CHAPTER 13

CONDUCT OF OPERATIONS

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ACRONYMS AND ABBREVIATIONS

ALARA	as low as reasonably achievable
ANS	American Nuclear Society
ANSI	American National Standards Institute
CBP	Computer Based Procedure
CCTV	closed circuit television
CFR	Code of Federal Regulations
COL	Combined License
CPNPP	Comanche Peak Nuclear Power Plant
DCD	Design Control Document
EOF	Emergency Operations Facility
EOP	Emergency Operating Procedure
EPC	engineering, procurement, and construction
FFD	Fitness For Duty
FSAR	Final Safety Analysis Report
I&C	instrumentation and control
INPO	Institute of Nuclear Power Operations
IDS	intrusion detection system
MHI	Mitsubishi Heavy Industries, Ltd.
MC&A	Material Control and Accounting
MNES	Mitsubishi Nuclear Energy Systems, Inc.
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
NUREG	NRC Technical Report Designation (Nuclear Regulatory Commission)
ORC	Operations Review Committee
PSP	Physical Security Plan
PBP	Paper Based Procedure
PGP	Procedure Generation Package
QA	quality assurance
QAPD	quality assurance program description

ACRONYMS AND ABBREVIATIONS

QC	quality control
RG	Regulatory Guide
RO	reactor operator
SNM	Special Nuclear Material
SORC	Station Operations Review Committee
SRO	senior reactor operator
SRP	Standard Review Plan
SSC	structure, system, and component
STA	Shift Technical Advisor
TSC	Technical Support Center

13.0 CONDUCT OF OPERATIONS

This section of the referenced Design Control Document (DCD) is incorporated by reference with no departures or supplements.

13.1 ORGANIZATIONAL STRUCTURE OF APPLICANT

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

CP COL 13.1(1)
CP COL 13.1(4)

Add the following paragraph to DCD Section 13.1.

This section provides a description of the Luminant corporate organization functions and responsibilities, with regard to activities including facility design, design review, design approval, construction management, testing, and operation of the Comanche Peak Nuclear Power Plant (CPNPP) Units 3 and 4.

13.1.1 Management and Technical Support Organization

CP COL 13.1(1)
CP COL 13.1(4)

Replace the content of DCD Subsection 13.1.1 with the following.

Project management and technical support for CPNPP Units 3 and 4 are the responsibility of Luminant Generation Company LLC (Luminant). Luminant is a wholly-owned subsidiary of Luminant Holdings Company LLC (Luminant Power). Luminant and Luminant Power are both subsidiaries whose ultimate parent is Energy Future Holdings Corporation. The Luminant Corporate Structure diagram is shown in Figure 13.1-201.

13.1.1.1 Design, Construction, and Operating Responsibilities

CP COL 13.1(1)
CP COL 13.1(2)
CP COL 13.1(4)

Replace the first sentence of the first paragraph in the DCD Subsection 13.1.1.1 with the following.

Luminant (formerly TXU Corporation) has over 20 years of experience in the design, construction, and operation of nuclear generating stations. Luminant has corporate responsibility for design, construction, and operation of the new nuclear units, CPNPP Units 3 and 4. Also, Luminant has corporate responsibility for the two current operating units, CPNPP Units 1 and 2.

CP COL 13.1(1)
CP COL 13.1(4)
CP COL 13.1(6)

Replace the second and third sentences of the first paragraph in the DCD Subsection 13.1.1.1 with the following.

The Nuclear Generation organization is discussed below and is depicted in Figure 13.1-202. The staffing plan for CPNPP Units 3 and 4 is provided in Table 13.1-201. General educational and experience requirements for identified positions are in accordance with the guidelines of ANSI/ANS-3.1-1993 (Reference 13.1-201).

The Nuclear Generation organization furnishes design, engineering, construction, licensing, operation, and fuel management support to CPNPP Units 3 and 4. Nuclear Generation is split into the following organizations:

- The Nuclear Engineering and Support organization, under the Vice President, Nuclear Engineering and Support.
- The CPNPP Units 3 and 4 Site organization, under the Site Vice President.
- The Oversight and Regulatory Affairs organization, under the Director, Oversight and Regulatory Affairs.
- The Fuel Management organization, under the President, STARS FUELCO.

The major design and operational support responsibilities are design and construction activities, pre-operational activities, and technical support for operation. Design, construction and pre-operational activities are addressed in Appendix 13AA.

13.1.1.1.1 Technical Support for Operations

Technical services and backup support for nuclear operations are furnished by the Nuclear Engineering and Support organization, including personnel who are competent in technical matters related to plant safety and other engineering and scientific support areas. In the event that nuclear operations require assistance with specific problems, the services of qualified individuals, including outside contractual assistance, are engaged as appropriate. The special capabilities that are available include nuclear, mechanical, structural, electrical, thermal-hydraulic, materials and instrumentation and control (I&C) engineering, as well as plant chemistry, health physics, operations support, maintenance support, quality assurance (QA), training, safety review, fire protection, metallurgy, fueling and refueling support, and emergency coordination support. Technical services and backup support for the operating organization will be available before the preoperational test and startup program begins and continue throughout the life of the plant. Technical supervisors are responsible for management of the technical support group functions performed by the System Engineering group.

13.1.1.2 Organizational Arrangement

CP COL 13.1(1)
CP COL 13.1(3)
CP COL 13.1(4)

Replace the content of DCD Subsection 13.1.1.2 with the following.

Responsible positions in the Nuclear Generation organization are described below. The position titles provide a functional description only and the actual titles may vary from those used herein. Certain executive and management positions may have deputies assigned. Deputies may act with the full authority of the position to which they are assigned. The CPNPP Units 3 and 4 Nuclear Generation Organization is shown in Figure 13.1-202.

- Chief Nuclear Officer - The Chief Nuclear Officer, who is generally an Executive Vice President or a Senior Vice President, reports directly to the Chief Executive Officer, Luminant Power, and is responsible for directing

the reliable operation and maintenance of CPNPP; providing the QA Program and associated evaluation services applicable to nuclear activities, providing engineering services, technical and administrative services, nuclear fuel services, and licensing services. The Chief Nuclear Officer is assisted by others including the Site Vice President, the Vice President, Nuclear Engineering and Support, and the Director, Oversight and Regulatory Affairs.

- Director, NuBuild Project – The Director, NuBuild Project, reports directly to the Chief Nuclear Officer, and is responsible for establishing and managing the NSSS and A/E contracts, and also for the new nuclear plant licensing, engineering, procurement, construction, operational development, and QAPD implementation activities.
- Manager, NuBuild Quality Assurance – The Manager, NuBuild Quality Assurance, reports directly to the Chief Nuclear Officer, and is responsible for developing and maintaining the NuBuild QA Program, evaluating compliance with the QA program, and managing the QA organization resources responsible for independently planning and performing activities to verify effective implementation of the QA Program, including but not limited to new nuclear plant activities in engineering, licensing, document control, corrective action program, and procurement. The Manager NuBuild Quality Assurance is responsible for NuBuild QA activities until QA responsibilities are transitioned to the operating organization under the direction of the Director, Oversight and Regulatory Affairs. This transition will occur after receipt of the COL and prior to 30 days before initial fuel load.

13.1.1.2.1 CPNPP Units 3 and 4 Site Organization

The CPNPP Units 3 and 4 Site Organization is shown in Figure 13.1-203. The CPNPP Units 3 and 4 operating organization, which reports directly to the Site Vice President, is discussed in Subsection 13.1.2.

- Site Vice President - The Site Vice President reports directly to the Chief Nuclear Officer, and is responsible for directing the operation and maintenance of CPNPP Units 3 and 4 in a reliable, safe and economic manner, in compliance with federal, state, and local laws, regulations, licenses and codes, and within established corporate and Nuclear Generation policies, plans, and procedures for implementing the appropriate portions of the Nuclear Policy Statements. The Site Vice President is assisted by the Plant Manager, the Nuclear Training Manager, the Director, Performance Improvement, and the Manager, Plant Support Nuclear (which includes Emergency Preparedness, Security, and Environmental).
- Director, Performance Improvement - The Director, Performance Improvement reports directly to the Site Vice President, and is responsible for trending and analysis of conditions adverse to quality, review and assessment of nuclear industry operating experience impact on CPNPP

Units 3 and 4, identifying and evaluating significant trends in human performance, and administering and facilitating the Human Performance, Self Assessment and Benchmarking Programs.

- Review Committees - Independent reviews of activities affecting plant safety and safety/security interface during the operations phase are performed by the Operations Review Committee (ORC) and the Station Operations Review Committee (SORC). The ORC is the designated corporate level review committee that provides independent review of CPNPP activities. The SORC is a CPNPP Units 3 and 4 site management standing committee that functions as an onsite operating organization review committee. The ORC reports directly to the Chief Nuclear Officer. The ORC immediately advises the Chief Nuclear Officer on all matters adversely affecting nuclear safety. The SORC provides a similar, site-level function and reports directly to the Plant Manager.
- Programmatic Controls - Work planning and controls, corrective action and reporting programs, etc. are established to assess and manage potential safety and security issues to ensure that emergent and planned operations or activities are identified, reviewed, approved, monitored and documented as appropriate. These programmatic controls include reviews of proposed changes to the facility as described in the FSAR; reviews of violations, deviations and reportable events; results of investigations; review of corrective actions; and review of audits to ensure that safety issues and issues involving physical protection, including safety/security interface, will be appropriately addressed.

Multiple layers of protection are provided to preserve unit integrity, including Organizational attributes and controls. Organizationally, operators and other shift members are assigned to a specific unit. Physical separation of units helps to minimize wrong-unit activities. In addition, station procedures and programs provide operating staff with methods to minimize human error including tagging programs, procedure adherence requirements, and training. As well as the ongoing protection it affords to existing CPNPP Units 1 and 2, the implementation of this protection strategy also applies to preserving the integrity between the existing CPNPP Units 1 and 2 and the new CPNPP Units 3 and 4.

Licensed Operators will license on both CPNPP Units 3 & 4 and other shift personnel will receive training on both units. This will allow the flexibility to rotate personnel between units on an as-needed basis.

13.1.1.2.2 Nuclear Engineering and Support Organization

The CPNPP Units 3 and 4 Support Organization is shown in Figure 13.1-204. The Support organization reports directly to the Vice President, Nuclear Engineering and Support. Support organizations include Site Engineering and Engineering Support.

- Vice President, Nuclear Engineering and Support - The Vice President, Nuclear Engineering and Support reports directly to the Chief Nuclear

Officer, and is responsible for performing design and engineering activities; providing technical support to other Nuclear Generation functions; developing and maintaining an integrated administrative services program which includes Document Control and Records Management; providing and coordinating regulatory rate case support; and implementing the appropriate portions of the Nuclear Policy Statements. The Vice President, Nuclear Engineering and Support is assisted by the Director, Site Engineering and the Director, Engineering Support.

- Director, Engineering Support - The Director, Engineering Support reports directly to the Vice President, Nuclear Engineering and Support and is responsible for providing for the development and implementation of specific major scope plant modifications and/or engineering projects including interface with involved off-site vendor organizations, evaluations related to plant reliability, and providing for the development and implementation of an integrated administrative services program.

- Director, Site Engineering - The Director, Site Engineering reports directly to the Vice President, Nuclear Engineering and Support and is responsible for systems engineering and plant reliability, assuring the consistency of design documentation, providing Operations with timely design engineering services for analyses and technical evaluations, assuring that design activities conducted for Comanche Peak meet the requirements of the design control program, assuring that design outputs are consistent with the design basis of the plant, and providing engineering specialists.

- Systems Engineering Supervisors - The Systems Engineering Supervisors report directly to the Director, Site Engineering. The Systems Engineering Supervisors provide oversight to the systems engineers, including providing technical direction to the operating organization and operating support organizations, maintain training and qualification requirements of system engineers, providing technical support for plant surveillance testing and maintaining design configuration control of plant SSCs. The reactor engineering group (core performance engineering) is responsible for providing records related to the special nuclear material (SNM) control and accounting program to records management to ensure that the records are maintained as required under 10 CFR 74.19. A reactor engineer (systems engineer) is assigned as the SNM custodian. The SNM custodian is responsible for the implementation of the SNM control and accounting program.

