing licensing basis, and the licensee has committed to implement the requirements of the relocated license condition; further, these requirements may only be changed in accordance with 10 CFR 50.59.

2.C.(8) (Program for Secondary Chemistry)

> The licensee shall implement a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall include:
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> (a) Identification of a sampling schedule for critical parameters and control points for these parameters;
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> (b) Identification of the procedures used to quantify parameters that are critical to control points;

(c) Identification of process sampling points;

(d) Procedure for the recording and management of data;

(e) Procedures defining corrective actions for off control point chemistry conditions; and

(f) A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events required to initiate corrective action.

The licensee proposes to eliminate this license condition because it is no longer needed to ensure safety because both the primary and secondary sides of the steam generators are depressurized and will ultimately be drained for long term SAFSTOR conditions. Consequently, the temperature and stress conditions which promote steam generator tube degradation have been eliminated and the consequences of such degradation are no longer significant. The staff finds this change to be acceptable.

2.C.(9) (Program for Leakage from Systems Outside Containment Following An Accident)

The licensee shall implement a program to reduce leakage from systems outside containment that would or could contain highly radioactive fluids during a serious transient or accident to as low as practicable levels. This program shall include the following:

1. Provisions establishing preventive maintenance and periodic visual inspection requirements, and

2. Integrated leak test requirements for each system at a frequency not to exceed refueling cycle intervals.

The licensee proposed that this license condition be eliminated because it is no longer needed to assure safety because loss-of-coolant accidents and other previously analyzed accidents inside containment are no longer credible. Additionally, all primary systems penetrating containment will be depressurized for long term SAFSTOR conditions.

Since the reactors at ZNPS have been permanently shut down and defueled, a serious transient or accident that requires leakage reduction is no longer credible. All primary systems penetrating containment will be depressurized and radioactive liquids have been drained from systems and components for long term SAFSTOR conditions. Therefore, the licensee states that this license condition is no longer applicable, and proposed to delete it. The staff has determined that due to the permanently shutdown and defueled status of the ZNPS, this license condition is no longer necessary for safe operation or maintenance of the plant, and finds its deletion to be acceptable.

2.C.(10) (Program for Vital Area Airborne Iodine Determination Under Accident Conditions)

> The licensee shall implement a program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:
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> 1. Training of personnel,
>
> 2. Procedures for monitoring, and
>
> 3. Provisions for maintenance of sampling and analysis equipment.

This license condition is no longer needed to ensure safety because sufficient time has elapsed since the units were shut down for the radioactive iodine in the fuel to decay to levels that would not result in exceeding the exposure limits for personnel in the control room stated in 10 CFR Part 50, Appendix A Criterion 19 following a fuel handling accident. The only remaining credible accident or event that could cause a breach of the fuel cladding is a fuel handling accident. Calculations have shown that the GDC 19 limits would be met for a fuel handling accident even without credit for the charcoal filters in the control room ventilation system. The staff has evaluated the licensee's analysis in Section 3.1.2 of this SE and find the deletion of this license condition acceptable.

2.C.(11) (March 14, 1983, Order concerning certain NUREG-0737 Issues)

> The licensee shall maintain the commitments made in response to the March 14, 1983, NUREG-0737 Order, subject to the following provision:
>
> The licensee may make changes to commitments made in response to the March 14, 1983, NUREG-0737 Order without prior approval of the Commission as long as the change would be permitted without NRC approval, pursuant to the requirements of 10 CFR 50.59. Consistent with this regulation, if the change results in an Unreviewed Safety Question, a license amendment shall be submitted to the NRC staff for review and approval prior to implementation of the change.

This license condition no longer needed since none of the issues subject to the order are relevant with the units permanently defueled. These issues are: simulator examinations, plant shielding, post accident sampling of reactor coolant and containment atmosphere, training for mitigating core damage, auxiliary feedwater flow indication, containment isolation dependability, post accident containment radiation monitor, containment pressure indication, containment water level indication, containment hydrogen indication, and post accident effluent monitors for iodine and noble gas. Regarding the last issue, the above described accident analysis demonstrates that 10 CFR Part 100 limits would not be exceeded if a fuel handling accident were to occur. Therefore, inclusion of a license condition concerning these monitors is no longer appropriate. The staff agrees that due to the permanently shutdown and defueled status of the ZNPS, this license condition is no longer necessary for safe operation or maintenance of the plant, and finds its deletion to be acceptable.

3.3 Technical Specification Changes

Custom Technical Specifications (CTS) Section 1.0 (Definitions)

The licensee has addressed the disposition of definitions defined in the CTS in the following manner.

1.1	Action	This definition has been reformatted, reworded, and retained as the only definition identified in PDTS 1.1.
1.2	Actuation Device	This definition is not included in the PDTS since the term is not used in any PDTS specification. There are no actuation systems credited in the analyses of the remaining credible accidents.
1.3	Actuated Equipment	This definition is not included in the PDTS since the term is not used in any PDTS specification. There are no actuation systems credited in the analyses of the accidents that remain credible.
1.4	Actuation Logic Test	This definition is not included in the PDTS since the term is not used in any PDTS specification. There are no actuation systems credited in the analyses of the accidents that remain credible.
1.6	Previously deleted	N/A
1.5	Axial Flux Difference	This definition is not included in the PDTS since the term is not used in any PDTS specification. The term only has meaning when related to an operational reactor core.
1.7	Channel Calibration, Instrument	This definition is not included in the PDTS since the term is not used in any PDTS specification. There is no instrumentation credited in the analyses of the accidents that remain credible.
1.8	Channel Check	This definition is not included in the PDTS since the term is not used in any PDTS specification. There is no instrumentation credited in the analyses of the accidents that remain credible.
1.9	Channel Functional Test	This definition is not included in the PDTS since the term is not used in any PDTS specification. There is no instrumentation credited in the analyses of the accidents that remain credible.
1.10	Previously deleted	N/A
1.11	Containment Integrity	This definition is not included in the PDTS since the term is not used in any PDTS specification. There is no longer any fuel in the containment.
1.12	Previously deleted	N/A

1.13	Controlled Leakage	This definition is not included in the PDTS since the term is not used in any PDTS specification. The CTS specifications in which it is used (1.22 and 3.3.3/4.3.3) are based on limiting reactor coolant system (RCS) leakage. The RCSs of both units have been depressurized and vented for the SAFSTOR period. Consequently, significant RCS leakage is no longer possible.
1.14	Core Alteration	This definition is not included in the PDTS since the term is not used in any PDTS specification. There are no longer any reactor cores.
1.14A	Core Operating Limits Report	This definition is not included in the PDTS since the term is not used in any PDTS specification. There are no longer any reactor cores.
1.15	Defined Terms	This definition has been reworded and reformatted and retained as a note in the PDTS 1.1, Definitions.
1.16	Degree of Redundancy	This definition is not included in the PDTS since the term is not used in any PDTS specification. There are no instruments or logic channels credited in the analyses of the accidents that remain credible.
1.17	Dose Equivalent I-131	This definition is not included in the PDTS since the term is not used in any PDTS specification. The CTS specification in which it was used (3.3.6) was based on limiting RCS specific activity to ensure 10 CFR Part 100 limits would be met in the event of a steam generator tube rupture. This accident is no longer possible.
1.18	E-average Disintegration Energy	This definition is not included in the PDTS since the term is not used in any PDTS specification. The CTS specification in which it was used (3.3.6) was based on limiting RCS specific activity to ensure 10 CFR Part 100 limits would be met in the event of a steam generator tube rupture. This accident is no longer possible.
1.19	Previously deleted	N/A
1.20	Identified Leakage	This definition is not included in the PDTS since the term is not used in any PDTS specification. The CTS specifications in which it is used (1.22 and 3.3.3/4.3.3) are based on limiting RCS leakage. The RCSs of both units have been depressurized and vented for the SAFSTOR period. Consequently, significant RCS leakage is no longer possible.
1.21	Instrument Channel	This definition is not included in the PDTS since the term is not used in any PDTS specification. There is no instrumentation credited in the analyses of the accidents that remain credible.
1.22	Leakage	This definition is not included in the PDTS since the term is not used in any PDTS specification. The CTS specification in which it is used (3.3.3/4.3.3) is based on limiting RCS leakage. The RCSs of both

		units have been depressurized and vented for the SAFSTOR period. Consequently, significant RCS leakage is no longer possible.
1.23	Master Relay Test	This definition is not included in the PDTS since the term is not used in any PDTS specification. There are no actuation systems credited in the analyses of the accidents that remain credible.
1.24	Member(s) of the Public	This definition is not included in the PDTS since the term is defined in 10 CFR 20.1003. Exclusion of this definition is consistent with the ZNPS ITS.
1.25	Off-site Ac Power Sources	This definition is not included in the PDTS since the term is not used in any PDTS specification. There are no electrical power supplies credited in the analyses of the accidents that remain credible.
1.26	Offsite Dose Calculation Manual (ODCM)	This definition has been reformatted, combined with other ODCM related requirements from CTS 6.7, and retained in ZNPS PDTS 5.6, Programs and Manuals.
1.27	Operable - Operability	This definition is not included in the PDTS since the term is not used in any PDTS specification. There are no systems or components required to be operable in the PDTS.
1.28	Operating	This definition is not included in the PDTS since the term is not used in any PDTS specification. There are no systems or components required or assumed to be operating in the PDTS.
1.29	Operating Cycle	This definition is not included in the PDTS since the term is not used in any PDTS specification. The reactors will no longer be operational.
1.30	Operational Mode-mode	This definition is not included in the PDTS since the term is not used in any PDTS specification. The permanently defueled condition is not an Operational Mode.
1.31	Physics Test	This definition is not included in the PDTS since the term is not used in any PDTS specification. Physics tests will not be conducted.
1.32	Pressure Boundary Leakage	This definition is not included in the PDTS since the term is not used in any PDTS specification. The CTS specifications in which it is used (1.22 and 3.3.3/4.3.3) are based on limiting RCS leakage. The RCSs of both units have been depressurized and vented for the SAFSTOR period. Consequently, significant RCS leakage is no longer possible.
1.32A	Pressure and Temperature Limits Report (PTLR)	This definition is not included in the PDTS since the term is not used in any PDTS specification. The RCSs of both units have been depressurized and vented for the SAFSTOR period and the RCS is no longer a post accident fission product barrier.