13.1.1.2.3 Oversight and Regulatory Affairs Organization

- Director, Oversight and Regulatory Affairs - The Director, Oversight and Regulatory Affairs, reports directly to the Chief Nuclear Officer and is responsible for providing assistance, as required, (including technical interface between Nuclear Generation departments) to assure consistency and compliance with CPNPP licensing commitments, providing liaison with

government regulatory agencies, controlling correspondence with regulatory agencies, providing for employee interviews and resolution of concerns through the SAFETEAM process, obtaining, controlling, amending, and renewing licenses and licensing documents needed to safely operate and maintain CPNPP, and implementing the appropriate portions of Nuclear Policy Statements. The Director, Oversight and Regulatory Affairs is also responsible for the definition, direction, maintenance, and measurement of the effectiveness of the QA Program for Nuclear Generation and assures that QA Program requirements are met by conducting evaluations that measure compliance to established requirements, the results of which are reported to the responsible organization and to higher Luminant Power management. The Director, Oversight and Regulatory Affairs is also responsible for the independent verification of critical attributes associated with safety-related equipment or work activities and providing, when necessary, independent review and concurrence for quality-related activities such as procurement, nonconformance reporting, corrective action and other activities as designated in the QA Program. These responsibilities include the identification of deficient conditions, the evaluation of subsequent corrective actions for acceptability, and the verification of corrective action implementation. The Director, Oversight and Regulatory Affairs has the authority to stop work to assure compliance with the QA Program. The Director, Oversight and Regulatory Affairs is assisted by the Manager, Quality Assurance, the Manager, Nuclear Licensing, the Manager, Corrective Action, and the Manager, SAFETEAM.

- Manager, Quality Assurance - The Manager, Quality Assurance reports directly to the Director, Oversight and Regulatory Affairs, and is responsible for developing and maintaining QA programs, manuals and procedures; supervising QA/quality control (QC) personnel; conducting QA/QC inspections, evaluations, reviews and audits; and maintaining channels of communications with management in matters of quality. The Manager, Quality Assurance has the duty and authority to identify quality-related problems; to initiate, recommend, or provide solutions; and to verify the implementation and effectiveness of solutions. When required, the Manager, Quality Assurance is responsible for the issuance and removal of stop work orders.
- Manager, Nuclear Licensing – The Manager, Nuclear Licensing, reports directly to the Director, Oversight and Regulatory Affairs, and is responsible for day-to-day licensing and regulatory engineering activities at CPNPP Units 3 and 4. These activities include, but are not limited to, licensing submittals to the U.S. Nuclear Regulatory Commission (NRC), maintenance of licensing documents such as the Final Safety Analysis Report (FSAR) and Technical Specifications, supporting the operations organization with interpretation of regulatory requirements, ensuring plant conformance with regulatory commitments, and interfacing with the NRC on inspections and enforcement actions.
- Manager, SAFETEAM - The Manager, SAFETEAM is responsible for managing the SAFETEAM Program for the review and investigation of

employee safety concerns, and ensuring both departing employees and employees with concerns are interviewed.

- Manager, Corrective Action – The Manager, Corrective Action is responsible for administering and facilitating the Corrective Action Program.

13.1.1.2.4 Fuel Management Organization

- President, STARS FUELCO – STARS FUELCO will provide nuclear fuel services to CPNPP Units 3 and 4. The President, STARS FUELCO reports directly to the Luminant Chief Nuclear Officer, and is responsible for providing those services safely and efficiently.

13.1.1.2.5 Outside Contractual Assistance

Contract assistance with vendors and suppliers of services not available from the CPNPP Units 3 and 4 staff is provided by the support group for materials, purchasing, and contracts. Personnel in this group perform the necessary interfacing functions with contract vendors, to procure services for which CPNPP Units 3 and 4 staff does not have the required resources. Resources of the support group for materials, purchasing, and contracts are shared between units.

13.1.1.3 Qualifications

CP COL 13.1(5) Replace the content of DCD Subsection 13.1.1.3 with the following.

The managers and supervisors in the technical support organizations meet the qualification requirements in education and experience for those described in ANSI/ANS-3.1 (Reference 13.1-201) as endorsed and amended by RG 1.8. The qualification and experience requirements of headquarters staff is established in corporate policy and procedure manuals.

13.1.2 Operating Organization

CP COL 13.1(1)
CP COL 13.1(4)
CP COL 13.1(6) Replace the content of DCD Subsection 13.1.2 with the following.

The CPNPP operating organization:

- Meets the guidelines of RG 1.33 for its operating organization.
- Meets the guidelines of RG 1.33 for onsite review and rules of practice.
- Meets the applicable requirements for a fire protection program.
- Meets the guidelines of RG 1.8 for its operating organization.
- Is consistent with the NRC Policy Statement on Engineering Expertise on Shift.
- Meets the TMI Action Plan Items I.A.1.1 and I.A.1.3 of NUREG-0737 for shift staffing.

- Meets the applicable requirements for physical protection program.

General education and experience requirements for the identified positions or classes of positions are in accordance with ANSI/ANS 3.1-1993, as endorsed and amended by RG 1.8.

13.1.2.1 Operations Department

- Plant Manager - The Plant Manager reports directly to the Site Vice President and is responsible for management of all operational activities, operational support, and maintenance support of CPNPP Units 3 and 4. The Plant Manager is assisted by the Director, Operations, the Director, Maintenance, the Manager, Radiation and Industrial Safety, and the Manager, Work Control/Outages.

- Director, Operations - The Director, Operations reports directly to the Plant Manager and is responsible for operations of CPNPP Units 3 and 4; management and training of Operations Department personnel; coordinating the generation of power and changes in operating modes; and participating in power ascension test program and refueling efforts. The Director, Operations provides technical assistance for the development and maintenance of Operations Department procedures to ensure CPNPP Units 3 and 4 are operated as prescribed. The Director, Operations is also responsible for the operation of the radioactive waste handling systems and for the processing and packaging of radioactive waste. Reporting directly to the Director, Operations, are the Shift Operations Manager, the Operations Support Manager, and the Chemistry Manager.

- Shift Operations Manager - The Shift Operations Manager reports directly to the Director, Operations, and is responsible for post-trip reviews, for refueling support, and for reactor operator training support. The Shift Operations Manager directs the Shift Managers and is responsible for ensuring that shift operations personnel are trained and qualified (see Section 13.2). The Shift Operations Manager is the position designated to meet ANSI/ANS 3.1-1993 (Reference Table 13.1-201) qualification requirements for “Operations” in section 4.3, Middle Manager Level, and is required to maintain a senior reactor operator (SRO) License.
- Shift Managers - The Shift Managers report directly to the Shift Operations Manager, and are members of management responsible for the operation of the CPNPP Units 3 and 4. The Shift Managers are responsible for supervising the evolutions conducted during their shift and ensuring that they are conducted in accordance with the operating license, station procedures, and applicable directives and policies. The Shift Managers are responsible for supervising shift operations personnel and for conducting on-shift training. During periods when senior management personnel are not on site, the Shift Manager assumes responsibility for all

station activities. Each Shift Manager is required to maintain a SRO License.

- Unit Supervisors - The Unit Supervisors report directly to the Shift Managers, and are members of management who assist the Shift Managers in discharging their responsibilities for supervision of the CPNPP Units 3 and 4. The Unit Supervisors may assume the duties of the Shift Managers in their absence. Each Unit Supervisor is required to maintain a SRO License.
- Reactor Operators - The Reactor Operators report directly to the Shift Manager or Unit Supervisor, and are responsible for routine evolutions on their assigned unit and for monitoring the status of that unit. Each Reactor Operator is required to maintain a reactor operator (RO) License.
- Nuclear Equipment Operators - Nuclear Equipment Operators work under the direction of a Shift Manager, Unit Supervisor, or Radwaste Supervisor. The Nuclear Equipment Operator responsibilities include operating equipment from the Control Room and operating and servicing equipment remote from the Control Room at the direction of Control Room operators.
- Shift Technical Advisors - Shift Technical Advisors report to the Shift Manager, and will be on each shift unless the Shift Manager or another individual with a SRO license meets the qualifications described in Option 1 of the Commission Policy Statement on Engineering Expertise (50 Federal Registry 43621, October 28, 1985).
- Chemistry Manager - The Chemistry Manager reports directly to the Director, Operations, and is responsible for the supervision of chemistry personnel and for monitoring and maintaining the station's fluid systems chemistry. In discharging these responsibilities, the Chemistry Manager ensures that chemistry personnel are trained, and that safety-related activities are conducted in accordance with applicable procedures, instructions, policies, and regulations.
- Fire Protection Supervisor - The Fire Protection Supervisor reports through the Director, Maintenance to the Site Vice President, who has responsibility for fire protection of the plant. The Fire Protection Supervisor and the fire protection program staff are responsible for maintaining and updating the fire protection program requirements, including consideration of potential hazards associated with postulated fires, knowledge of building layout, and system design. This group is also responsible for maintaining post-fire shutdown capability for CPNPP Units 3 and 4; and for design, maintenance, surveillance, and quality assurance of fire protection features such as detection systems, suppression systems, barriers, dampers, doors, penetration seals and fire brigade equipment. The group responsibilities also include fire prevention activities such as administrative controls and training, and pre-fire planning including review and updating of pre-fire plans at least every two years. Additionally, the Fire Protection Supervisor works with the Director of Operations to coordinate activities and program requirements with the Operations Department. In accordance with RG 1.189, the Fire Protection

Supervisor is a graduate of an engineering curriculum of accepted standing, and has completed not less than six years of engineering experience, three of which were in a responsible position in charge of fire protection engineering work.

- Fire Brigade – The fire brigade reports to the Unit 3 Shift Manager for incidents involving Unit 3 plant equipment and common plant equipment, and to the Unit 4 Shift Manager for incidents involving Unit 4 plant equipment. The CPNPP Units 3 and 4 station is designed, and the fire brigade is organized to be self sufficient with respect to fire fighting activities. The fire brigade is organized to deal with fires and related emergencies. It consists of a fire brigade leader and a sufficient number of brigade members to operate the equipment that is used during a fire emergency. At least five (5) trained and physically qualified fire brigade members are available onsite during each shift. Members of the fire brigade are knowledgeable of building layout and system design. The fire brigade assigned for any shift does not include the shift manager or licensed operators. Fire brigade members for a shift are designated in accordance with established procedures at the beginning of the shift.

13.1.2.2 Maintenance Department

- Director, Maintenance - The Director, Maintenance, reports directly to the Plant Manager and is responsible for maintenance activities associated with mechanical and electrical equipment, instrumentation, and controls, and for implementing the preventive maintenance program. The Director, Maintenance, ensures that maintenance personnel are trained and qualified and that maintenance activities during routine operation and refueling outages, and maintenance activities associated with the power ascension test program, are conducted in accordance with approved procedures and instructions, regulatory requirements, and applicable policies and directives. The Director, Maintenance, is responsible for developing and maintaining procedures and instructions as described in Subsection 13.5.

- Scheduled Maintenance and Repair Teams - The Scheduled Maintenance and Repair Teams report directly to the Director, Maintenance. These teams are part of a multi-discipline, system-oriented management program established to provide ownership and accountability within the maintenance organization. The Maintenance Team Managers are responsible for the maintenance of electrical and mechanical plant systems and their instrumentation and control systems. They ensure that the electricians, mechanics, and I&C technicians are trained and that safety-related activities are conducted in accordance with applicable procedures, instructions, policies, and regulations. They are responsible for managing their respective areas/systems through the Maintenance Team Supervisors who direct the day-to-day activities of their personnel.
- Maintenance Plant Support Manager - The Maintenance Plant Support Manager reports directly to the Director, Maintenance, and is responsible

for providing technical, administrative, and field support for the Maintenance Department.

- PROMPT Team - The PROMPT Team reports directly to the Maintenance Plant Support Manager. Specific duties and responsibilities include, but are not limited to, ensuring PROMPT Team activities are performed in accordance with the applicable site procedures. The PROMPT Team is also responsible for providing immediate response to plant emergent maintenance items.
- Maintenance Team Supervisors - The Maintenance Team Supervisors report directly to the Maintenance Team Managers, and are responsible for directing the day-to-day activities of the electricians, mechanics and I&C technicians for the maintenance of electrical and mechanical plant systems and their instrumentation and control systems.

13.1.2.3 Radiation Protection and Safety Services

- Manager, Radiation and Industrial Safety - The Manager, Radiation and Industrial Safety reports directly to the Plant Manager and is responsible for the supervision of the Radiation Protection Manager and Supervisors, for the transportation of radioactive material, for the CPNPP Units 3 and 4 Radiation Protection program (see Subsection 12.5) and for implementation of the station policy of maintaining operational radiation exposures as low as reasonably achievable (ALARA). The Manager, Radiation and Industrial Safety ensures that personnel are trained and that radiation protection activities are conducted in accordance with applicable procedures, instructions, policies, and regulations. The Manager, Radiation and Industrial Safety is also responsible for industrial safety and environmental services.

- Radiation Protection Supervisors - The Radiation Protection Supervisors report to the Manager, Radiation and Industrial Safety and are responsible for the Radiation Protection support programs, including Dosimetry, ALARA, Rad Waste, Respiratory Protection, fixed and portable radiological instrumentation, and supervision of radiation protection and monitoring and control activities.

13.1.2.4 Plant Support

- Manager, Plant Support Nuclear - The Manager, Plant Support Nuclear, reports directly to the Site Vice President and is responsible for station security and emergency planning. The Manager, Plant Support Nuclear is also responsible for maintaining the CPNPP Units 3 and 4 work control program, scheduling on-line work and tests, and administering the risk assessment process.
- Manager, Work Control/Outages - The Manager, Work Control/Outages reports directly to the Plant Manager and is responsible for outage management, preparation and execution of planned outages, scheduling

outage activities, ensuring the implementation of the risk assessment process on outage activities, and incorporation of outage lessons learned.

- Security Manager - The Security Manager reports directly to the Manager, Plant Support Nuclear, and is responsible for the overall development and implementation of the security program at CPNPP Units 3 and 4 as outlined in the Security Plan.

- Emergency Planning Manager - The Emergency Planning Manager reports directly to the Manager, Plant Support Nuclear, and is responsible for the development of the Emergency Plan and procedures, maintenance of emergency response facilities and equipment, and training of the emergency response organization. The Emergency Planning Manager is also responsible for interfacing with local, state, and federal officials to ensure integrated onsite and off-site plans.

- Nuclear Training Manager - The Nuclear Training Manager reports directly to the Site Vice President, and is responsible for directing the analysis, design, development, implementation, evaluation and revision of nuclear training programs in order to provide personnel with the requisite skills and knowledge for effectively performing functions important to the operation and maintenance of CPNPP Units 3 and 4.

13.1.2.5 Operating Shift Crews

The minimum on-duty shift complement for each mode of two units operation with separate control rooms is shown in Table 13.1-202. Senior Reactor Operator (SRO) and Reactor Operator (RO) requirements are as found in 10 CFR 50.54(m)(2)(i). As allowed by note 1 in 10 CFR 50.54(m)(2)(i), temporary deviations from the numbers of licensed operators required by this table shall be in accordance with the following criteria. The minimum Operations shift crew composition may be one less than shown for not more than (2) hours to accommodate unexpected absences of on-duty crew members, provided immediate action is taken to restore the crew composition within the minimum shown in the table. This exception does not permit any crew composition to be unmanned upon shift turnover due to an oncoming crewmember being late or absent.

Plant administrative procedures implement the required shift staffing. These procedures establish staffing of the operational shifts with sufficient qualified plant personnel who are readily available in the event of an abnormal or emergency situation. The objective is to operate the plant with the required staff and develop work schedules that minimize overtime for plant staff members who perform safety-related functions. Work hour limitations and shift staffing requirements defined by TMI Action Plan I.A.1.3 are defined in station procedures. When overtime is necessary, the provisions in the technical specifications and the plant administrative procedures apply. Shift crew staffing plans may be modified during refueling outages to accommodate safe and efficient completion of outage work.

13.1.2.6 Supervisory Succession

The Plant Manager is responsible for the operation of CPNPP Units 3 and 4. If the Plant Manager is absent, becomes incapacitated, or in the event of any other unexpected circumstance of a temporary nature, the line of succession of authority and responsibility for overall operations is:

1. Director of Operations

2. Director of Maintenance

As described in Subsection 13.1.2.1, the Director of Operations is the Plant Manager's direct representative for the conduct of operations. The succession of authority includes the authority to issue standing or special orders as required. During back shift and weekend periods when the station staff is not on site, the Shift Manager is responsible for all activities at CPNPP Units 3 and 4.

13.1.3 Qualifications of Nuclear Plant Personnel

CP COL 13.1(5)
CP COL 13.1(7)

Replace the content of DCD Subsection 13.1.3 with the following.

Qualifications of managers, supervisors, operators, and technicians of the operating organization meet the requirements for education and experience described in ANSI/ANS-3.1 (Reference 13.1-201), as endorsed and amended by RG 1.8. For Operators and SROs, these requirements are modified in Section 13.2.

RO and SRO candidates meet the requirements of ACAD 09-001 Section 6, "Reactor Operator and Senior Reactor Operator Candidate Education, Experience, and Training Requirements for Initial Startup and Operation of New Construction Plants (Cold Licensing) (Ref. 13.1-203)."

Final selections of initial appointees to plant positions for key managerial and supervisory personnel, through the shift supervisory level, have not yet been made. Resumes of these personnel, reflecting qualifications, will be provided when these positions are filled. All positions will be filled prior to fuel loading for each unit. This is consistent with RG 1.206, Section 13.1.2(7).

13.1.4 Combined License Information

Replace the content of DCD Subsection 13.1.4 with the following.

CP COL 13.1(1)

***13.1(1)** Corporate or home office organization*
This Combined License (COL) item is addressed in Section 13.1 through Subsection 13.1.1.2.5, Subsection 13.1.2 through 13.1.2.6, including Table 13.1-201, 13.1-202, Figure 13.1-201 through Figure 13.1-204, and Appendix 13AA.

CP COL 13.1(2) ***13.1(2)*** *Past experience*
This COL item is addressed in Subsection 13.1.1.1.

CP COL 13.1(3) ***13.1(3)*** *Management, engineering, and technical support organizations*
This COL item is addressed in Subsection 13.1.1.2 through 13.1.1.2.5, including Figure 13.1-204.

CP COL 13.1(4) ***13.1(4)*** *Organizational arrangement*
This COL item is addressed in Section 13.1 through Subsection 13.1.1.2.5, including Table 13.1-201 and Figure 13.1-201 through Figure 13.1-204.

CP COL 13.1(5) ***13.1(5)*** *General qualification requirements*
This COL item is addressed in Subsection 13.1.1.3 and 13.1.3.

CP COL 13.1(6) ***13.1(6)*** *Organizational structure for the plant organization, its personnel responsibilities and authorities, and operating shift crews*
This COL item is addressed in Subsection 13.1.1.1, 13.1.2 through 13.1.2.6, including Tables 13.1-201, 13.1-202, and Figures 13.1-202, 13.1-203.

CP COL 13.1(7) ***13.1(7)*** *Education, training, and experience requirements*
This COL item is addressed in Subsection 13.1.3.

13.1.5 References

Add the following references after the last reference in DCD Subsection 13.1.5.

13.1-201 American Nuclear Society, *American National Standard for Selection, Qualification, and Training of Personnel for Nuclear Power Plants,* ANSI/ANS-3.1-1993, April 1993.

13.1-202 American Nuclear Society, *American National Standard for Selection, Qualification, and Training of Personnel for Nuclear Power Plants,* ANSI N18.7-1976/ANS 3.2-1976, “Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants”, February 1976.

13.1-203 National Academy for Nuclear Training, Guidelines for Initial Training and Qualification of Licensed Operators, ACAD-09-001, January 2009.

CP COL 13.1(1)
CP COL 13.1(4)
CP COL 13.1(6)

Table 13.1-201 (Sheet 1 of 7)

Staffing Plan for CPNPP Units 3 and 4 (1)

			Estimated Numbers of Full Time Equivalents			
Nuclear Function	**Function Position (ANS-3.1-1993 section)**	**CPNPP Units 3 and 4 Position**	**Design Review Phase**	**Construction Phase**	**Preoperational Phase**	**Operational Phase**
Executive Management	Chief Nuclear Officer (NA)	Chief Nuclear Officer	0.1	0.1	0.1	0.1
	Site Executive (NA)	Site Vice President	0.25	0.25	0.5	0.5

Table 13.1-201 (Sheet 2 of 7)

Staffing Plan for CPNPP Units 3 and 4 (1)

			Estimated Numbers of Full Time Equivalents			
Nuclear Function	**Function Position (ANS-3.1-1993 section)**	**CPNPP Units 3 and 4 Position**	**Design Review Phase**	**Construction Phase**	**Preoperational Phase**	**Operational Phase**
Nuclear Support	Executive, Operations Support (NA)	Manager, Plant Support Nuclear	0.3	0.5	0.5	0.5
		Administrative Assistant		6	12	12
	Supervisor	Supv, Document Control		1	1	1
	Clerk	Document Control Clerk		6	6	6
	Supervisor	Supv, Ops Support (Procedures)		1	1	1
	Specialist	Ops Support Specialist		6	6	6
	Executive, Construction (NA)	Director, NuBuild Project	1	1	1	
	Executive, Engineering and Technical Services (NA)	Vice President, Nuclear Engineering and Support; and	0.2	0.5	0.5	0.5
		Director, Oversight and Regulatory Affairs	0.2	0.5	0.5	0.5
	Executive, Contracts and Procurement (NA)	Manager, Contracts and Procurement	0.2	1	1	1
	Supervisor	Supv Contracts/Procurement		2	2	2
	Attendant	Warehouse Attendant		3	3	3

Table 13.1-201 (Sheet 3 of 7)

Staffing Plan for CPNPP Units 3 and 4 (1)

			Estimated Numbers of Full Time Equivalents			
Nuclear Function	**Function Position (ANS-3.1-1993 section)**	**CPNPP Units 3 and 4 Position**	**Design Review Phase**	**Construction Phase**	**Preoperational Phase**	**Operational Phase**
Quality Assurance, Safety, and Training	Functional Mgr. (QAPD)	Manager, Quality Assurance		0.2	0.5	1
	Functional Mgr. (QAPD)	Manager, NuBuild QA	1	1	1	
	Functional Mgr. (QAPD)	Director, Performance Impvmnt.			0.5	0.5
	Quality Verif./Insp.(QAPD)	QA/QC Inspectors	5	17	14	12
	Functional Mgr. (4.3)	Manager, Nuclear Licensing	0.5	0.5	0.5	0.5
	Supervisor	Supv Nuclear Licensing	2	2	2	1
	Engineer	Licensing Engineer		3	3	3
	Supervisor	Supv, Safety Analysis			1	1
	Engineer	Safety Analysis Engineer			2	2
	Supervisor	Supv, PRA			1	1
	Engineer	PRA Engineer			2	2
	Supervisor	Supv, Reactor Engineering			1	1
	Engineer	Reactor Engineer			3	3
	Functional Mgr. (4.3)	Manager, SAFETEAM	0.5	0.5	0.5	0.5
	Functional Mgr. (4.3)	Manager, Radiation/ Ind. Safety	1	1	1	1
	Functional Mgr. (4.3.1)	Manager, Nuclear Training	1	1	1	1
	Supervisor	Operations Training Supv		1	1	1
	Supervisor	Technical Training Program Supv		1	1	1
	Training Instructors (4.5.4)			22	22	22
	Functional Mgr.	Training Instructor		1	1	1
	Technician	Corrective Action Program Mgr.		2	2	2
		Corrective Action Program Analyst				

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Table 13.1-201 (Sheet 4 of 7)

Staffing Plan for CPNPP Units 3 and 4 (1)