1.33	Process Control Program (PCP)	This definition is not included in the PDTS since it is included in Section 12.1 of the ODCM. Exclusion of this definition is consistent with the ZNPS ITS.
1.34	Protection Logic Channel	This definition is not included in the PDTS since the term is not used in any PDTS specification There are no logic channels credited in the analyses of the accidents that remain credible.
1.35	Protection System	This definition is not included in the PDTS since the term is not used in any PDTS specification. There are no protection systems credited in the analyses of the accidents that remain credible.
1.36	Purge-purging	This definition is not included in the PDTS since the term is not used in any PDTS specification. There are no purge activities credited in the analyses of the accidents that remain credible.
1.37	Quadrant Power Tilt Ratio	This definition is not included in the PDTS since the term is not used in any PDTS specification. The term only has meaning when related to an operational reactor core.
1.38	Rated Thermal Power	This definition is not included in the PDTS since the term is not used in any PDTS specification. The term only applies to a reactor operating at power.
1.39	Reactor Pressure	This definition is not included in the PDTS since the term is not used in any PDTS specification. There are no PDTS specifications involving pressure in the reactor, RCS, or any other system or component.
1.39	Refueling Cycle or Outage	This definition is not included in the PDTS since the term is not used in any PDTS specification. There are no longer refueling cycles or outages.
1.41	Reportable Event	This definition is not included in the PDTS since the term is defined in 10 CFR 50.72 and 10 CFR 50.73. Exclusion of this definition is consistent with the ZNPS ITS.
1.42	Shutdown Margin	This definition is not included in the PDTS since the term is not used in any PDTS specification. The term only applies to a fueled reactor.
1.43	Site Boundary	This definition is not included in the PDTS since the term is defined in 10 CFR 20.1003. Exclusion of this definition is consistent with the ZNPS ITS.
1.44	Previously Deleted	N/A
1.45	Source Check	This definition is not included in the PDTS since the term is not used in any PDTS specification. There are no radiation monitors credited in the analyses of the accidents that remain credible.

1.46	Surveillance Frequency Notation	This definition is not included in the PDTS since the term is not used in any PDTS specification. The frequency descriptions in the PDTS are self explanatory. Also, the part of the definition that references CTS 4.0.2 (PDTS SR 3.0.2) is unnecessary since that specification is self-invoking.
1.47	Thermal Power	This definition is not included in the PDTS since the term is not used in any PDTS specification. The term only applies to a reactor operating at power.
1.48	Unidentified Leakage	This definition is not included in the PDTS since the term is not used in any PDTS specification. The CTS specifications in which it is used (1.22 and 3.3.3/4.3.3) are based on limiting RCS leakage. The RCSs of both units have been depressurized and vented for the SAFSTOR period. Consequently, significant RCS leakage is no longer possible.
1.49	Unrestricted Area	This definition is not included in the PDTS since the term is defined in 10 CFR 20.1003. Exclusion of this definition is consistent with the ZNPS ITS.
1.50	Previously deleted	N/A
1.51	Venting	This definition is not included in the PDTS since the term is not used in any PDTS specification. There are no venting operations involved in any of the PDTS specifications.

The staff examined the CTS definitions listed above and finds their disposition acceptable.

CTS Safety Limits

1.1/2.1 Reactor Core

This specification establishes limits on the combinations of thermal power, RCS pressure, temperature, and coolant flow when the reactor is critical and specifies trip settings for instruments monitoring reactor power, reactor coolant pressure, temperature, and flow, and pressurizer level. This specification is not included in the PDTS since both units will no longer operate and since the RCSs of both units have been depressurized and vented for the SAFSTOR period. The staff agrees with the licensee's assessment and finds the change acceptable.

1.2/2.2 Reactor Coolant System Pressure

This specification establishes the maximum allowable RCS pressure and specifies set points for RCS safety valves. This specification is not included in the PDTS since the RCSs of both units have been depressurized and vented for the SAFSTOR period. The staff finds the proposed change to be acceptable.

CTS Limiting Condition for Operation

3.0.1 LCO/Action Applicability

This specification establishes the relationship between Applicability requirements and LCOs. The specification has been reworded and reformatted and retained as ZNPS PDTS LCO 3.0.1.

The reference to operational modes in the CTS specification is not included in the PDTS specification since the units will no longer be in any operational mode. The staff agrees with the licensee's assessment and finds the change acceptable.

3.0.2 LCO/Action Compliance

This specification establishes the relationship between LCOs and Actions. The specification has been reworded and retained as ZNPS PDTS LCO 3.0.2. The staff finds this change acceptable.

3.0.3 Failure to Comply - LCO/Action

This specification requires placing the unit in hot shutdown followed by cold shutdown if an LCO and/or associated Action cannot be satisfied. This specification is not included in the PDTS since, with both units permanently defueled it is not possible to enter a condition in which this specification would apply. The staff agrees with the licensee's assessment and finds the change acceptable.

3.0.4 Applicability Change vs. LCO/Action

This specification prohibits entering an operational mode or specified applicability condition unless the LCOs are met without reliance on the Action statements. This specification is not included in the PDTS since all the Action statements in the PDTS have a completion time of "Immediately." The staff finds this change acceptable.

3.0.5 AC Power Availability

This specification defines how the availability of emergency AC power affects the operability of systems, subsystems, trains components, and devices. This specification is not included in the PDTS since there are no systems, subsystems, trains components, or devices required to be operable by the PDTS. The staff finds this change acceptable.

4.0.1 Surveillance Applicability

This specification establishes the relationship between surveillance requirements and operational modes or conditions of applicability. The specification has been reworded and reformatted and retained as ZNPS PDTS SR 3.0.1. This re-wording also resulted in requirements from CTS 4.0.3 being included in PDTS SR 3.0.1. The staff finds this change acceptable.

4.0.2 SR Interval Extension

This specification requires that surveillance requirements be performed within the specified interval with an allowance not to exceed 25 percent. The specification has been reworded and reformatted and retained as ZNPS PDTS SR 3.0.2. The staff finds this change acceptable.

4.0.3 Failure to Comply with a SR

This specification establishes the relationship between surveillance requirements and LCOs. The specification has been reworded and reformatted and retained as ZNPS PDTS SR 3.0.3. As noted above, some requirements from this specification have been included in PDTS SR 3.0.1. The staff finds this change acceptable.

4.0.4 Mode Change re. SR

This specification prohibits entering an operational mode or specified applicability condition unless the SRs have been performed within the required interval. This specification is not included in the PDTS since all the surveillance frequencies in the PDTS require that the surveillance be performed prior to entering the condition of applicability. The staff agrees with the licensee's assessment and finds the change acceptable.

4.0.5 ISI & IST Surveillance Rules

This specification establishes requirements for inservice inspection (ISI) and inservice testing (IST) of ASME Code Class 1, 2, and 3 components. This specification is not included in the PDTS since, as indicated in 10 CFR 50.55a(f) and (g), ISI and IST requirements apply only to the RCS and other safety-related components. This specification is no longer needed since, based on the accident analyses described above, none of the SSC at ZNPS meet the definition of a safety-related SSC stated in 10 CFR 50.2. Therefore there will no longer be any safety-related SSC. The staff agrees with the licensee's assessment and finds the change acceptable.

CTS Specifications

3.1/4.1 Reactor Protection Instrumentation and Logic

This section contains the requirements for operability, compensatory action, and surveillance of the reactor protection instrumentation and actuation logic. The specifications in this section are not included in the PDTS since both reactors are permanently defueled. The staff finds this change acceptable.

3.2/4.2 Reactivity Control and Power Distribution

This section contains the limits, compensatory action, and surveillance requirements for reactivity control and power distribution in the reactor, and the operability, compensatory action, and surveillance requirements for the rod control, boric acid, and excore instrumentation systems. The specifications in this section are not included in the PDTS since both reactors are permanently defueled. The staff finds this change acceptable.

3.3/4.3 Reactor Coolant System (per unit)

This section contains the requirements for operability, compensatory action, and surveillance of the RCS and associated components, and requirements for RCS integrity, chemistry, and radioactivity. The specifications in this section are not included in the PDTS since the RCSs of both units have been depressurized and vented for the SAFSTOR period. The staff finds this change acceptable.

3.4/4.4 Safeguards Instrumentation and Control

This section contains the requirements for operability, compensatory action, and surveillance of the engineered safeguards instrumentation and actuation logic. The specifications in this section are not included in the PDTS since the loss-of-coolant (LOCA) and main steam line break (MSLB) accidents this system is designed to mitigate are no longer possible. The staff finds this change acceptable.

3.5/4.5 Reactor Containment Fan Coolers

This section contains the requirements for operability, compensatory action, and surveillance of the reactor containment fan coolers. The specifications in this section are not included in the PDTS since the post-accident containment heat removal function provided by these components is no longer necessary. The staff finds this change acceptable.

3.6/4.6 Containment Spray

This section contains the requirements for operability, compensatory action, and surveillance of the containment spray system. The specifications in this section are not included in the PDTS since the post-accident heat and iodine removal function provided by this system is no longer necessary. The staff finds this change acceptable.

3.7/4.7 Steam Generator Emergency Heat Removal

This section contains the requirements for operability, compensatory action, and surveillance of the steam generator safety valves and the auxiliary feedwater system. The specifications in this section are not included in the PDTS since the steam generators are depressurized and will ultimately be drained, and since decay heat will no longer be generated in the RCS. The staff finds this change acceptable.

3.8/4.8 Emergency Core Cooling and Core Cooling Support

This section contains the requirements for operability, compensatory action, and surveillance of the charging, safety injection, residual heat removal, accumulator, component cooling, service water, and hydrogen control systems, and accident monitoring instrumentation. The specifications in this section are not included in the PDTS since the accidents these systems and components were designed to mitigate are no longer possible. The staff finds this change acceptable.

3.9/4.9 Containment Isolation Systems

This section contains the requirements for operability, compensatory action, and surveillance of the isolation valve seal water, penetration pressurization, and containment ventilation systems, the containment isolation valves, the main steam isolation valves, and for containment integrity. The specifications in this section are not included in the PDTS since there is no longer the possibility of an accident needing a pressure-tight containment for mitigation. The staff finds this change acceptable.

3.10/4.10 Containment Structural Integrity

This section contains the requirements for operability, compensatory action, and surveillance of those components and structural features that ensure the containment can withstand the peak pressure following a loss-of-coolant accident. The specifications in this section are not included in the PDTS since the RCSs of both units have been depressurized and vented for the SAFSTOR period. The staff finds this change acceptable.

3.11/4.11 Radioactive Liquids

This specification contains the limits for the amount of radioactivity contained in outdoor liquid storage tanks, including compensatory actions and surveillance requirements. The specification has been reworded and reformatted and retained as ZNPS PDTS Section 5.6.3.