			Estimated Numbers of Full Time Equivalents			
Nuclear Function	**Function Position (ANS-3.1-1993 section)**	**CPNPP Units 3 and 4 Position**	**Design Review Phase**	**Construction Phase**	**Preoperational Phase**	**Operational Phase**
Plant Management	Plant Manager (4.2.1)	Plant Manager		1	1	1
	Functional Manager (4.3)	Manager, Work Control/Outages			1	1
Operations	Manager (4.2.2)	Director, Operations		1	1	1
	Functional Manager (4.3.8)	Shift Operations Manager			1	2
	Functional Manager (4.4.1)	Shift Manager (2)			10	10
	Supervisor (4.4.2)	Unit Supervisor (2)			10	10
	Supervisor (4.6.2)	Shift Technical Advisor (2)			5	5
	Licensed Operator (4.5.1)	Senior Reactor Operator (2)			10	10
		Reactor Operator (2)			20	20
	Non-Licensed Operator (4.5.2)	Nuclear Equipment Operator (2)			60	40
Offsite Engineering	Manager (4.2.4)	Director, Engineering Support	0.5	1	1	1
	Manager (4.2.4)	Technical Manager	1	3	3	3
Onsite Engineering	Manager (4.2.4)	Director, Site Engineering	1	1	1	1
	Manager (4.2.4)	Technical Manager	2	3	3	3
System Engineering	Functional Mgr. (4.3.9)	Director, System Engineering	0.5	1	1	1
	Engineering Support (4.4.10)	System Engineering Supervisor	1	1	4	4
	System Engineer (4.6.1)	System Engineer	1	4	24	24

Table 13.1-201 (Sheet 5 of 7)

Staffing Plan for CPNPP Units 3 and 4 (1)

			Estimated Numbers of Full Time Equivalents			
Nuclear Function	**Function Position (ANS-3.1-1993 section)**	**CPNPP Units 3 and 4 Position**	**Design Review Phase**	**Construction Phase**	**Preoperational Phase**	**Operational Phase**
Chemistry		Chemistry Manager		1	1	1
	Supervisor (4.4.6)	Chemistry Supervisor		1	5	5
	Technician (4.5.3.1)	Chemistry Technician (2)		2	10	10
Radiation Protection	Functional Mgr. (4.3.3)	Radiation Protection Manager		1	1	1
	Supervisor (4.4.6)	Radiation Protection Supervisor (2)		2	5	5
	Technician (4.5.3.1)	Radiation Protection Technicians(2)		4	20	30

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Table 13.1-201 (Sheet 6 of 7)

Staffing Plan for CPNPP Units 3 and 4 (1)

			Estimated Numbers of Full Time Equivalents			
Nuclear Function	**Function Position (ANS-3.1-1993 section)**	**CPNPP Units 3 and 4 Position**	**Design Review Phase**	**Construction Phase**	**Preoperational Phase**	**Operational Phase**
Maintenance	Manager (4.2.3)	Director, Maintenance	1	1	1	1
	Supervisor (4.4.7)	Maintenance Plant Support Mgr.		1	3	3
	Supervisor	Maint. Support (Procedures)		6	1	1
	Specialist	Maintenance Specialist		1	6	6
	Manager	Manager, Work Control/Outages			1	1
	Coordinator	Outage Coordinator			3	3
	Scheduler	Outage Scheduler			3	3
	Supervisor	Work Control Supervisor			1	1
	Scheduler	Work Control Scheduler		1	3	3
	Manager (4.2.3)	Director, Maintenance		1	1	1
	Supervisor (4.4.7)	Maintenance Plant Support Mgr.		1	3	3
	Supervisor	I&C Supervisor		1	8	4
	I&C Tech. (4.5.3.3)	I&C Technician (2)		5	35	25
	Supervisor	Mechanical Supervisor		1	2	2
	Mechanical Tech. (4.5.7.2)	Mechanical Technician (2)		5	45	35
	Supervisor	Electrical Supervisor		2	2	2
	Electrical Tech. (4.5.7.1)	Electrical Technician (2)		5	35	25

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Table 13.1-201 (Sheet 7 of 7)

Staffing Plan for CPNPP Units 3 and 4 (1)

			Estimated Numbers of Full Time Equivalents			
Nuclear Function	**Function Position (ANS-3.1-1993 section)**	**CPNPP Units 3 and 4 Position**	**Design Review Phase**	**Construction Phase**	**Preoperational Phase**	**Operational Phase**
Nuclear Fuel Services	Manager (4.2.4)	Nuclear Fuel Services Manager (STARS FUELCO)		0.5	0.5	0.5
Fire Protection	Supervisor (RG 1.189)	Fire Protection Supervisor	0.5	1	1	1
Emergency Preparedness	Functional Manager (4.3)	Emergency Planning Manager		1	1	1
		EP Coordinator		2	2	2
Security	Functional Manager (4.3)	Security Manager		1	1	1
	Supervisor (4.4)	Security Supervisor (2)		3	5	5
Security	Security Officer (NA)	Security Officer		(Withheld)	(Withheld)	(Withheld)
Preoperational and Startup Testing	Manager (NA)	Startup Manager		1	1	1
	Preop. Test Engr. (4.4.11)	Preoperational Test Engineer (supervisory) (2)		20	20	
	Startup Test Engr. (4.4.12)	Startup Test Engineer (supervisory) (2)		5	20	5
		TOTALS	**20.75**	**173.55**	**494.6**	**412.1**

Note (1): Each entry in this table for the number of individuals assigned to a function during a project phase (i.e., the numerical entries in the four right-hand columns, labeled Design Review Phase, Construction Phase, Preoperational Phase, and Operational Phase) reflects the sum of resources required for the two units. For resources not expected to spend all of their time on CPNPP Units 3 and 4, the entries are fractional. Contractor Support may be utilized as required to fill positions other than Licensed Shift Operations staff.

Note (2): For operations personnel assigned on a shift basis, the staffing numbers are based on the assumption of a total of five (5) operating crews to cover the shift requirements for each unit. Numbers are also based on the assumption of simultaneous full power operation of both units, using separate control rooms for CPNPP Unit 3 and Unit 4.

CP COL 13.1(1)
CP COL 13.1(4)
CP COL 13.1(6)

Table 13.1-202

Minimum Shift Crew Composition

Position	Both Units in Modes 1, 2, 3, or 4	One Unit in Modes 1, 2, 3, or 4 and One Unit in Mode 5,6, or Defueled	Both Units in Modes 5, 6, or Defueled
Senior Reactor Operator (SRO)	3	2	1
Reactor Operator (RO)	4	3	2
Shift Technical Advisor (STA)	1	1	1
Nuclear Equipment Operator	4	3	3
Radiation Protection Technician	1	1	1
Chemistry Technician	1	1	0

Notes:

a) Shift Manager - In the table, the SM is one of the SROs. A SM with a dual unit SRO license is assigned to both units when either unit contains fuel. During the absence of the SM from the control room, any currently licensed SRO will be designated to assume the control room command function. The SM does not fulfill the duties as Emergency Coordinator and dose assessor concurrently.

b) Senior Reactor Operator (SRO) - During core alternations on either unit, at least one currently licensed SRO (or SRO limited to fuel handling) will be present and responsible for fuel handling activities with no other concurrent duties assigned.

c) Reactor Operator (RO) - At least one RO is assigned as a relief operator when either unit is in MODE 1, 2, 3, or 4.

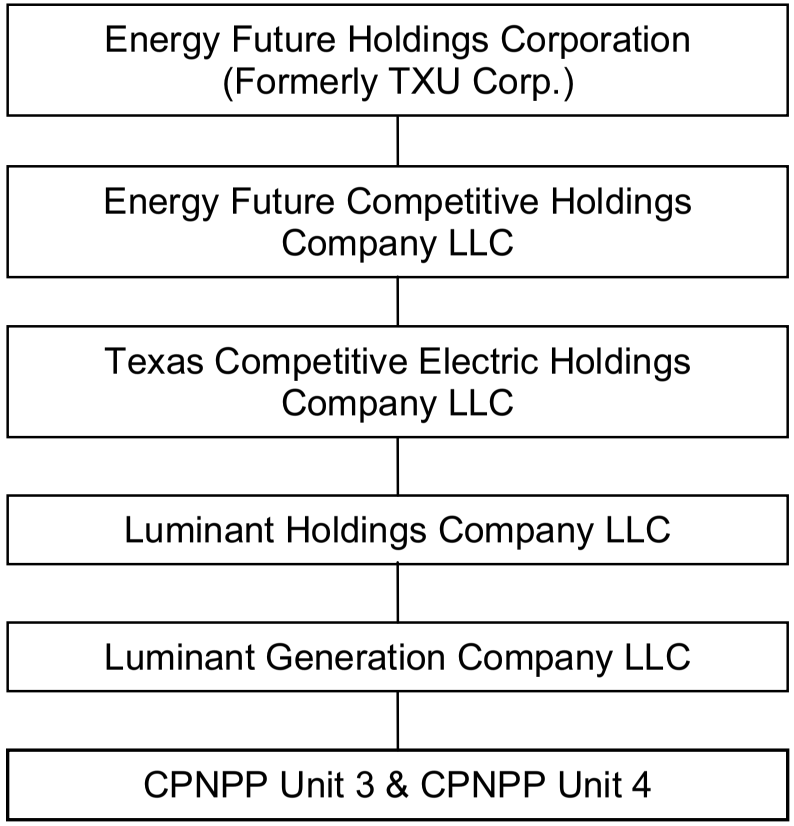
d) Nuclear Equipment Operator - Nuclear Equipment Operators are non-licensed.

e) Shift Technical Advisor (STA) - An STA is assigned to each shift in all MODES or when DEFUELED. The STA position may be filled by an on-shift SRO provided the individual meets the dual role requirements described in the Commission Policy Statement on Engineering Expertise on Shift (50 CFR 43621) and has dose assessment capability.

f) Radiation Protection/Chemistry Technicians - At least one (1) radiation protection technician is onsite at all times when there is fuel in the reactor. At least one (1) chemistry technician is onsite during plant operation modes other than cold shutdown or refueling. The Radiation Protection and Chemistry Technicians may be less than the minimum requirements for a period of 2 hours in order to accommodate unexpected absence, provided immediate action is taken to fill the required position.

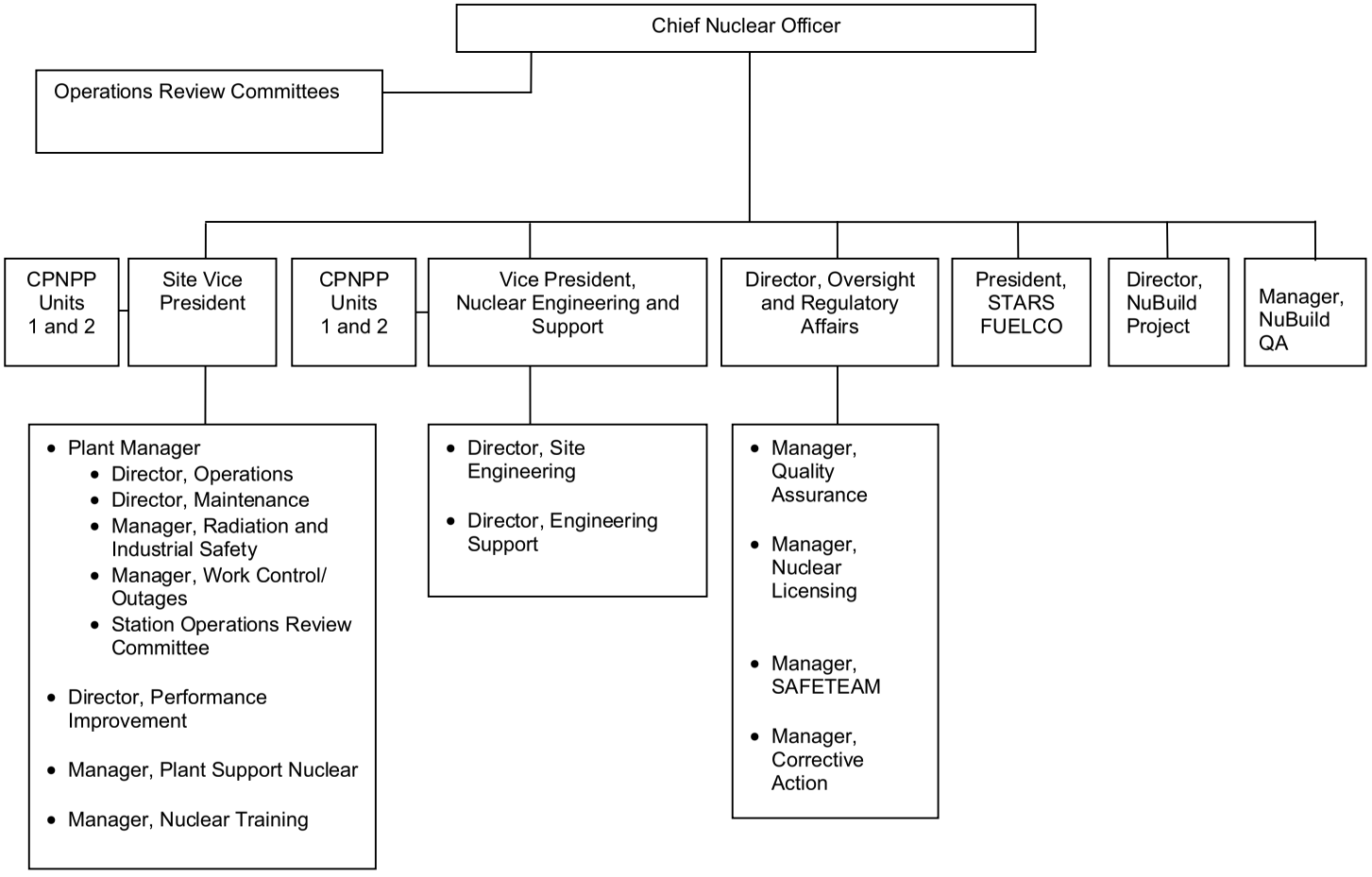
g) One of the SRO positions shown in Table 13.1-202, representing the Shift Manager, is shared between CPNPP Units 3 and 4. Also, the STA, Radiation Protection Technician, and Chemistry Technician positions shown in Table 13.1-202 are shared between CPNPP Units 3 and 4.

h) Additional minimum on-shift staffing requirements are contained in the CPNPP Units 3 and 4 Emergency Plan.



CP COL 13.1(1)
CP COL 13.1(4)

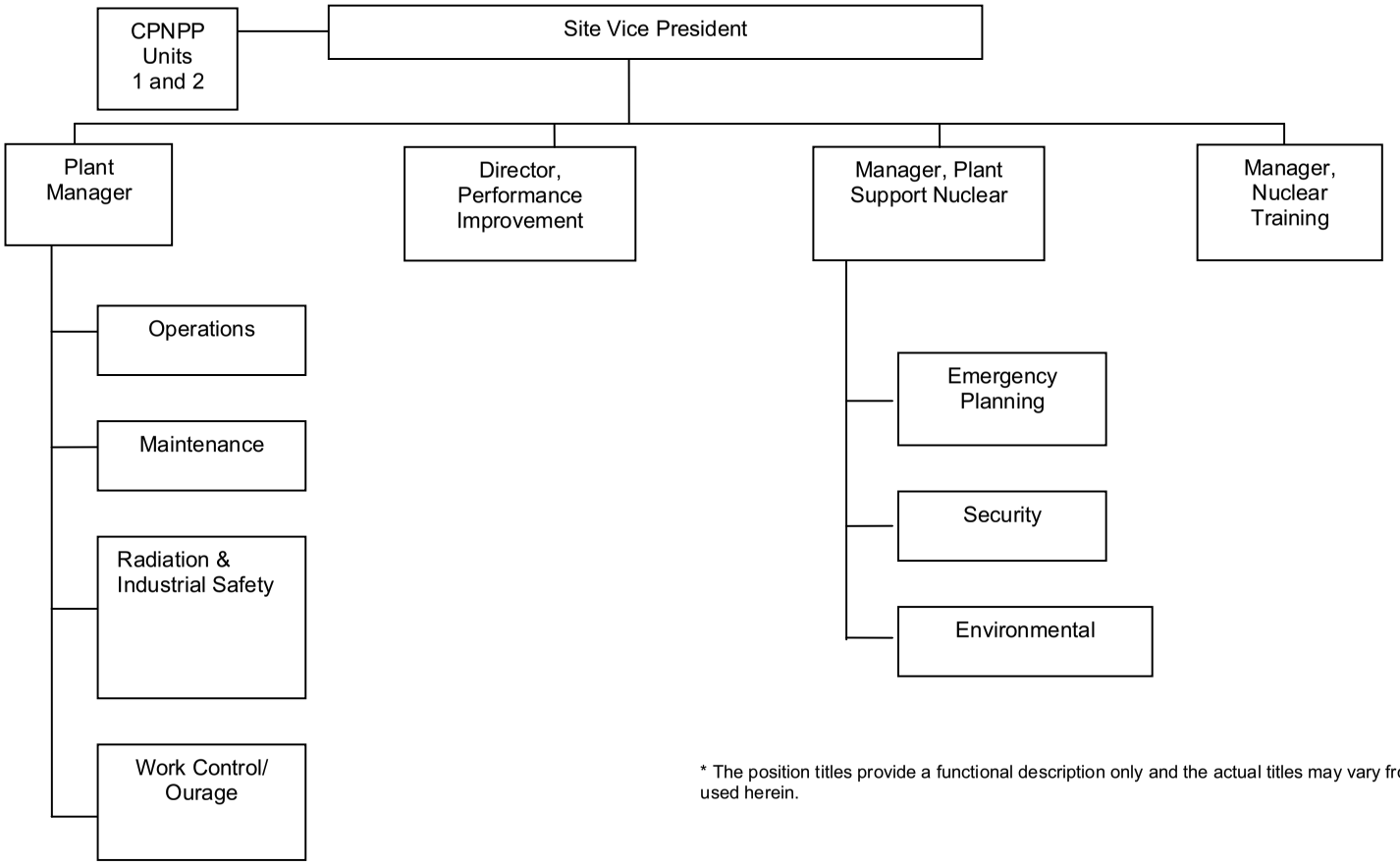
Figure 13.1-201 Luminant Corporate Structure Diagram



* The position titles provide a functional description only and the actual titles may vary from those used herein.

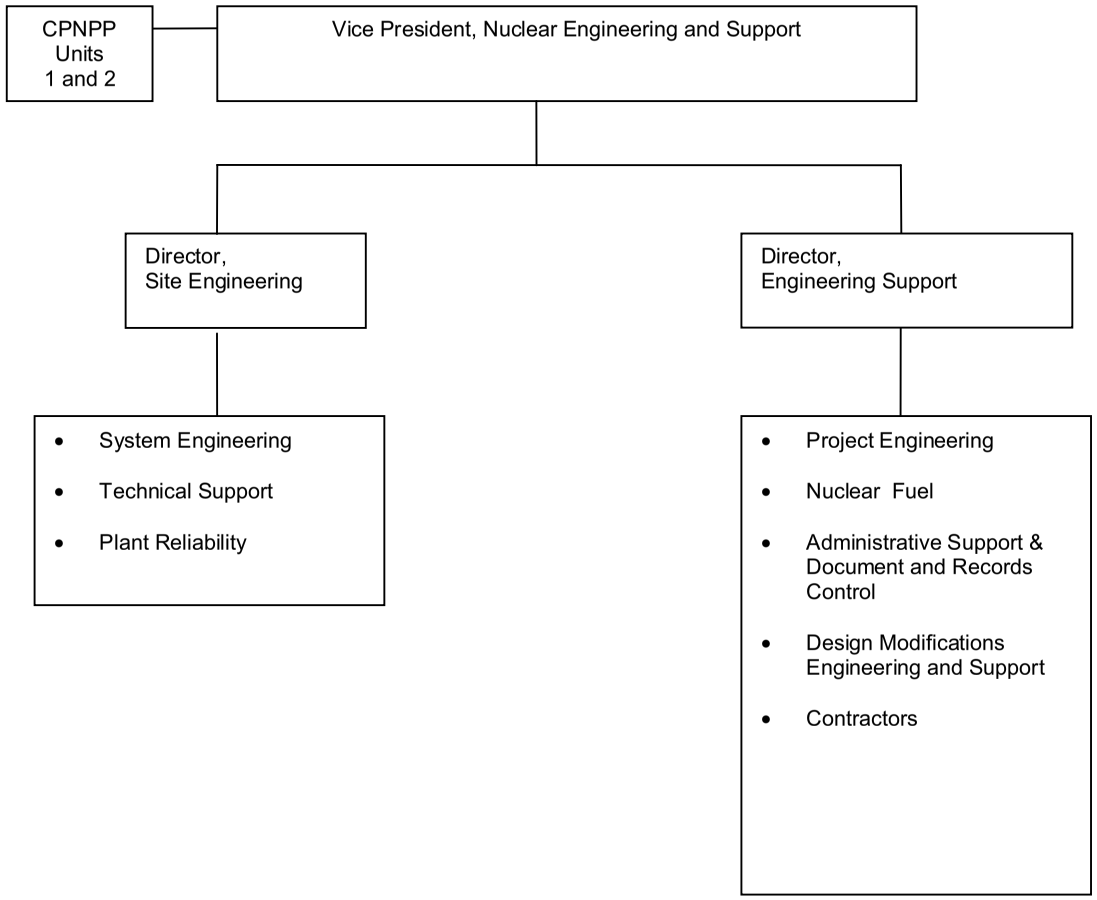
CP COL 13.1(1)
CP COL 13.1(4)
CP COL 13.1(6)

Figure 13.1-202 Nuclear Generation Organization*



CP COL 13.1(1)
CP COL 13.1(4)
CP COL 13.1(6)

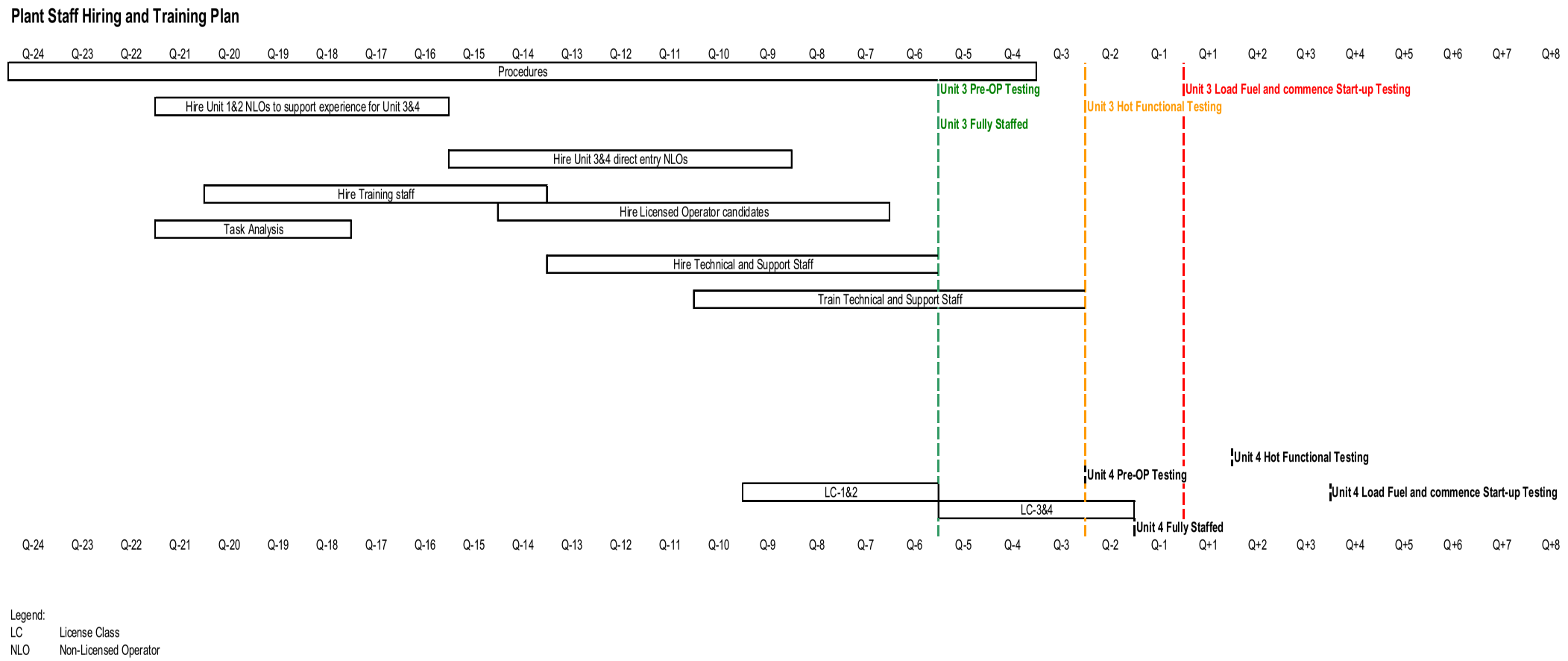
Figure 13.1-203 CPNPP Units 3 and 4 Site Organization*



* The position titles provide a functional description only and the actual titles may vary from those used herein.