As a result of converting the CTS LCO to a PDTS Administrative Control specification, details in the CTS specification, such as curie limit, surveillance frequencies, and compensatory measures, will be relocated to site procedures if implementation of the program is required. This change is consistent with the previously approved ITS.

The licensee has elected to include this CTS specification in the ZNPS PDTS since it may be applicable during flushing or decontamination activities during SAFSTOR or the dismantlement phase. The staff finds the changes to Specification 3.11/4.11 acceptable.

3.12/4.12 Gaseous Effluents

This section contains the requirements for limiting the quantity of radioactivity in the gas decay tanks and for limiting the hydrogen concentration in the waste gas system. The specifications in this section are not included in the PDTS since the gas decay tanks will be vented and removed from service and since there will no longer be any source of hydrogen in the waste gas system. The staff finds this change acceptable.

3.13/4.13 Refueling Operations

3.13.1/4.13.1 Core Reactivity

This section contains the requirements for maintaining core reactivity within the proper limits during core alterations. The specifications in this section are not included in the PDTS since both reactors have been permanently defueled and there is no longer a core in either unit. The staff finds this change acceptable.

3.13.2/4.13.2 Protection from Damaged Spent Fuel

This section contains the requirements for operability, compensatory action, and surveillance of the fuel building ventilation exhaust system including filters and charcoal adsorbers during movement of irradiated fuel or loads over irradiated fuel in the fuel building.

This system provides filtration for radioactive material released from an irradiated fuel assembly as a result of a postulated fuel handling accident. The specification requires the SFP ventilation system to be operating and discharging through the high efficiency particulate activity (HEPA) and charcoal filter train when irradiated fuel which has decayed less than 60 days is in the SFP and either fuel is being moved in the SFP or the crane is being operated with loads over the SFP. The licensee has stated that CTS 3.13.2/4.13.2 is excluded from the PDTS since all of the fuel in the SFP has decayed greater than 60 days and dose limits, for personnel in the control room, given in 10 CFR Part 50, Appendix A, GDC 19, and the limits for doses at the site boundary given in 10 CFR Part 100 would not be exceeded in the event of a design basis fuel handling accident even if no credit is assumed for charcoal adsorption. The staff has determined that, due to the shutdown of ZNPS more than 16 months ago, and the permanently shutdown and defueled status of the ZNPS, this subsection is no longer necessary for safe operation or maintenance of the plant, and finds its deletion to be acceptable.

3.13.3/4.13.3 Containment Status

This section contains the requirements for the containment status during core alteration. The specifications in this section are not included in the PDTS since both reactors have been permanently defueled and there is no longer a core in either unit. The staff finds this change acceptable.

3.13.4/4.13.4 Radiation Monitoring

This section contains the requirements for operability and surveillance of the radiation monitors in the containment and the fuel building during core alteration. The specifications in this section are not included in the PDTS since both reactors have been permanently defueled and there is no longer a core in either unit nor is there any fuel in containment. The staff finds this change acceptable.

3.13.5/4.13.5 Refueling Equipment Operability

This section contains the requirements for operability and surveillance of the manipulator crane located in containment and the system for transferring fuel between containment and the SFP prior to refueling. The specifications in this section are not included in the PDTS since both reactors have been permanently defueled and refuelings will no longer be conducted.

The licensee proposed to exclude, from the PDTS, CTS 3.13.5 and 4.13.5 pertaining to operability verification of the containment manipulator crane and the fuel transfer system for transferring fuel between containment and the SFP, and verification and testing of all interlocks prior to refueling. This is acceptable because ZNPS is permanently defueled, and refueling and fuel transfer will no longer occur.

In addition, the licensee stated that inspection and testing of equipment used for handling irradiated fuel and other components in the fuel building will be performed in accordance with site instructions. The site instructions require that the fuel handling equipment be inspected and tested prior to use. Also, the site instructions have added procedures governing inspection, testing, and maintenance of fuel handling equipment, including the overhead bridge crane, fuel handling bridge crane, and interlocks, etc. The added requirement helps to improve the reliability of the fuel handling equipment and is consistent with commitments under NUREG-0612 for the control and handling of heavy loads. The staff finds the changes to this specification acceptable.

3.13.6/4.13.6 Refueling Actions

This section contains the requirements for compensatory action if the limiting conditions for refueling are not met. The specifications in this section are not included in the PDTS since both reactors have been permanently defueled and refuelings will no longer be conducted. The staff finds this change acceptable.

3.13.7/4.13.7 Spent Fuel Pool Cooling System

This section contains the requirements for operability and surveillance of the SFP cooling system prior to core alteration. The specifications in this section are not included in the PDTS since both reactors have been permanently defueled and core alterations will no longer be conducted. The surveillance required the system to be tested and verified operable immediately prior to core alterations. The CTS did not specify an applicability condition nor did it include an action statement. Since core alterations will no longer occur, the staff agrees with the licensee's determination that this specification does not need to be included in the PDTS.

3.13.8/4.13.8 Fuel Inspection Program

This section contains the requirements for implementing a program for inspecting fuel discharged from the reactor. The specifications in this section are not included in the PDTS since fuel will no longer be discharged from the reactor. The staff finds this change acceptable.

3.13.9/4.13.9 Residual Heat Removal System Operation

This section contains the requirements for operability, compensatory action, and surveillance of the residual heat removal system during refueling. The specifications in this section are not included in the PDTS since both reactors have been permanently defueled and refuelings will no longer be conducted. The staff finds this change acceptable.

3.13.10/4.13.10 Water Level Reactor Vessel

This section contains the requirements for reactor vessel water level while moving fuel or control rods in the reactor during refueling. The specifications in this section are not included in the PDTS since both reactors have been permanently defueled and refuelings will no longer be conducted. The staff finds this change acceptable.

3.13.11/4.13.11 Water Level-Storage Pool

This specification contains the limits, compensatory action, and surveillance requirements for the SFP water level. The specification has been reworded and reformatted and retained as ZNPS PDTS 3.1.1, Spent Fuel Pool Water Level.

"Spent Fuel Pool Water Level," has been proposed to be modified and reworded. The new TS will be renumbered as PDTS 3.1.1. The TS limiting condition for operation (LCO) will not be changed. The licensee is required to maintain the water level at least 23 feet above the top of irradiated fuel seated in the storage racks. This TS is currently applicable whenever irradiated fuel assemblies or control rods are being moved in the storage pool. The proposed surveillance requirement will be changed from 2 hours prior to the start of fuel movement to 24 hours prior to the start of fuel movement. The licensee states that since the pool water level is not subject to sudden or frequent changes, the 24 hour time period provides adequate assurance of safety. In the supplemental submittal dated September 15, 1999, the licensee also provided information on the actions that would be taken if level was lost.

The licensee calculated as of August 1998 that approximately 39 hours are required to raise the water temperature from 125°C to the saturation point and approximately 250 hours are required to reduce the level from 614 feet, 4 inches (low level alarm setting, which is approximately 24 feet above the stored fuel) to 3.8 feet above the stored fuel (level calculated by licensee required for adequate radiation shielding). As of August 1998, the licensee calculated that approximately 20 gpm of makeup is required. In the submittal dated September 15, 1999, the licensee stated that two sources of makeup are available, each with a capacity greater than the boiloff rate. One source is the fire protection system that is maintained as important to the defueled condition.

In Bulletin 94-01, "Potential Fuel Pool Draindown Caused by Inadequate Maintenance Practices at Dresden Unit 1," the possibility of draining the SFP and the importance of proper SFP maintenance at decommissioning plants was discussed. The NRC issued Bulletin 94-01 in April 1994; only the permanently shutdown plants at the time were requested to respond. Although not required by the bulletin, many plants' technical specifications address the bulletin concerns and provide a high level of assurance that they are maintained. ZNPS was requested to respond to the bulletin since the proposed PDTS did not require maintaining SFP level at all times or a cold weather program. The bulletin, in part, required a response in the following areas that relate to ensuring SFP level is maintained:

- Verify that the structures and systems required for level monitoring and makeup of water in the SFP are operable and adequate, consistent with the licensing basis, to preclude high levels of radionuclides in the pool water and adverse effects on stored fuel, the SFP, fuel transfer components, and related equipment.

- Ensure that operating procedures address conditions and observations that could indicate changes in SFP level.

- Ensure that systems for essential area heating and ventilation are adequate and appropriately maintained so that potential freezing failures that could cause loss of SFP water inventory are precluded.

- Ensure that piping or hoses in or attached to the SFP cannot serve as siphon or drain paths

In a response dated September 15, 1999, the licensee stated that level is monitored locally at least once per shift in accordance with a proceduralized operations checklist. To prevent the potential for a siphon event, all piping connections to and from the pool are above the level of the spent fuel storage racks. There are no permanently installed hoses that could drain the pool and any temporary hoses would be procedurally controlled and removed after use. To detect level changes, high and low level alarms are maintained in the control room. A leak in the SFP would be indicated by an increase in the associated sump or drain tank level. To provide assurance that piping and components that form the SFP boundary will be protected against potential freezing, the licensee is planning to install new electrical space heaters and a new ventilation system that is designed to maintain the fuel building area greater than 45°F during the coldest anticipated conditions.

STS 3.7.15, "Fuel Storage Pool Water Level" states that 23 feet of water shall be above the stored fuel during fuel movement. The STS surveillance is required every 7 days and, in accordance with Surveillance Requirement 3.9.7.1, daily during refueling operations. The licensee proposes to maintain its current TS applicability of during fuel movement only and to survey the pool level daily. The proposed applicability is in accordance with the STS and the CTS and is acceptable. The proposed surveillance requirement is a relaxation from the CTS but is more restrictive than the STS. Based on the long time period required to lose significant water level and the capability to recover level, we find the surveillance frequency is acceptable. Bulletin 94-01 discusses the operating experience at a decommissioned plant that could lead to a loss of level in the SFP. As described above and in the licensee's submittal, the licensee is capable of maintaining pool level during normal decommissioning operation. Based on this licensee's submittals, we agree that the modification of CTS Subsection 3.13.11/4.13.11, "Spent Fuel Pool Water Level," to PDTS 3.1.1 is acceptable.

3.13.12/4.13.12 Previously deleted - N/A

3.13.13/4.13.13 Spent Fuel Pool Storage

This specification contains the limits, compensatory action, and surveillance requirements for storing fuel assemblies in Region 2 of the SFP. The specification has been reworded and reformatted to be consistent with ZNPS ITS 3.7.16 and retained as ZNPS PDTS 3.1.3, Spent Fuel Assembly Storage. The statement in the CTS Action to immediately suspend all other movement of fuel assemblies is not included in the PDTS. The PDTS Action to immediately move the non-complying fuel assembly to Region 1 will effectively preclude movement of other fuel assemblies, since only one assembly can be moved at a time. This is consistent with ZNPS ITS 3.7.16. The ITS 3.7.16 Required Action contains a note that LCO 3.0.3 is not applicable. This note is not included in the ZNPS PDTS since LCO 3.0.3 (requires going to Mode 5 if LCO and Action are not met) is not included in the ZNPS PDTS. The staff finds this change acceptable.

3.13.14/4.13.14 Spent Fuel Storage Pool Boron Concentration

This specification contains the limits, compensatory action, and surveillance requirements for SFP boron concentration. The specification has been reworded and reformatted and retained as ZNPS PDTS 3.1.2, Spent Fuel Pool Boron Concentration.

The following changes were made to the CTS requirements:

Applicability Statement

The CTS applicability statement of "Whenever fuel assemblies are in the spent fuel storage pool" was modified to be consistent with ZNPS ITS 3.7.15 applicability statement of: "When fuel assemblies are stored in Region 2 of the spent fuel pool and a spent fuel pool verification is not performed since the last movement of fuel assemblies in the spent fuel pool."

This change is based on the Zion criticality analyses which demonstrate that the K_{eff} of the SFP will remain below 0.95 with any fuel assembly authorized by PDTS 4.2 for ZNPS stored in Region 1 of the SFP and with unborated water in the pool. Therefore, boron concentration is not a concern for Region 1 and the specification only need be applicable to Region 2. The analyses also showed that if burnup/enrichment limitations for the assemblies stored in Region 2 are met, then boron concentration again is not a concern since the K_{eff} will remain below 0.95. Therefore, the only time that boron concentration is a concern is when there are assemblies in Region 2 that have not been verified to be within the required burnup/enrichment limits.

Also, the following additional condition, not in the CTS, was included in the PDTS 3.1.2 applicability statement: "During movement of fuel assemblies in the spent fuel pool." This additional condition provides assurance that the K_{eff} of the SFP will remain below 0.95 when assemblies are being moved from their previously verified locations.

Required Action

New Action (A.2.2) was included in the PDTS to allow an alternative to suspending fuel movements and restoring boron concentration if the concentration is below the limit. The alternative action is to verify that only the proper fuel assemblies are stored in Region 2. This provides assurance that the K_{eff} of the SFP will remain below 0.95 even though the boron concentration is below limits and provides a compensatory measure which is consistent with the Applicability statement. This is consistent with Action A.2.2 in ZNPS ITS 3.7.15.

The CTS surveillance frequency of 31 days has been maintained in the ZNPS PDTS. This is consistent with the frequency specified in the ZNPS ITS and is appropriate based on the stability of the boron concentration.

The staff finds the changes to Specification 3.13.14 / 4.13.14 acceptable.

3.13.15/4.13.15 Specification 3.0.3 Non-applicability

This specification states that CTS Specification 3.0.3 (which requires placing the unit in cold shutdown if an LCO and/or associated Action is not met) is not applicable to CTS Section 3.13

(refueling specifications). Therefore, this specification is not included in the PDTS since the requirements of CTS Specification 3.0.3 are not included in the PDTS. The staff finds this change acceptable.

3.13.16/4.13.16 Specification 3.0.4 Non-applicability

This specification states that CTS Specification 3.0.4 (which prohibits entering a mode or condition of applicability if LCO is not met without reliance on an action statement) does not apply to CTS Sections 3.13.13 (storage of fuel in proper SFP region) and 3.13.14 (SFP boron concentration). Therefore, this specification is not included in the PDTS since the requirements of CTS Specification 3.0.4 are not included in the PDTS. The staff finds this change acceptable.

3.14/4.14 Plant Radiation Monitoring

This section contains the requirements for operability, compensatory action, and surveillance of various area and process radiation monitors.

The specifications for the following monitors are not included in the PDTS since the CTS requires these monitors to be operable only in Modes 1 through 7 or combinations thereof: containment area, containment high range area, reactor annulus atmosphere (leak detection), containment ventilation system, pipe chase ventilation system, VCT and letdown piping (for failed fuel), steam generator blowdown system, ECCS cubicle/pipe tunnel and gas decay tank cubicle ventilation system (gas), control room ventilation system, and Technical Support Center ventilation system monitors. In addition none of the remaining monitors (the SFP area, control room area, Technical Support Center area, auxiliary building area, component cooling system, and the service water system monitors) are credited in the analyses of the accidents that are credible with both units permanently defueled. Therefore, specifications for these monitors are not included in the PDTS. The staff finds this change acceptable.

3.15/4.15 Auxiliary Electrical Power System

This section contains the requirements for operability, compensatory action, and surveillance of the AC and DC electrical power supplies and distribution systems.

The specifications in this section are not included in the PDTS since there are no requirements in the PDTS for components that need electrical power. There are no active systems credited as part of the initial conditions of an analysis or as part of the primary success path for mitigation of the design basis accidents that are credible with the units permanently defueled. The staff finds this change acceptable.

3.16/4.16 Previously deleted.

3.17/4.17 Ventilation

This section contains the requirements for operability, compensatory action, and surveillance of the particulate filters and charcoal adsorbers in various ventilation systems including the control room, fuel handling ventilation systems, and the containment.

The exhaust air from the auxiliary building and fuel building is filtered through HEPA filters and also through charcoal adsorbers if high radiation level is detected. The control room air is automatically routed through HEPA filters and charcoal adsorbers. The containment purge exhaust air is always routed through HEPA filters. The containment circulating air is routed as necessary through the HEPA filters and charcoal adsorbers prior to personnel access or containment purging. The licensee has stated that CTS 3.17/4.17 is excluded from the PDTS since no credit is taken for any ventilation system function in the analyses of the remaining credible accidents. The staff has determined that due to the permanently shutdown and defueled status of the ZNPS Station, this subsection is no longer necessary for safe operation or maintenance of the plant, and finds its deletion to be acceptable.

3.18/4.18 Steam Generator Activity

This section contains the limits, compensatory actions, and surveillance requirements for the concentration of radioactive iodine in the secondary side of the steam generators.

The specifications in this section are not included in the PDTS since the requirements are based on limiting the dose at the site boundary following an accident in which the entire contents of the unit's steam generators are released to the atmosphere. The secondary side of all steam generators has been depressurized and will ultimately be drained for SAFSTOR. The staff finds this change acceptable.

3.19/4.19 Failed Fuel Monitoring

This section contains the requirements for operability, compensatory action, and surveillance of radiation instruments that monitor the VCT and letdown lines for indications of failed fuel. (These instruments are also covered under CTS 3.14/4.14)

The specifications in this section are not included in the PDTS since the fuel has been permanently removed from both reactors. The staff finds this change acceptable.

3.20/4.20 Previously deleted.

3.21/4.21 Previously deleted.

3.22/4.22 Shock Suppressors (Snubbers)

This section contains the requirements for operability, compensatory action, and surveillance of safety-related mechanical and hydraulic snubbers.

The specifications in this section are not included in the PDTS since there are no longer any snubbers that perform a safety-related function at ZNPS Station. The staff finds this change acceptable.

3.23/4.23 Previously deleted.

3.24/4.24 Sealed Source Contamination

This section contains the limits, compensatory action, and surveillance requirements for surface contamination on sealed radioactive sources.

These requirements will be relocated to Chapter 7 of the DSAR since they do not prevent or mitigate any design basis accident. This change is consistent with the previously approved ITS. The staff finds this change acceptable.

5 Design Features

5.1 Site

This specification provides a general description of the site location, exclusion area, and low population zone. The specification has been reformatted and retained as ZNPS PDTS 4.1, Site. However, the CTS descriptions of the exclusion area and the low population zone are not included in the PDTS. This information will be relocated to Chapter 2 of the DSAR. Since regulations do not require that descriptions of the exclusion area boundary or low population zones be included in technical specification, and the DSAR is an adequate licensing basis document for this information, the staff finds this change acceptable.

5.2 Reactor Coolant System

This specification provides a general description of the design and function of the RCS.

This specification is not included in the PDTS since the RCS no longer performs the stated functions of removing heat from the core or serving as a post accident boundary for fission products. The RCSs of both units have been depressurized and vented for the SAFSTOR period. The staff finds this change acceptable.

5.3 Reactor Core

This specification provides a general description of the design and size of the core.

This specification is not included in the PDTS since all fuel has been permanently removed from both reactors. The staff finds this change acceptable.

5.4 Containment System

This specification provides a general description of the design and function of the containment.

This specification is not included in the PDTS since the containments no longer perform the stated functions of serving as a post accident boundary for fission products or biological shield. All fuel has been permanently removed from both containments. The staff finds this change acceptable.

5.5 Fuel Storage

This specification provides a general description of the new and spent fuel storage facilities.

The specification has been reformatted and reworded to be consistent with ZNPS ITS 4.3 and retained as PDTS 4.2, Fuel Storage. This specification was included in the ZNPS PDTS because there may still be new fuel stored at ZNPS.

The following changes were made to CTS Specification 5.5: "New Fuel Storage." The information on the capacity of the racks, the number of sections and rows, the distance between each section, the U235 gram/centimeter loading, and the vault drain will be relocated to Chapter 3 of the DSAR. This change is consistent with the previously approved ITS.

The following changes were made to the CTS requirements regarding spent fuel storage. The information in the CTS concerning the SFP stainless steel liner and vertical array, the U235 gram/centimeter loading, and the figure showing a diagram of the SFP will be relocated to Chapter 3 of the DSAR. This change is consistent with the previously approved ITS. The discussion in the CTS on the use of borated water during refueling has been excluded since refueling will no longer occur.

The staff has reviewed the licensee's assessment of the fuel storage specification and find the changes acceptable.

5.6 Seismic Design

This specification provides a general description of the Seismic Class 1 equipment as being the SSC vital to safe shutdown, containment isolation, or whose failure might cause or increase the severity of a loss-of-coolant accident. The specification also provides a description of requirements for meeting a design basis earthquake and special requirements for safe shutdown equipment. The specification also notes that other SSC are designed to withstand an operational basis earthquake or per applicable codes, and are defined as Seismic Class 2 or 3. These descriptions are not included in the PDTS since safe shutdown, post accident containment isolation, LOCAs, and the ability of the reactor to withstand an earthquake and keep operating are no longer of concern.