CP COL 13.1(1)
CP COL 13.1(3)
CP COL 13.1(4)

Figure 13.1-204 CPNPP Units 3 and 4 Support Organization*



CP COL 13.2(1)
CP COL 13.2(2)
CP COL 13.2(3)
CP COL 13.2(4)
CP COL 13.2(5)

Figure 13.1-205 CPNPP Units 3 and 4 Plant Staff Hiring and Training Plan

13.2 TRAINING

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

STD COL 13.2(1)
STD COL 13.2(2)
STD COL 13.2(3)
STD COL 13.2(4)
STD COL 13.2(5)

Add the following text to the end of DCD Section 13.2.

NEI 06-13A, "Template for an Industry Training Program Description" Revision 2 which includes Appendix A – Cold License Training Plan (Reference 13.2-201), including all subsections, is incorporated by reference. NEI 06-13A provides a complete generic program description for use with COL applications. The document reflects guidance provided by the NRC and by Industry-NRC discussions on training-related issues. A main objective of this program is to assist in expediting NRC review and issuance of the combined license. Chapter 1 of NEI 06-13A states "The results of reviews of operating experience are incorporated into training and retraining programs in accordance with the provisions of TMI Action Item I.C.5, Appendix 1A."

CP COL 13.2(1)
CP COL 13.2(2)
CP COL 13.2(3)
CP COL 13.2(4)
CP COL 13.2(5)

CPNPP has partnered with local community leadership, educators, colleges, and other utilities in the development of a regional-based education alliance. Specifically, CPNPP is currently working with Texas A & M University, the University of North Texas, Hill College, and Texas State Technical Institute to provide the educational background needed for a successful career in the nuclear energy industry. All of the course work required for an Associate or Bachelors degree in a technical field is offered on the CPNPP site by the University of North Texas and Hill College.

In addition, CPNPP currently has a thriving Industrial Technology Program that selects promising students from local high schools and colleges and provides those candidates hands-on nuclear experience while they are concurrently enrolled in college level curriculum leading to an Associate or Bachelors degree in a Technical Field. Upon graduation selected candidates are offered employment at CPNPP.

The long-term vision is to develop a workforce pipeline that would support attrition challenges and operational expansion strategies.

13.2.1.1 Program Description

Replace the content of DCD Subsection 13.2.1.1 with the following.

The content of this subsection is discussed above. In addition, the training program will be accredited prior to fuel load or within the time frame established by Institute of Nuclear Power Operations (INPO) and the operating company

senior management using the guidance provided by ACAD 08-001 (Ref. 13.2-202), "The Process for Initial Accreditation of Training in the Nuclear Power Industry." FSAR Figure 13.1-205 depicts anticipated milestone dates to support initial fuel load.

13.2.1.1.1 Licensed Plant Staff Training Program

Replace the content of DCD Subsection 13.2.1.1.1 with the following.

The content of this subsection is discussed above.

13.2.1.1.2 Non-Licensed Plant Staff Training Program (to be verified during construction)

Replace the content of DCD Subsection 13.2.1.1.2 with the following.

The content of this subsection is discussed above.

Add the following Subsection after DCD Subsection 13.2.1.1.2.

13.2.1.1.3 Hazards Awareness Training

Workers and operators will receive initial and annual refresher training for protection from chemical hazards and confined space entry in accordance with 29 CFR 1910. As part of this training, operators receive training for response to toxic gas release events.

13.2.1.2 Coordination with Preoperational Tests and Fuel Loading

Replace the content of DCD Subsection 13.2.1.2 with the following.

The content of this subsection is discussed above.

13.2.2 Applicable Nuclear Regulatory Commission Documents

Replace the content of DCD Subsection 13.2.2 with the following.

The content of this subsection is discussed above.

13.2.3 Combined License Information

Replace the content of DCD Subsection 13.2.3 with the following.

STD COL 13.2(1)
CP COL 13.2(1)

13.2(1) *Training program*
This COL item is addressed in Section 13.2 and Figure 13.1-205.

STD COL 13.2(2)
CP COL 13.2(2)

13.2(2) *Training programs for reactor operators.*
This COL item is addressed in Section 13.2 and Figure 13.1-205.

STD COL 13.2(3)
CP COL 13.2(3)

13.2(3) *Training programs for non-licensed plant staff*
This COL item is addressed in Section 13.2 and Figure 13.1-205.

STD COL 13.2(4)
CP COL 13.2(4)

13.2(4) *Training programs, including the schedule of each part of the training program for each functional group of employees in the organization*
This COL item is addressed in Section 13.2 and Figure 13.1-205.

STD COL 13.2(5)
CP COL 13.2(5)

13.2(5) *Extent to which portions of applicable NRC guidance is used in the facility training program or the justification of exceptions*
This COL item is addressed in Section 13.2 and Figure 13.1-205.

13.2.4 References

Add the following reference after the last reference in DCD Subsection 13.2.4.

13.2-201 *Template for an Industry Training Program Description*, NEI 06-13A, Revision 2, Nuclear Energy Institute, March 2009.

13.2-202 ACAD-08-001, “The Process for Initial Accreditation of Training in the Nuclear Power Industry” January 2008.

13.3 EMERGENCY PLANNING

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

STD COL 13.3(1) Replace the fourth sentence of the first paragraph in the DCD Subsection 13.3 with the following.

Interfaces of design features with site specific designs and site parameters are addressed in Combined License Application Part 5 “Emergency Plan”.

STD COL 13.3(7) Add the following paragraph to the end of DCD Section 13.3.

The description of the operation support center is provided in Combined License Application Part 5 “Emergency Plan”.

13.3.1 Combined License Application and Emergency Plan Content

CP COL 13.3(2) Replace the first and second sentence of the first paragraph in the DCD Subsection 13.3.1 with the following.

The Emergency Plan for the CPNPP Units 3 and 4 is provided in Combined License Application Part 5 “Emergency Plan”. The Emergency Plan is developed in accordance with 10 CFR 50.47 Appendix E and 10 CFR 52.

STD COL 13.3(3)
STD COL 13.3(4) Replace the second paragraph in the DCD Subsection 13.3.1 with the following.

Emergency classifications and action levels, and the security-related aspects of emergency planning are addressed in Combined License Application Part 5 “Emergency Plan”.

13.3.2 Emergency Plan Considerations for Multi-Unit Site

CP COL 13.3(5) Replace the sentence in the DCD Subsection 13.3.2 with the following.

The interface between the Emergency Plan for CPNPP Units 3 and 4 and the Emergency Plan for CPNPP Units 1 and 2 is addressed in the CPNPP Units 3 and 4 Combined License Application Part 5 “Emergency Plan”.

13.3.3 Emergency Planning Inspections, Tests, Analyses, and Acceptance Criteria

CP COL 13.3(6) Replace the sentence in the DCD Subsection 13.3.3 with the following.

Emergency planning inspections, tests, analyses, and acceptance criteria are addressed in the CPNPP Units 3 and 4 Combined License Application Part 5 “Emergency Plan” and are provided in the CPNPP Units 3 and 4 Combined License Application Part 10 “ITAAC and ITAAC Closure”.

13.3.4 Combined License Information

Replace the content of DCD Subsection 13.3.4 with the following.

STD COL 13.3(1) ***13.3(1)*** *Interfaces of design features with site specific designs and site parameters*
This COL item is addressed in Section 13.3.

CP COL 13.3(2) ***13.3(2)*** *Comprehensive emergency plan*
This COL item is addressed in Subsection 13.3.1.

STD COL 13.3(3) ***13.3(3)*** *Emergency classification and action level scheme*
This COL item is addressed in Subsection 13.3.1.

STD COL 13.3(4) ***13.3(4)*** *Security-related aspects of emergency planning*
This COL item is addressed in Subsection 13.3.1.

CP COL 13.3(5) ***13.3(5)*** *Multi-unit site interface plan depending on the location of the new reactor on, or near, an operating reactor site with an existing emergency plan*
This COL item is addressed in Subsection 13.3.2.

CP COL 13.3(6) ***13.3(6)*** *Emergency planning inspections, tests, analyses, and acceptance criteria*
This COL item is addressed in Subsection 13.3.3.

STD COL 13.3(7) ***13.3(7)*** *Operation support center*
This COL item is addressed in Section 13.3.

13.4 OPERATIONAL PROGRAM IMPLEMENTATION

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

STD COL 13.4(1) Replace the sentence in the DCD Section 13.4 with the following.

Table 13.4-201 identifies the required Operational Programs including the associated FSAR Sections and committed Milestones for implementation. Each operational programs is "fully described" in the associated FSAR Sections.

13.4.1 Combined License Information

Replace the content of DCD Subsection 13.4.1 with the following.

STD COL 13.4(1)
CP COL 13.4(1) ***13.4(1)*** *Operational programs as defined in SECY-05-0197 (Ref. 13.4-1)*
This COL item is addressed in Section 13.4, including Table 13.4-201.

CP COL 13.4(2) ***13.4(2)*** *Leakage monitoring program and prevention program as defined in NUREG-0737 Item III.D.1.1 (Ref. 13.4-2)*
This COL item is addressed in Table 13.4-201.

CP COL 13.4(1)

Table 13.4-201 (Sheet 1 of 11)

Operational Programs Required by NRC Regulation and Program Implementation

Item	Program Title	Program Source (Required By)	FSAR (SRP) Section	Implementation	
				Milestone	Requirement
1.	Inservice Inspection Program	10 CFR 50.55a(g)	5.2.4 6.1 6.6	Prior to Commercial service	10 CFR 50.55a(g) ASME Code Section XI IWA 2430(b)
	• Primary-to-Secondary Leakage Monitoring Program	10 CFR 50.55a(b)(2)(iii)	5.4.2.2	After steam generator on-line on nuclear heat	License Condition
CP COL 13.4(2)	• Highly Radioactive Fluid Systems Outside Containment Monitoring Program	10 CFR 50.34.f(2)(xxvi)	Part 4 Technical Specification Subsection 5.5.2	After generator on-line on nuclear heat	License Condition
	• Steam Generator Program	10 CFR 50.55a(g)	5.4.2.2	Prior to Commercial service	10 CFR 50.55a(g) ASME Code Section XI IWA 2430(b) Technical Specification 5.5.9

CP COL 13.4(1)

Table 13.4-201 (Sheet 2 of 11)

Operational Programs Required by NRC Regulation and Program Implementation

CP COL 13.4(2)

Item	Program Title	Program Source (Required By)	FSAR (SRP) Section	Implementation	
				Milestone	Requirement
2.	Inservice Testing Program (1)	10 CFR 50.55a(f) 10 CFR 50, Appendix A	3.9.6 5.2.4	After generator on-line on nuclear heat (1)	10 CFR 50.55a(f) ASME OM Code
	• Primary-to-Secondary Leakage Monitoring Program	10 CFR 50.55a(b)(2)(iii)	5.4.2.2	After generator on-line on nuclear heat(1)	License Condition
	• Highly Radioactive Fluid Systems Outside Containment Monitoring Program	10 CFR 50.34.f(2)(xxvi)	Part 4 Technical Specification Subsection 5.5.2	After generator on-line on nuclear heat(1)	License Condition
3.	Environmental Qualification Program	10 CFR 50.49(a)	3.11	Prior to Initial fuel load	License Condition
4.	Preservice Inspection Program	10 CFR 50.55a(g)	5.2.4 6.6	Completion prior to initial plant start-up	10 CFR 50.55a(g) ASME Code Section XI IWB-2200(a)
	• Steam Generator Tube Preservice Inspection	10 CFR 50.55a(g)	5.4.2.2	Prior to initial entry into Mode 4, Hot Shutdown	10 CFR 50.55a(g) ASME Code Section XI IWB-2200(c)
5.	Reactor Vessel Material Surveillance Program	10 CFR 50.60 10 CFR 50, Appendix H	5.3.1	Prior to initial criticality	License Condition