Those seismic design features that are relevant with the units permanently shutdown and defueled will be described in Chapter 3 of the DSAR. Removal of the seismic design descriptions from the PDTS is consistent with the previously approved changes for the Zion ITS. The staff has reviewed the licensee's assessment related to the seismic design specification and find the changes acceptable.

6 Administrative Controls (CTS 6.0 Administrative Controls to PDTS 5.0 Administrative Controls)

6.1 Organization

6.1.1 Onsite and Offsite Organizations

This specification establishes certain organizational requirements including the key management positions and their responsibilities regarding safety.

The specification has been reformatted and retained as ZNPS PDTS 5.2.1, General Organizational Requirements.

The following changes were made to the CTS requirements:

CTS 6.1.1.a requires that lines of authority, responsibility, and communication be documented in the Quality Assurance Manual. Since this manual is also used for ComEd's operating sites, a provision has been added to the PDTS allowing the subject documentation to be contained in a site specific quality assurance program description incorporated directly or by reference in the DSAR. This provision will allow implementation of a site specific program appropriate to the permanently defueled status of the ZNPS units.

CTS 6.1.1d requires that certain individuals, including those who train the operating staff, have sufficient organizational freedom to ensure their independence from operating pressures. In PDTS 5.2.1.d this has been changed to apply to those who train the certified fuel handlers and the requirement has been changed such that they must have sufficient freedom to ensure their ability to perform their assigned functions. These changes remove the implication that the units are still operational.

ZNPS PDTS 5.2.1.b requires that the plant manager be responsible "for overall plant safety." The ZNPS PDTS requirements are consistent with the current licensing basis as stated in CTS 6.1.1.b and reflect that ZNPS is a multi-unit station.

The staff has reviewed the licensee's assessment related to Specification 6.1.1 (Onsite and Offsite organizations) and find the changes acceptable.

6.1.2 Previously Deleted.

6.1.3 Shift Manning

This specification contains the requirements for minimum shift manning, and the qualifications of shift personnel and the Decommissioning Operations Manager. The specification also defines management responsibilities pertaining to the fire protection program.

The specification has been reformatted and retained as ZNPS PDTS 5.2.2, Facility Staff.

The CTS Figure 6.1-1 identified the minimum required on shift manning for the decommissioning ZNPS. The licensee has proposed reducing the shift compliment by one non-certified operators. The staff finds the change in shift staffing acceptable because, although ZNPS is a 2-unit station, it has only one SFP. PDTS Specification 5.2.2 is consistent with the shift manning requirements for sites with a single SFP.

Regarding management responsibilities for the fire protection program, the licensee did not include these requirements in the PDTS and instead, relocated them to site documents. Licensee compliance with 10 CFR 50.48(f) will provide reasonable assurance that adequate fire protection staff will be maintained as the fire protection program is scaled down in accordance with the diminishing radiological hazard. On the basis of its evaluation, the staff concludes that the licensee's request to relocate the requirements specified in CTS 6.1.3 to licensee-controlled documents is acceptable.

6.1.4 Management and Operating Staff Qualifications

This specification contains the requirements for station management and staff qualifications.

The specification has been reworded and reformatted to be consistent with and retained as ZNPS PDTS 5.3, Facility Staff Qualifications.

The following changes were made to the CTS requirements. The CTS 6.1.4 term "Health Physics Supervisor" has been replaced with the term "Manager of the Health Physics Department" for consistency with the titles in the station decommissioning organization. The staff has reviewed the change in terms and find it acceptable.

6.1.5 Training and Retraining of Station Personnel

This specification requires that training/retraining of plant personnel be in accordance with ANSI N18.1 dated March 8, 1971.

This specification is not included in the PDTS since, with the units permanently shutdown and defueled, only the training/retraining program for the Certified Fuel Handlers need be specified in the PDTS. Some of the ANSI N18.1 requirements, such as those for training in startup and shutdown procedures and emergency shutdown systems, are no longer appropriate. Moreover, the spectrum of credible accidents and operational events, and the quantity and complexity of activities required for safety has been greatly reduced from that at an operating plant. Consequently, it is only necessary that the PDTS specify the training/retraining requirements for the personnel who are most directly responsible for maintaining facility safety. These personnel are the Shift Supervisors, who are required by PDTS 5.2 to be Certified Fuel Handlers. The training and retraining program for Certified Fuel Handlers was reviewed and approved previously by the NRC staff by amendment dated July 24, 1998, and is maintained as PDTS Specification 5.4.

6.1.6 Retraining Interval

This specification requires that retraining of personnel be conducted at intervals not to exceed two years.

This specification is not included in the PDTS for reasons similar to that given for CTS 6.1.5 above, i.e., inclusion in the PDTS of specific retraining requirements for personnel who are not required to be Certified Fuel Handlers is not necessary. Only the retraining requirements for the Certified Fuel Handlers need be specified in the PDTS. The retraining program for the Certified Fuel Handlers (which includes biennial retraining) was reviewed and approved by the NRC and must be maintained as specified by PDTS Section 5.4. The training/retraining of other plant personnel will be governed by ComEd controlled documents.

Exclusion of this CTS requirement from the ZNPS PDTS is consistent with the ZNPS ITS.

6.1.7 Certified Fuel Handler Training and Retraining Program

This specification contains requirements for the Certified Fuel Handler training and retraining program. The specification has been reformatted and retained as PDTS Section 5.4, Training. The ZNPS PDTS specification is consistent with the current licensing basis as stated in the CTS.

The staff has reviewed the changes to CTS Specification 6.1 and find them acceptable.

6.2 Procedures and Programs

6.2.1 Procedures

This specification requires that procedures be established, implemented and maintained for the listed activities. The specification has been reformatted and retained as Zion PDTS Section 5.5.1, Procedures.

6.2.1.a Procedures per Regulatory Guide 1.33, Appendix A)

This specification requires that the applicable procedures recommended in Appendix A to Regulatory Guide 1.33 be established, implemented and maintained.

The specification has been retained as ZNPS PDTS 5.5.1.a. The specification has been reworded to clearly indicate that "applicable" means applicable to the safe storage and handling of nuclear fuel. The staff finds this change acceptable.

6.2.1.b Emergency Operating Procedures per NUREG-0737 and Supplement 1, Generic Letter 83-33

This specification requires that Emergency Operating Procedures (EOPs) be prepared, implemented, and maintained in accordance with NUREG-0737 and Generic Letter 82-33 (Supplement 1 to NUREG-0737).

This specification is not included in the PDTS because none of the EOPs are applicable with the units permanently defueled. The staff finds this change acceptable.

6.2.1.c Security Plan Procedures

This specification requires that Station Security Plan procedures be prepared, implemented, and maintained.

This specification is not included in the PDTS since it is redundant to requirements stated in 10 CFR 50.54(p)(1) and 10 CFR 73.55(b)(3). Exclusion of this specification from the ZNPS PDTS is consistent with the ZNPS ITS. The staff finds this change acceptable.

6.2.1.d GSEP Procedures

This specification requires that Generating Station Emergency Response Plan procedures be prepared, implemented, and maintained.

This specification is not included in the PDTS since it is redundant to requirements stated in 10CFR 50.54(q) and 10 CFR Part 50, Appendix E, Section V. The staff finds this change acceptable.

6.2.1.e Process Control Program Procedures

This specification requires that Process Control Program procedures be prepared, implemented, and maintained.

This specification is not included in the PDTS since it is redundant to requirements stated in 10 CFR 20.1101, 10 CFR Part 71(c), and 10 CFR 71.111. Exclusion of this CTS requirement from the ZNPS PDTS is consistent with the ZNPS ITS. The staff finds this change acceptable.

6.2.1.f Offsite Dose Calculation Manual Implementation

This specification requires that procedures be established, implemented and maintained to implement the ODCM.

This specification has been reformatted and retained as ZNPS PDTS 5.5.1.c. ZNPS PDTS 5.5.1.c requires that procedures be established, implemented and maintained for the programs specified in PDTS Section 5.6, Programs and Manuals. Since the ODCM is included in PDTS Section 5.6, the requirements of CTS 6.2.1.f have been maintained. The staff finds this change acceptable.

6.2.1.g Fire Protection Program Implementation

This specification requires that procedures be established, implemented and maintained to implement the Fire Protection Program.

This specification has been reformatted and retained as ZNPS PDTS 5.5.1.b.

"Fire Protection Procedures," specifies that written procedures be established, implemented, and maintained to implement the fire protection program. The licensee has retained the requirements for this section under "Administrative Controls," in Subsection 5.5.1.b of the

PDTS. This change is administrative in nature and is, therefore, acceptable. On the basis of its evaluation, the staff concludes that the licensee's request to retain the requirements from CTS 6.2.1.g in PDTS 5.5.1.b is acceptable.

6.2.1.h Post Accident Sampling Program

This specification requires that procedures be prepared, implemented, and maintained for a Post Accident Sampling Program which would ensure the capability to obtain and analyze reactor coolant and containment atmosphere samples, and collect and analyze or measure radioactive iodine and particulates in plant gaseous effluents under accident conditions.

This specification is not included in the PDTS since there are no longer any accident scenarios that release significant radioactivity to the reactor coolant or containment atmosphere. As discussed in Section 3.1 of this evaluation, there are also no spent fuel pool accident scenarios that will result in any significant release of radioactivity. Given the amount of time since the reactors have been shutdown, fuel pin gap gaseous activity has decayed to the point where any gaseous release will be at such low levels that obtaining samples would not require remote systems. Site procedures will be maintained, as part of the radiation protection program required by 10 CFR 20.1101, which are adequate for sampling gaseous effluents under the conditions which would result from the accidents that remain credible with both units permanently defueled. The staff finds this change acceptable.

6.2.1.i Working Hours of Staff

This specification requires that procedures be established implemented and maintained covering overtime for personnel who perform functions important to the safe handling and storage of nuclear fuel.

This specification has been reworded and reformatted and retained as ZNPS PDTS 5.2.2.d. ZNPS PDTS 5.2.2.e is consistent with the current licensing basis requirements as stated in CTS 6.2.1.i. The staff finds this change acceptable.

6.2.2 Radiation Protection Program

6.2.2.A Radiation Control Procedures

This specification requires that procedures be prepared, implemented, and maintained for radiation control consistent with the requirements of 10 CFR Part 20.

This specification is not included in the PDTS since it is redundant to requirements stated in 10 CFR 20.1101. Exclusion of this CTS requirement from the ZNPS PDTS is consistent with the ZNPS ITS. The staff finds this change acceptable.

6.2.2.B High Radiation Area

This specification establishes special requirements for control of high radiation areas.

This specification has been reformatted and retained as ZNPS PDTS Section 5.8, High Radiation Area.

The following changes were made to the CTS requirements. References to sections of 10 CFR Part 20 have been updated to reflect the numbering of the current regulation.

ZNPS PDTS 5.8 has been maintained consistent with the current licensing basis as specified in CTS 6.2.2.B. The inclusion of ZNPS PDTS 5.8.4 is consistent with the current licensing basis as specified in CTS 6.2.2.B. The staff finds this change acceptable.

6.2.3 Technical Review and Control

This specification establishes the requirements for the technical review and control of procedures.

This specification is not included in the PDTS since its requirements have been relocated to 3.3.1 of Section 5 of the Quality Assurance Manual. Exclusion of this CTS requirement from the ZNPS PDTS is consistent with the ZNPS ITS. The staff finds this change acceptable.

6.2.4 Temporary Changes to Procedures

This specification establishes the requirements for temporary changes to procedures.

This specification is not included in the PDTS since its requirements have been relocated to 3.3.2 of Section 5 of the Quality Assurance Manual. Exclusion of this CTS requirement from the ZNPS PDTS is consistent with the ZNPS ITS. The staff finds this change acceptable. However, it should be noted that the manual requires approval of the temporary change by an individual holding a Senior Reactor Operator License while CTS 6.2.4 requires approval by a Certified Fuel Handler. The licensee has stated that new temporary changes are prohibited at ZNPS Station until the Quality Assurance Manual is made to reflect the proper designation of Certified Fuel Handler.

6.2.5 Conduct of Emergency Plan Drills

This specification requires conducting drills of emergency plan procedures.

This specification is not included in the PDTS since it is redundant to requirements contained 10 CFR Part 50, Appendix E, Section F. Exclusion of this CTS requirement from the ZNPS PDTS is consistent with the ZNPS ITS. The staff finds this change acceptable.

6.2.6 Programs

This specification requires that the listed programs be established, implemented and maintained.

The specification has been reformatted and retained as ZNPS PDTS Section 5.6, Programs and Manuals. ZNPS PDTS Section 5.6 includes a Technical Specification Bases Control Program that is not in the CTS. This program, which is contained in Specification 5.6.4,

provides a means for processing changes to the Bases of the PDTS without prior NRC approval provided the change meets the criteria of 10 CFR 50.59. Except for referencing the DSAR rather than the UFSAR, the program is identical to that contained in the ZNPS ITS. This is consistent with the ZNPS CTS and ITS

6.2.6.A Radioactive Effluent Controls Program

This specification requires that a radioactive effluent controls program be established, implemented and maintained in accordance with 10 CFR 50.36a, and specifies the elements that the program is to contain.

This specification has been reworded and reformatted and retained as ZNPS PDTS 5.6.2, Radioactive Effluent Controls Program.

The following changes were made to the CTS requirements. The requirements in CTS 6.2.6.A(7)(b) and 6.2.6.A(9) to limit dose rates and doses from Iodine-131 and Iodine-133 are not included in the ZNPS PDTS since there is no longer a significant quantity of these isotopes left on site. This is due to radioactive decay of these isotopes following the last unit shutdown in February of 1997.

A statement has been added to the end of ZNPS PDTS 5.6.2 to clearly convey that the 25 percent surveillance frequency allowance provided by SR 3.0.2 is also applicable to the Radioactive Effluent Controls Program surveillances. This change is consistent with the previously approved ITS. The staff finds this change acceptable.

6.2.6.B Radiological Environmental Monitoring Program

This specification establishes the requirements for the Radiological Environmental Monitoring Program.

This specification is not included in the PDTS since its requirements have been relocated to ODCM Section 12.5. Exclusion of this CTS requirement from the ZNPS PDTS is consistent with the ZNPS ITS. The staff finds this change acceptable.

6.3 Actions to be Taken in the Event of a Reportable Event in Plant Operation

This specification requires that any reportable event be promptly reported to the Decommissioning Plant Manager or designated alternate. The incident shall be promptly reviewed by the Onsite Review and Investigative Function and a separate report be prepared in accordance with 10 CFR 50.73.

This specification is not included in the PDTS. The first requirement has been relocated to site procedures; the second requirement has been relocated to 3.3.3 of Section 20 of the Quality Assurance Manual; and the third requirement is redundant to requirements contained in 10 CFR 50.73. Exclusion of these CTS requirements from the ZNPS PDTS is consistent with the ZNPS ITS. The staff finds this change acceptable.

6.4 Previously Deleted.

6.5 Plant Operating Records

This specification lists various types of plant records and specifies how long they must be retained.

This specification is not included in the PDTS since its requirements have been relocated to 3.10 of Section 17 of the Quality Assurance Manual, except for requirements regarding fuel transfer records. The site procedures contain retention requirements for fuel transfer records. Exclusion of these CTS requirements from the ZNPS PDTS is consistent with the ZNPS ITS. The staff finds this change acceptable.

6.6 Reporting Requirements

This specification requires that, in addition to the requirements of Title 10 of the Code of Federal Regulations, the listed reports must be submitted to the Director of the Regional Office of Inspection and Enforcement unless otherwise noted.

This specification has been reworded and reformatted and retained as Zion PDTS 5.7, Reporting Requirements.

The following changes were made to the CTS requirements. This specification has been changed to require that the reports be submitted in accordance with 10 CFR 50.4. This is not a change in requirements since all the listed reports are encompassed by 10 CFR 50.4(b)(1) which requires that a copy be sent to the appropriate Regional Office. The staff finds this change acceptable.

6.6.1 Routine Reports

6.6.1.A Startup Report

This specification requires submittal of a Startup Report summarizing plant startup and power escalation testing following receipt of the operating license, an increase in licensed power level, the installation of nuclear fuel with a different design or manufacturer than the current fuel, and modifications that may have significantly altered the nuclear, thermal, or hydraulic performance of the plant.

This specification is not included in the PDTS since the units are permanently defueled and prohibited from restart. The staff finds this change acceptable.

6.6.1.B Annual Occupational Exposure Report

This specification contains the requirements pertaining to the Occupational Exposure Report.

This specification has been reworded and reformatted and retained as ZNPS PDTS 5.7.1, Occupational Exposure Report.

The following changes were made to the CTS requirements. A note clearly stating that a single submittal may be made for multiple unit stations was added. This change is consistent with the

previously approved ITS. The due date for the report was changed from March 1 of each year, as specified in the CTS, to April 30 of each year for consistency with NUREG 1431. This change is consistent with the previously approved ITS. Some of the examples of job functions given in the CTS were changed to be applicable to permanently defueled units rather that to an operational plant. A footnote contained in CTS was incorporated into the PDTS text. This change is consistent with the previously approved ITS. The staff finds this change acceptable.

6.6.1.C Annual Radiological Environmental Operating Report

This specification contains the requirements pertaining to the Annual Radiological Environmental Operating Report.

This specification has been reformatted and retained as Zion PDTS 5.7.2, Annual Radiological Environmental Operating Report.

The following changes were made to the CTS requirements: A note from the CTS clarifying that a single submittal may be made for multiple unit stations was moved to precede the specification in the PDTS for greater visibility. The term "operation of the unit" used in the CTS specification has been replaced with the term "unit activities" since the units are no longer operational. The due date for the report was changed from May 1 of each year to May 15 of each year for consistency with NUREG-1431. A paragraph explaining the actions to be taken if some individual results are not available for the report has been added to the end of the specification. This change is consistent with the previously approved ITS. The staff finds this change acceptable.

6.6.1.D Radioactive Effluent Release Report

This specification contains the requirements pertaining to the Radioactive Effluent Release Report.

This specification has been reformatted and retained as ZNPS PDTS 5.7.3, Radioactive Effluent Release Report.

The following changes were made to the CTS requirements. A note from the CTS clarifying that a single submittal may be made for multiple unit stations was moved to precede the specification in the PDTS, except that reference to separate radwaste systems was excluded since it is not applicable to ZNPS. This change is consistent with the previously approved ITS.

The term "operation of the unit" used in the CTS specification has been replaced with the term "unit activities" since the units are no longer operational. The CTS specification states that the report is to be submitted in accordance with 10 CFR 50.36a (which requires that the report be submitted annually). This has been changed in the Zion PDTS such that the requirement which states that the report is to be submitted by May 1 of each year in accordance with 10 CFR 50.36a. This provides a fixed deadline for submittal as is done in the two previous specifications. The staff finds this change acceptable.

6.6.1.E Monthly Operating Report

This specification requires submittal of a monthly report containing operating data such as average daily power levels, unit shutdowns, unit load reductions, etc.

This specification is not included in the PDTS since this information is no longer relevant with the units permanently shut down. Elimination of this specification is consistent with Generic Letter 97-07 which prescribes the contents of the Monthly Operating Report and which is addressed to:

"All holders of operating licenses for nuclear power reactors, except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel." The staff finds this change acceptable.

6.6.1.F Core Operating Limits Report (COLR)

This specification requires submittal of a report describing core operating limits for each core reload cycle or partial cycle.

This specification is not included in the PDTS since both units are permanently defueled. The staff finds this change acceptable.

6.6.1.G Reactor Coolant System (RCS) Pressure and Temperature Limits Report (PTLR)

This specification requires a report documenting the limits on pressure and temperature, and on heatup and cooldown rates. These limits were established to address reactor vessel brittle fracture concerns and neutron embrittlement of the reactor vessel. The specification requires that revisions to the report be provided to the NRC.

This specification is not included in the PDTS since the reactors have been permanently defueled and the RCSs of both units have been depressurized and vented for the decommissioning SAFSTOR period. The staff finds this change acceptable.

6.6.2 Reportable Events

This specification contains the requirements for notification of the NRC via the Emergency Notification System and for 30 day written reports (Licensee Event Reports).
This specification is not included in the PDTS since it is redundant to the regulations contained in 10 CFR 50.72 and 10 CFR 50.73. Exclusion of these CTS requirements from the ZNPS PDTS is consistent with the ZNPS ITS. The staff finds this change acceptable.

6.6.3 Unique Reporting Requirements

6.6.3.A Previously Deleted.

6.6.3.B Special Reports

6.6.3.B.a In-Service Inspection Evaluation

This specification requires submittal of inservice inspection reports for each refueling outage in accordance with ASME Section IX, IWA-6000.

This specification is not included in the PDTS since there will no longer be refueling outages and since, as discussed above regarding CTS Specification 4.0.5, there is no longer any need for an ISI program. Exclusion of these CTS requirements from the Zion PDTS is consistent with the Zion ITS. The staff finds this change acceptable.