CP COL 13.4(1)

Table 13.4-201 (Sheet 3 of 11)

Operational Programs Required by NRC Regulation and Program Implementation

CP COL 13.4(2)

Item	Program Title	Program Source (Required By)	FSAR (SRP) Section	Implementation	
				Milestone	Requirement
6.	Preservice Testing Program	10 CFR 50.55a(f)	3.9.6 5.2.4	Prior to initial fuel load	License Condition
	• Highly Radioactive Fluid Systems Outside Containment Monitoring Program	10 CFR 50.34.f(2)(xxvi)	Part 4 Technical Specification Subsection 5.5.2	After generator on-line on nuclear heat	License Condition
7.	Containment Leakage Rate Testing Program	10 CFR 50.54(o) 10 CFR 50, Appendix A (GDC 32) 10 CFR 50, Appendix J 10 CFR 52.47(a)(1)	6.2.6	Prior to Initial fuel load	10 CFR 50, Appendix J Option A-Section III Option B-Section III.A

CP COL 13.4(1)

Table 13.4-201 (Sheet 4 of 11)

Operational Programs Required by NRC Regulation and Program Implementation

Item	Program Title	Program Source (Required By)	FSAR (SRP) Section	Implementation	
				Milestone	Requirement
8.	Fire Protection Program	10 CFR 70.22	9.5.1	The Construction Fire Protection Program will be in place prior to initial receipt of byproduct, source, or special nuclear materials (excluding Exempt Quantities as described in 10 CFR 30.18).	10 CFR 70.22(a)
		10 CFR 50.48		Prior to fuel receipt for elements of the Fire Protection Program necessary to support receipt and storage of fuel on-site. Prior to initial fuel load for elements or the Fire Protection Program necessary to support fuel load and plant operation.	License Condition

CP COL 13.4(1)

Table 13.4-201 (Sheet 5 of 11)

Operational Programs Required by NRC Regulation and Program Implementation

Item	Program Title	Program Source (Required By)	FSAR (SRP) Section	Implementation	
				Milestone	Requirement
9.	Process and Effluent Monitoring and Sampling Program				
	• Radiological Effluent Technical Specifications/ Standard Radiological Effluent Controls	10 CFR 20.1301 and 20.1302 10 CFR 50.34a 10 CFR 50.36a 10 CFR 50, Appendix I, section II and IV	11.5	Receipt of radioactive material on-site	License Condition
	• Offsite Dose Calculation manual	Same as above	11.5	Receipt of radioactive material on-site	License Condition
	• Radiological Environmental Monitoring Program	Same as above	11.5	Receipt of radioactive material on-site	License Condition
	• Process Control Program	Same as above	11.4	Receipt of radioactive material on-site	License Condition

CP COL 13.4(1)

Table 13.4-201 (Sheet 6 of 11)

Operational Programs Required by NRC Regulation and Program Implementation

Item	Program Title	Program Source (Required By)	FSAR (SRP) Section	Implementation	
				Milestone	Requirement
10.	Radiation Protection Program • Radioactive Source Control (assignment of RP Supervisor) • Assignment of RP Supervisor • Assignment of Nuclear RP Manager	10 CFR 20.1101 10 CFR 20.1801 10 CFR 20.1802 10 CFR 20.1906	12.5	Prior to initial receipt of by-product, source, or special nuclear materials (excluding Exempt Quantities as described in 10 CFR 30.18) for those elements of the Radiation Protection (RP) Program necessary to support such receipt Prior to fuel receipt for those elements of the RP Program necessary to support receipt and storage of fuel on-site Prior to fuel load for those elements of the RP Program necessary to support fuel load and plant operation Prior to first shipment of radioactive waste for those elements of the RP Program necessary to support shipment of radioactive waste	License Condition
	• Ground Water Monitoring Program	10 CFR 20.1406	12.5	Prior to fuel load	License Condition
11.	Non licensed Plant Staff Training Program	10 CFR 50.120 10 CFR 52.78	13.2.2	18 months prior to scheduled fuel load	10 CFR 50.120(b)

CP COL 13.4(1)

Table 13.4-201 (Sheet 7 of 11)

Operational Programs Required by NRC Regulation and Program Implementation

STD COL 13.6(1)

Item	Program Title	Program Source (Required By)	FSAR (SRP) Section	Implementation	
				Milestone	Requirement
	For elements of Fire Protection Program, Security Program and Radiation Protection Program prior to full program implementation.	10 CFR 70.22		Prior to implementation of the program elements	10 CFR 70.22 (a)
12.	Reactor Operator Training Program	10 CFR 55.13 10 CFR 55.31 10 CFR 55.41 10 CFR 55.43 10 CFR 55.45	13.2.1	18 months prior to scheduled fuel load	License Condition
13.	Reactor Operator Requalification Program	10 CFR 50.34(b) 10 CFR 50.54(i) 10 CFR 55.59	13.2.1	Within 3 months after issuance of an operating license or the date the Commission makes the finding under 10 CFR 52.103(g)	10 CFR 50.54 (i-1)
14.	Emergency Planning	10 CFR 50.47 10 CFR 50, Appendix E	13.3	Full participation exercise conducted within 2 years of scheduled date for initial loading of fuel. Onsite exercise conducted within 1 year before the schedule date for initial loading of fuel.	10 CFR 50, Appendix E.IV.F.2a(ii) 10 CFR 50, Appendix E.IV.F.2a(ii)

CP COL 13.4(1)

Table 13.4-201 (Sheet 8 of 11)

Operational Programs Required by NRC Regulation and Program Implementation

STD COL 13.6(1)

Item	Program Title	Program Source (Required By)	FSAR (SRP) Section	Implementation	
				Milestone	Requirement
				Detailed implementing procedures for emergency planning submitted no less than within 180 days prior to scheduled date for initial loading of fuel.	10 CFR 50, Appendix E.V.
15.	Security Program	10 CFR 50.34(c)			
	• Controlled Access Area for SNM Physical Protection Program of new fuel prior to implementation of the Physical Security Program and Protected Area per 10 CFR 73.55.	10 CFR 73.1 10 CFR 73.67	13.6	Prior to initial receipt of special nuclear material (controlled access area)	License Condition
	• Cyber Security Program	10 CFR 73.54	13.6	Prior to receipt of fuel on-site in the protected area	License Condition
	• Physical Security Program	10 CFR 73.55 10 CFR 73.56 10 CFR 73.57 10 CFR 26	13.6	Prior to receipt of fuel on-site in the protected area	License Condition
	• Safeguards Contingency Program	10 CFR 50.34(d) 10 CFR 73, Appendix C	13.6	Prior to receipt of fuel on-site in the protected area	License Condition

CP COL 13.4(1)

Table 13.4-201 (Sheet 9 of 11)

Operational Programs Required by NRC Regulation and Program Implementation

Item	Program Title	Program Source (Required By)	FSAR (SRP) Section	Implementation	
				Milestone	Requirement
	• Training and Qualification Program	10 CFR 73, Appendix B	13.6	Prior to receipt of fuel on-site in the protected area	License Condition
16.	Quality Assurance Program Operation	10 CFR 50.54(a) 10 CFR 50, Appendix A (GDC 1) 10 CFR 50, Appendix B	17.5	30 days prior to scheduled date for the initial loading of fuel	10 CFR 50.54(a)(1)
17.	Maintenance Rule	10 CFR 50.65	17.6	Prior to fuel load authorization per 10 CFR 52.103(g)	10 CFR 50.65(a)(1)
18.	Motor-Operated Valve Testing	10 CFR 50.55a(b)(3)(ii)	3.9.6	Prior to Initial fuel load	License Condition
19.	Initial Test Program	10 CFR 50.34 10 CFR 52.79(a)(28)	14.2	Prior to the first construction test for the Construction Test Program Prior to the first preoperational test for the Preoperational Test Program Prior to Initial fuel loading for the Startup Test Program	License Condition
20.	Fitness for Duty Program	10 CFR 26			
	FFD Program for Construction (workers and first-line supervisors)	10 CFR 26.4(f)	13.7	Prior to onsite construction of safety-or security-related SSCs	10 CFR 26, Subpart K, or 10 CFR 26, Subparts A-H, N, and O
	FFD Program for Construction (management and oversight personnel)	10 CFR 26.4(e)	13.7	Prior to onsite construction of safety-or security-related SSCs	10 CFR 26, Subparts A-H, N, and O

CP COL 13.4(1)

Table 13.4-201 (Sheet 10 of 11)

Operational Programs Required by NRC Regulation and Program Implementation

Item	Program Title	Program Source (Required By)	FSAR (SRP) Section	Implementation	
				Milestone	Requirement
	FFD Program for Security Personnel	10 CFR 26.4(e)(1)	13.7	Prior to fuel assemblies being received on site	10 CFR 26,Subparts A-H, N, and O
		10 CFR 26.4(a)(5)		Prior to the earlier of: Licensee's receipt of fuel assemblies onsite or Establishment of a protected area or The 10 CFR 52.103(g) finding	10 CFR 26, Subparts A-H, N, and O, with Subpart I
	FFD Program for FFD Program Personnel	10 CFR 26.4(g)	13.7	Prior to initiating 10 CFR 26 construction activities	10 CFR 26, Subparts A, B, D-H, N, O, and possibly C
	FFD Program for persons required to physically report to the Technical Support Center (TSC) or Emergency Operations Facility (EOF)	10 CFR 26.4(c)	13.7	Prior to the conduct of the first full-participating emergency preparedness exercise under 10 CFR 50, App. E, Section F.2.a	10 CFR 26, Subparts A-H, N, and O, except for §§ 26.205-209
	FFD Program for Operation	10 CFR 26.4(a) and (b)	13.7	Prior to the earlier of: Licensee's receipt of fuel assemblies onsite or Establishment of a protected area or The 10 CFR 52.103(g) finding	10 CFR 26, Subparts A-H, N, and O, except for individuals listed in § 26.4(b), who are not subject to §§ 26.205-209
21.	Epoxy Coatings Program	10 CFR 20.1406, RG 1.54	6.1.2, 11.2, 11.4	Prior to plant start-up	10 CFR 20.1406 and RG 1.54

CP COL 13.4(1)

Table 13.4-201 (Sheet 11 of 11)

Operational Programs Required by NRC Regulation and Program Implementation

Item	Program Title	Program Source (Required By)	FSAR (SRP) Section	Implementation	
				Milestone	Requirement
22.	Special Nuclear Material Control and Accounting Program	10 CFR 74 Subpart B (§§ 74.11 - 74.19, excluding 74.17)	13.5.2.2	Prior to receipt of special nuclear material	License Condition

(1) Inservice Testing Program will be fully implemented by generator on line on nuclear heat. Appropriate portions of the program are implemented as necessary to support the system operability requirements of the Technical Specifications.

13.5 PLANT PROCEDURES

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

STD COL 13.5(1) Replace the sentences in the DCD Section 13.5 with the following.

Under the overall responsibility and direction of the Plant Manager, the plant staff is responsible for assuring the safe and efficient operation of the station. All activities that affect safety related structures, systems, and components (SSCs) will be conducted by detailed, written, and approved procedures and instructions. This section identifies the activities that must be conducted by procedures and instructions and provides an appropriate method to develop and approve these procedures and instructions.

Operation, Emergency Response, Maintenance, Test, Inspection, and Surveillance procedures will be evaluated by the HFE Program. Also, procedures provided to Operations and Maintenance personnel to maintain plant safety and respond to abnormal plant conditions will be evaluated by the HFE Program (See Subsection 18.1.1.3)

13.5.1 Administrative Procedures

STD COL 13.5(1) Replace the content of DCD Subsection 13.5.1 with the following.