6.6.3.B.b Previously Deleted.

6.6.3.B.c Containment Building Structural Testing Report (ILRT, Tendon)

This specification requires submittal of reports on containment integrated leak rate tests and on tests of containment tendons following the completion of each test.

This specification is not included in the PDTS since, as discussed above regarding CTS Specification 3.10/4.10, such testing will no longer be required. The staff finds this change acceptable.

6.6.3.B.d Changes to the Offsite Dose Calculation Manual (ODCM)

This specification requires that changes to the ODCM be reported with the Radioactive Effluent Release Report in accordance with CTS 6.7.c. This requirement has been incorporated in PDTS 5.6.1.c.3. The staff finds this change acceptable.

6.6.3.B.e Waukegan Regional Airport Expansion Plans

This specification requires an annual report regarding expansion plans for Waukegan Regional Airport including FAA form # 5010 (Airport Master Record).

This specification is not included in the PDTS since it is not required to ensure safety. A 1989 study supporting License Amendment 119/108 evaluated the probability of aircraft crashing in the vicinity of certain important plant structures and causing fires that threatened safety related components. This study determined that the probability of such an event for the Crib House air intakes, including the entire roof area and a 40 foot zone around the air intakes was 7.5×10^{-9} per year. As documented in the NRC SE for the amendment, this probability would remain below 1.0×10^{-7} per year even allowing for estimated growth of the airport through 2008. With both units permanently defueled, the Crib House and its components are no longer safety related. However the target area is comparable to that of the fuel building. Based on this low apparent probability combined with the fact that the FAA form # 5010 has not changed since 1990, the licensee considers that this specification is no longer needed to ensure safety and can be excluded from the PDTS. The staff agrees with the licensee's assessment.

6.6.3.B.f Low Temperature Overpressure Protection System Operation

This specification requires submittal of a report within 30 days of an RCS low temperature overpressure protection system operation.

This specification is not included in the PDTS since the RCSs of both units have been depressurized and vented for the SAFSTOR period. The staff finds this change acceptable.

6.6.3.B.g Primary Coolant Specific Activity

This specification requires reporting of any occurrence in which the primary coolant specific activity limits of CTS specification 3.3.6 are exceeded.

This specification is not included in the PDTS since the RCSs of both units have been depressurized and vented for the SAFSTOR period. This is also consistent with removal of CTS Section 3.3/4.3 on the reactor coolant system (including activity requirements) from the PDST. The staff finds this change acceptable.

6.6.3.B.h Pressurizer PORV or Safety Valve Failure to Close

This specification requires submittal of a report within 30 days of a failure of a pressurizer PORV or safety valve to close.

This specification is not included in the PDTS since the RCSs of both units have been depressurized and vented for the SAFSTOR period. Exclusion of this CTS requirement from the ZNPS PDTS is consistent with the ZNPS ITS. The staff finds this change acceptable.

6.6.3.B.i Pressurizer PORV or Safety Valve Challenges

This specification requires reporting of any occurrence in which a pressurizer PORV or safety valve is challenged.

This specification is not included in the PDTS since the RCSs of both units have been depressurized and vented for the SAFSTOR period. Exclusion of this CTS requirement from the ZNPS PDTS is consistent with the ZNPS ITS. The staff finds this change acceptable.

6.6.3.B.j Not used.

6.6.3.B.k Steam Generator Tube Inspection and/or Plugging

This specification requires submittal of a report following each inspection of steam generator tubes per CTS specification 4.3.1.B.5.

This specification is not included in the PDTS since, as discussed above, CTS Section 3.3/4.3 has been not been included in the PDTS. The staff finds this change acceptable.

6.6.3.B.l Emergency Core Cooling System (ECCS) Actuation and Injection when RCS Temperature > 350°F

This specification requires submittal of a report within 30 days of an ECCS actuation and injection when RCS temperature is greater than 350°F.

This specification is not included in the PDTS since the ECCSs of both units have been deactivated and the RCSs of both units will no longer exceed 350°F. Exclusion of this CTS requirement from the ZNPS PDTS is consistent with the ZNPS ITS. The staff finds this change acceptable.

6.6.3.B.m Diesel Generator Failures

This specification requires submittal of a report within 30 days of a diesel generator failure per CTS Specification 4.15.1.B.5.

This specification is not included in the PDTS since, as discussed above, CTS Section 3.15/4.15 has been not been included in the PDTS. Exclusion of this CTS requirement from the ZNPS PDTS is consistent with the ZNPS ITS. The staff finds this change acceptable.

6.6.3.B.n Post Accident Radiation Monitor Inoperable Greater than 7 Days

This specification requires submittal of a report per CTS Table 3.14-1 within 14 days of a containment area high range radiation monitor being inoperable for greater than 7 days.

This specification is not included in the PDTS since, as discussed above, CTS Section 3.14/4.14 has been not been included in the PDTS. The staff finds this change acceptable.

6.7 Offsite Dose Calculation Manual (ODCM)

This specification contains the requirements pertaining to changes to the ODCM.

This specification has been reformatted and combined with requirements from CTS 1.26 and retained as ZNPS PDTS 5.6.1

The following changes were made to the CTS requirements: CTS 6.7 refers to CTS 6.5.2.S for record retention requirements for ODCM changes. No reference to another specification for record retention requirements is made in PDTS 5.6.1 since, as discussed above under CTS Section 6.5, record retention requirements have been relocated to the Quality Assurance Manual. This change is consistent with the previously approved ITS.

The requirements regarding the Onsite Review and Investigative Function for ODCM changes in CTS 6.7.b were not included in PDTS 5.6.1.c.2 since they have been relocated to Section 12.6.3 of the ODCM. This change is consistent with the previously approved ITS.

The reference to 10 CFR 20.106 in CTS 6.7.a.2 was changed to reference 10 CFR 20.1302 in PDTS 5.6.1.c.1.ii for consistency with the latest regulation.

6.8 Flooding Protection

This specification requires that all doors (23) listed in CTS Table 6.8-1 be closed if there is the possibility of flooding.

This specification is not included in the PDTS since there is no significant safety concern from a flooding event with the units permanently defueled. The most significant flooding threat to the site would be that caused by a seiche on Lake Michigan. This could potentially result in a water level 2 feet above grade (592.0') for about 20 minutes. This is well below the top of the SFP (approximately 617'). If any components involved in SFP cooling were affected there would be adequate time, as described above, to restore the components or to take other actions to compensate for their unavailability. Exclusion of this CTS requirement from the ZNPS PDTS is consistent with the ZNPS ITS. The staff agrees with the licensee's assessment.

6.9 Process Control Program (PCP)

This specification requires that:

Records of reviews of changes to the PCP be retained per CTS 6.5.2.S

Documentation for changes to the PCP contain sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s).

Documentation for changes to the PCP contain a determination that the change will maintain the overall conformance of the solidified waste product to existing requirements of Federal, State, or other applicable regulations.

Changes to the PCP become effective after review and acceptance by the Onsite Review and Investigative Function and the approval of the Decommissioning Plant Manager.

This specification is not included in the PDTS. The first requirement has been relocated to 3.10.2 of Section 17 of the Quality Assurance Manual; the second, third, and fourth requirements are no longer necessary since adequate review requirements will be incorporated into the ODCM. Exclusion of these CTS requirements from the ZNPS PDTS is consistent with the ZNPS ITS. The staff finds this change acceptable.

6.10 Containment Leakage Rate Testing Program

This specification requires that a program be established to implement containment leakage rate testing as required by 10 CFR Part 50 Appendix J, Option B.

This specification is no longer needed since 10 CFR 50.54(o) excludes permanently defueled units from the requirements of 10 CFR Part 50 Appendix J. The staff finds this change acceptable.

The ZNPS PDTS contain a new section, 5.1 (Responsibility) for which there is no equivalent in the CTS. This section contains requirements on delegation of Decommissioning Plant Manager

responsibilities, Decommissioning Plant Manager approval of proposed tests, experiments or modifications, and the Shift Supervisor command function.

In addition to the above changes, the ZNPS PDTS contain a new Section, 5.9, that is not in the CTS. This specification establishes requirements for technical reviews and safety reviews of various documents and occurrences that may be safety significant.

Also, the licensee created a new Technical Specification Bases section for the PDTS. This section contains the Bases for the specifications in PDTS Sections 3.0 and 3.1, and will be controlled by the licensee as permitted by PDTS 5.6.4. The Bases for Section 3.0 consist of non-plant specific general requirements for LCO and SR applicability. The Bases for Section 3.1.1 are newly created for the unique circumstances involved with the ZNPS SFP water level specification now that the unit has been shutdown for an extended period. The Bases for Sections 3.1.2 and 3.1.3 are modeled on the ZNPS ITS but have been changed somewhat to reflect the permanently shutdown status of the plant and to clarify some of the explanations. The staff agrees with the addition of the new Section 5.9 and the new bases section in the PDTS. Table 3.1 provides a comparison of the CTS and the PDTS.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Illinois State official was notified of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (64 FR 29709). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). These amendments also involve changes in recordkeeping, reporting or administrative procedures or requirements. Accordingly, with respect to these items, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Attachment: Table

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Date: December 30, 1999

TABLE 3-1

Zion CTS Section/Specification		Proposed Zion PDTS
Definitions		
1.1	ACTION	1.1, Definitions
1.2	ACTUATION DEVICE	Not Included
1.3	ACTUATED EQUIPMENT	Not Included
1.4	ACTUATION LOGIC TEST	Not Included
1.5	AXIAL FLUX DIFFERENCE	Not Included
1.6	Previously deleted	N/A
1.7	CHANNEL CALIBRATION, INSTRUMENT	Not Included
1.8	CHANNEL CHECK	Not Included
1.9	CHANNEL FUNCTIONAL TEST	Not Included
1.10	Previously deleted	N/A
1.11	CONTAINMENT INTEGRITY	Not Included
1.12	Previously deleted	N/A
1.13	CONTROLLED LEAKAGE	Not Included
1.14	CORE ALTERATION	Not Included
1.14A	CORE OPERATING LIMITS REPORT	Not Included
1.15	DEFINED TERMS	1.1, Definitions Note
1.16	DEGREE OF REDUNDANCY	Not Included
1.17	DOSE EQUIVALENT I-131	Not Included
1.18	E-AVERAGE DISINTEGRATION ENERGY	Not Included
1.19	Previously deleted	N/A
1.20	IDENTIFIED LEAKAGE	Not Included
1.21	INSTRUMENT CHANNEL	Not Included
1.22	LEAKAGE	Not Included
1.23	MASTER RELAY TEST	Not Included
1.24	MEMBER(S) OF THE PUBLIC	Not Included
1.25	OFF-SITE AC POWER SOURCES	Not Included
1.26	OFFSITE DOSE CALCULATION MANUAL (ODCM)	5.6.1, Offsite Dose Calculation Manual (ODCM)
1.27	OPERABLE- OPERABILITY	Not Included
1.28	OPERATING	Not Included
1.29	OPERATING CYCLE	Not Included
1.30	OPERATIONAL MODE-MODE	Not Included
1.31	PHYSICS TESTS	Not Included
1.32	PRESSURE BOUNDARY LEAKAGE	Not Included

Zion CTS Section/Specification	Proposed Zion PDTS
1.32A PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)	Not Included
1.33 PROCESS CONTROL PROGRAM (PCP)	Not Included
1.34 PROTECTION LOGIC CHANNEL	Not Included
1.35 PROTECTION SYSTEM	Not Included
1.36 PURGE-PURGING	Not Included
1.37 QUADRANT POWER TILT RATIO	Not Included
1.38 RATED THERMAL POWER	Not Included
1.39 REACTOR PRESSURE	Not Included
1.39 REFUELING CYCLE OR OUTAGE	Not Included
1.41 REPORTABLE EVENT	Not Included
1.42 SHUTDOWN MARGIN	Not Included
1.43 SITE BOUNDARY	Not Included
1.44 Previously deleted	N/A
1.45 SOURCE CHECK	Not Included
1.46 SURVEILLANCE FREQUENCY NOTATION	Not Included
1.47 THERMAL POWER	Not Included
1.48 UNIDENTIFIED LEAKAGE	Not Included
1.49 UNRESTRICTED AREA	Not Included
1.50 Previously deleted	N/A
1.51 VENTING	Not Included

Safety Limits / Limiting Safety System Settings	
1.1 / 2.1 Reactor Core	Not Included
1.2 / 2.2 Reactor Coolant System Pressure	Not Included

Limiting Conditions for Operation / Surveillance Requirements	
3.0.1 (LCO/Action Applicability)	LCO 3.0.1 (Applicability)
3.0.2 (LCO/Action Compliance)	LCO 3.0.2 (Actions)
3.0.3 (Failure to comply -LCO/Action)	Not Included
3.0.4 (Mode change re. LCO/Action)	Not Included
3.0.5 (AC power availability)	Not Included
4.0.1 (Surveillance applicability)	SR 3.0.1 (Applicability)
4.0.2 (SR interval/extension)	SR 3.0.2 (Frequency)
4.0.3 (Failure to comply - SR)	SR 3.0.3 (Non-performance)
4.0.4 (Mode change re. SR)	Not Included
4.0.5 (ISI &IST Surveillance Rules)	Not Included

Table 3-1

3.1 / 4.1 Reactor Protection Instrumentation and Logic	Not Included
3.2 / 4.2 Reactivity Control and Power Distribution	Not Included
3.3 / 4.3 Reactor Coolant System (per unit)	Not Included
3.4 / 4.4 Safeguards Instrumentation and Control	Not Included
3.5 / 4.5 Reactor Containment Fan Coolers	Not Included
3.6 / 4.6 Containment Spray	Not Included
3.7 / 4.7 Steam Generator Emergency Heat Removal	Not Included
3.8 / 4.8 Emergency Core Cooling and Core Cooling Support	Not Included
3.9 / 4.9 Containment Isolation Systems	Not Included
3.10 / 4.10 Containment Structural Integrity	Not Included
3.11 / 4.11 Radioactive Liquids	5.6.3, Outdoor Storage Tank Radioactivity Monitoring Program
3.12 / 3.12 Gaseous Effluents	Not Included

3.13 / 4.13 Refueling Operations	
3.13.1 / 4.13.1 Core Reactivity	Not Included
3.13.2 / 4.13.2 Protection from Damaged Spent Fuel	Not Included
3.13.3 / 4.13.3 Containment Status	Not Included
3.13.4 / 4.13.4 Radiation Monitoring	Not Included
3.13.5 / 4.13.5 Refueling Equipment Operability	Not Included
3.13.6 / 4.13.6 (Refueling Actions)	Not Included
3.13.7 / 4.13.7 (Spent Fuel Pit Cooling System)	Not Included
3.13.8 / 4.13.8 (Fuel Inspection Program)	Not Included
3.13.9 / 4.13.9 Residual Heat Removal System Operation	Not Included
3.13.10 / 4.13.10 Water Level Reactor Vessel	Not Included
3.13.11 / 4.13.11 Water Level-Storage Pool	3.1.1, Spent Fuel Pool Water Level
3.13.12 / 4.13.12 Previously deleted	N/A
3.13.13 / 4.13.13 Spent Fuel Pool Storage	3.1.3, Spent Fuel Assembly Storage
3.13.14 / 4.13.12 Spent Fuel Storage Pool Boron Conc.	3.1.2, Fuel Storage Pool BoronConcentration
3.13.15 / 4.13.15 (Spec. 3.0.3 Non-applicability)	Not Included
3.13.16 / 4.13.16 (Spec. 3.0.4 Non-applicability)	Not Included
3.14 / 4.14 Plant Radiation Monitoring	Not Included

Table 3-1

3.15 / 4.15 Auxiliary Electrical Power System	Not Included
3.16 Previously deleted	N/A
3.17 / 4.17 Ventilation	Not Included
3.18 / 4.18 Steam Generator Activity	Not Included
3.19 / 4.19 Failed Fuel Monitoring	Not Included
3.20 Previously deleted	N/A
3.21 Previously deleted	N/A
3.22 / 4.22 Shock Suppressors (Snubbers)	Not Included
3.23 Previously deleted	N/A
3.24 / 4.24 Sealed Source Contamination	Not Included
Design Features	
5.1 Site	4.1.1, Site Description
5.2 Reactor Coolant System	Not Included
5.3 Reactor Core	Not Included
5.4 Containment System	Not Included
5.5 Fuel Storage	
5.5.1 New Fuel Storage	4.2, Fuel Storage
5.5.2 Spent fuel storage	4.2, Fuel Storage
5.6 Seismic Design	Not Included
Administrative Controls	
6.1 Organization	
6.1.1 (Onsite and Offsite organizations)	5.2.1, General Organizational Requirements
6.1.2 Previously Deleted	N/A
6.1.3 (Shift manning)	5.2, Shift Staff
6.1.4 (Management and operating staff qualifications)	5.3, Staff Qualifications
6.1.5 (Retraining and replacement of station personnel)	Not Included
6.1.6 (Retraining interval)	Not Included
6.1.7 (Certified Fuel Handler training and retraining program)	5.4, Training
6.2 Procedures and Programs	
6.2.1 (Procedures)	5.5.1, Procedures
6.2.1.a (Procedures per R.G. 1.33, App. A)	5.5.1.a (R.G. 1.33 procedures)

Table 3-1

6.2.1.b (Emergency Operating procedures per NUREG-0737, Sup. 1, and G.L. 83-33)	Not Included
6.2.1.c (Security Plan procedures)	Not Included
6.2.1.d (GSEP procedures)	Not Included.
6.2.1.e (PCP procedures)	Not included
6.2.1.f (ODCM procedures)	5.5.1.c (Programs specified in Specification 5.6)
6.2.1.g (Fire Protection procedures)	5.5.1.b (Fire Protection procedures)
6.2.1.h (Post Accident Sampling procedures)	Not Included
6.2.1.i (Overtime procedures)	5.2.2.e (Overtime procedures)
6.2.2.A (Radiation Control procedures)	Not Included
6.2.2.B. High Radiation Area	5.8, High Radiation Area
6.2.3 (Technical review and control of procedures)	Not Included
6.2.4 (Temporary changes to procedures)	Not Included
6.2.5 (GSEP Drills)	Not Included
6.2.6 Programs	5.6, Programs and Manuals
6.2.6.A Radioactive Effluent Controls Program	5.6.2, Radioactive Effluent Controls Program
6.2.6.B Radiological Environmental Monitoring Program	Not Included
6.3 Actions to be Taken in the Event of a Reportable Event in Plant Operation	Not Included
6.4 Previously deleted	N/A
6.5 Plant Operating Records	Not Included
6.6 Reporting Requirements	5.7, Reporting Requirements
6.6.1 Routine Reports	
6.6.1.A Startup Report	Not Included
6.6.1.B Annual Occupational Exposure Report	5.7.1, Occupational Exposure Report
6.6.1.C Annual Radiological Environmental Operating Report	5.7.2, Annual Radiological Environmental Operating Report
6.6.1.D Radioactive Effluent Release Report	5.7.3, Radioactive Effluent Release Report
6.6.1.E Monthly Operating Report	Not Included
6.6.1.F Core Operating Limits Report (COLR)	Not Included
6.6.1.G Reactor Coolant System (RCS) Pressure and Temperature Limits Report (PTLR)	Not Included
6.6.2 Reportable Events	Not Included
6.6.3 Unique Reporting Requirements	
6.6.3.A Previously deleted	N/A
6.6.3.B Special Reports	

6.6.3.B.a In-Service Inspection Evaluation	Not Included
6.6.3.B.b Previously deleted	N/A
6.6.3.B.c Containment Building Structural Testing Report (ILRT, Tendon)	Not Included
6.6.3.B.d Changes to the Offsite Dose Calculation Manual (ODCM)	5.6.1, Offsite Dose Calculation Manual
6.6.3.B.e Waukegan Regional Airport Expansion Plans	Not Included
6.6.3.B.f Low Temperature Overpressure Protection System Operation	Not Included
6.6.3.B.g Primary Coolant Specific Activity	Not Included
6.6.3.B.h Pressurizer PORV or Safety Valve Failure to Close	Not Included
6.6.3.B.i Pressurizer PORV or Safety Valve challenges	Not Included
6.6.3.B.j (not used)	N/A
6.6.3.B.k Steam generator tube inspection and/or plugging	Not Included
6.6.3.B.l Emergency Core Cooling System (ECCS) actuation and injection when RCS temp > 350 F	Not Included
6.6.3.B.m Diesel generator failures	Not Included
6.6.3.B.n Post Accident Radiation monitor inoperable greater than 7 days	Not Included
6.7 Offsite Dose Calculation Manual (ODCM)	5.6.1, Offsite Dose Calculation Manual
6.8 Flooding Protection	Not included
6.9 Process Control Program (PCP)	Not included
6.10 Containment Leakage Rate Testing Program	Not Included