The Plant Manager develops and implements written administrative procedures that assign the responsibilities and authorities of the plant staff. These administrative procedures also provide the control measures for the preparation, review, approval, revision, and use of all station procedures and instructions that govern quality related activities. Administrative procedures ensure that station procedures and instructions are reviewed by qualified personnel, approved by authorized personnel, and distributed to and used by the personnel performing the prescribed activity.

The administrative controls used during the operations phase, which are described in this section, are consistent with the provisions of RG 1.33.

13.5.1.1 Administrative Procedures General

Procedures address the following administrative categories:

Category A – Controls

- Procedure review and approval
- Equipment control
- Control of maintenance and modifications
- Fire protection
- Crane operation

- Temporary changes to procedures
- Temporary procedures
- Special orders of a transient or self-cancelling character

Category B - Specific Procedures

- Standing orders to shift personnel, including authority and responsibility of the shift supervisor, licensed senior reactor operator in the control room, control room operator, and shift technical advisor
- Assignment of shift personnel to duty stations and definition of "surveillance area"
- Shift relief and turnover
- Fitness for duty
- Control room access
- Limitation on work hours
- Feedback of design, construction, and applicable important industry and operating experience
- Shift supervisor administrative duties
- Verification of correct performance of operating activities

13.5.1.2 Preparation of Procedures

Preparation of plant procedures takes place in approximately the same period as the preparation of preoperational and initial startup test procedures. Administrative procedures that govern the assignment of responsibilities for preparation, review, and approval of other station procedures and instructions are initially prepared. Other administrative procedures are prepared, as necessary, to implement the operational phase of programs, such as security and visitor control, housekeeping, and document control and records management. Administrative procedures and operating procedures necessary for operator training and preparation for operator license examinations will be completed 18 months prior to fuel loading. All other procedures and instructions are prepared and approved prior to their use for performing the prescribed safety-related activity.

The QA program described in Chapter 17 addresses document control, record retention, adherence, assignment of responsibilities, approval, and change requirements for procedures. The station management position designated responsible for a given activity, as prescribed in the QA manual, is also responsible for the preparation of procedures and instructions for that activity. The actual preparation of procedures and instructions may be performed by other plant personnel or by outside contractors. The final responsibility lies with the designated responsible position.

The Plant Manager approves station administrative procedures. Security plan implementing procedures and emergency plan implementing procedures are approved in accordance with provisions of the security plan and the emergency plan, respectively. All procedures are reviewed by qualified personnel, and these reviews are documented. Quality-related procedures and instructions are reviewed by at least one individual other than the preparer and approved by an appropriate manager. This designation of the appropriate manager is stated in writing and approved by the Plant Manager.

Changes to approved quality-related procedures and instructions that clearly do not change the intent of the procedure and that require urgent implementation may be approved by two members of the nuclear operations staff, at least one of whom has been licensed as a SRO. The original approval authority shall approve these changes within 14 days of implementation.

Other changes to procedures and instructions are reviewed and approved in the same manner as a permanent revision to that document.

13.5.2 Operating and Maintenance Procedures

STD COL 13.5(3)
STD COL 13.5(4)
STD COL 13.5(5)
STD COL 13.5(6)

Replace the content of DCD Subsection 13.5.2 with the following.

Development of Computer Based Procedures (CBPs) will be performed in accordance with the regulations and guidance provided in NUREG's 0700, 0711, and 0899, and ISG-04 Digital Instrumentation and Controls, dated September 28, 2007. In addition, CBPs with backup Paper Based Procedures (PBPs) will be developed in accordance with Section 18.8.

PBPs will be available in the event of a CBP failure. The content and presentation of procedure information in the PBPs and CBPs will be consistent. Smooth transition between the CBPs and PBPs (and visa versa) will be facilitated by consistency in formatting. This will also facilitate training in use of the procedures. Upon transfer to PBPs, the user will have ready access to currently open procedures, location in the procedures, completed and not completed steps, and currently monitored steps. (See Section 18.8).

13.5.2.1 Operating and Emergency Operating Procedures

STD COL 13.5(3)
STD COL 13.5(4)
STD COL 13.5(5)
STD COL 13.5(6)

Replace the content of DCD Subsection 13.5.2.1 with the following.

Operating procedures for all anticipated conditions affecting reactor safety are written prior to initial fuel loading. These procedures are grouped into the following classifications:

- System Operating Procedures - These procedures include instructions for energizing, filling, venting, draining, starting up, shutting down, changingmodes of operation, returning to service following testing or

maintenance, and other instructions appropriate for operation of systems important to safety.

- General Plant Procedures - These procedures provide instructions for the integrated operation of the plant (e.g., startup, shutdown, power operation and load changing, process monitoring, fuel handling, maintenance, surveillance, and periodic testing).

- Abnormal Condition Procedures - These procedures specify operator actions for restoring an operating variable to its normal controlled value when it departs from its normal range, or restoring normal operating conditions following a transient. Such actions are invoked following an operator observation or an annunciator alarm indicating a condition that, if not corrected, could degenerate into a condition requiring action under an Emergency Operating Procedure.

- Emergency Operating Procedures (EOPs) – These procedures direct actions necessary for the operators to mitigate the consequences of transients and accidents that cause plant parameters to exceed reactor protection system or engineering safety feature actuation setpoints.

  The Procedure Generation Package (PGP) will be developed and provided to the NRC at least three months prior to commencing formal operator training on the EOPs. The PGP will include a detailed description of the process for developing the Plant-Specific Technical Guidelines (P-STGs) from the US-APWR generic technical guidelines, a plant-specific writer's guide that details the specific methods for preparing the EOPs based on the P-STGs, a description of the program for verfication and validation (V&V) of the EOPs and a brief description of the operator training program for the EOPs (See NUREG-0737, Supplement 1). The PGP development process also includes the identification of safety significant deviations from the generic technical guidelines (including the identification of additional equipment beyond that identified in the generic technical guidelines) and engineering evaluations or analyses as necessary to support the adequacy of each deviation. In accordance with the human factors program summarized in DCD Section 18.8, the PGP describes the process used to identify operator information and control requirements.

  The EOPs are symptom-based with clearly specified entry and exit conditions. Transitions between and within the normal operating, alarm response, and abnormal operating procedures and the EOPs are appropriately laid out, well defined, and easy to follow (See Section 18.8). The use of human factored, functionally oriented, EOPs will improve human reliability and the ability to mitigate the consequence of a broad range of initiating events and subsequent multiple failures or operator errors, without the need to diagnose specific events.

  The general objectives of the EOP V&V process are to ensure the EOPs:

- correctly reflect the generic technical guidelines
- reflect the procedure writer's guide
- are useable
- correctly refer to controls, equipment and indications
- provide language and level of information consistent with minimum staff qualifications and composition
- provide a high level of assurance they will effectively guide the operator in mitigating transients and accidents.

- Alarm Response Procedures – These procedures guide operator actions for responding to plant alarms.

13.5.2.2 Maintenance and Other Operating Procedures

STD COL 13.5(7) Replace the content of DCD Subsection 13.5.2.2 with the following.

The following maintenance and other operating procedures are classified as General Plant Procedures:

- Plant Radiation Protection Procedures - Detailed written and approved procedures and instructions are used to ensure that occupational radiation exposure is maintained ALARA. It is the responsibility of the Radiation and Industrial Safety Manager to prepare and maintain the plant radiation protection procedures and instructions. Careful administrative control of the use of these procedures and instructions ensures that a sound health physics philosophy becomes an integral part of station operation and maintenance.
- Emergency Preparedness Procedures - The Emergency Planning Manager is responsible for preparing and maintaining procedures that implement the protective measures outlined in Emergency Plan.
- Instrument Calibration and Test Procedures - The Director, Maintenance is responsible for preparing procedures and instructions for proper control and periodic calibration of plant measuring and test equipment to maintain accuracy within necessary limits and to confirm adequacy of calibration frequency. Specific procedures are prepared for surveillance tests performed on safety-related equipment and instrumentation. These procedures have provisions for assuring measurement accuracies are adequate to keep safety parameters within operational and safety limits. A master surveillance schedule reflecting the status of all planned in-plant surveillance testing is maintained. Control measures exist to assure appropriate documentation, reporting, and evaluation of test results.

- Chemical/Radiochemical Control Procedures - The preparation of detailed, written, and approved chemical and radiochemical procedures and instructions are the responsibility of the Chemistry Manager. These procedures and instructions ensure primary and secondary side chemical/radiochemical quality, protection of component integrity, and promotion of efficient plant operation.
- Radioactive Waste Management Procedures - It is the responsibility of the Radiation and Industrial Safety Manager to prepare procedures and instructions for the operation of radioactive liquid, solid, and gaseous waste systems and provide guidance for collection, storage, processing, and discharge of these materials. Radioactive waste management is incorporated into these procedures to support the effort to minimize radiation exposure and precisely control the release of radioactive material to the environment.
- Maintenance and Modification Procedures - Maintenance or modification that may affect the functioning of safety-related SSCs are performed in accordance with applicable codes, bases, standards, design requirements, material specifications, and inspection requirements. Maintenance of safety-related equipment is pre-planned and performed in accordance with written procedures, written instructions, or drawings appropriate to the circumstances. Skills normally possessed by qualified maintenance personnel may not require detailed step-by-step delineation in a written procedure. It is the responsibility of the Director, Maintenance, to implement a maintenance program for safety-related mechanical and electrical equipment and instruments and controls.
- Material Control Procedures - The Director, Oversight, and Nuclear Overview, is responsible for preparing procedures and instructions for the proper procurement, documentation, and control of safety-related materials and components necessary for plant maintenance and modification. The procedures will be sufficiently detailed to ensure that purchased materials and components associated with safety-related structures or systems are as follows:
  - Purchased to specifications and codes that ensure performance at least equivalent to the original equipment.
  - Produced or fabricated under quality control that ensures performance at least equivalent to that of the original equipment.
  - Properly documented to show compliance with applicable specifications, codes, and standards.
  - Properly inspected, identified, and stored to provide protection against damage or misuse.
  - Properly controlled to ensure the identifications, segregation, and disposal of non-conforming material.
- Plant Security Procedures - It is the responsibility of the Security Manager to prepare and maintain detailed, written, and approved procedures to

implement the security plan. These procedures supplement the physical barriers and other features designed to control access to the station and, as appropriate, to vital areas within the station. Information concerning specific design features and administrative provisions of the security plan is accorded limited distribution on a need-to-know basis.

- Procedures address periodic assessment of the Control Room Habitability System's material condition, configuration controls, safety analyses and operating and maintenance procedures in accordance with the guidance in RG 1.196.

- A material control and accounting system consisting of Special Nuclear Material (SNM) accounting procedures is utilized to delineate the requirements, responsibilities, and methods of SNM control from the time SNM is received until it is shipped from the plant. These procedures provide detailed steps for SNM shipping and receiving, inventory, accounting, and preparing records and reports. The SNM Material Control and Accounting (MC&A) Program description is submitted to the Nuclear Regulatory Commission as a separate licensing basis document in Part 11.

13.5.3 Combined License Information

Replace the content of DCD Subsection 13.5.3 with the following.

STD COL 13.5(1) ***13.5(1)*** *Administrative procedures*
This COL item is addressed in Subsection 13.5 through 13.5.1.2.

13.5(2) *Deleted from the DCD.*

STD COL 13.5(3) ***13.5(3)*** *Procedures performed by licensed operators in the control room*
This COL item is addressed in Subsection 13.5.2 and 13.5.2.1.

STD COL 13.5(4) ***13.5(4)*** *Different classifications of procedures*
This COL item is addressed in Subsection 13.5.2 and 13.5.2.1.

STD COL 13.5(5) ***13.5(5)*** *Program for developing operating procedures*
This COL item is addressed in Subsection 13.5.2 and 13.5.2.1.

STD COL 13.5(6) ***13.5(6)*** *Program for developing and implementing emergency operating procedures*
This COL item is addressed in Subsection 13.5.2 and 13.5.2.1.

STD COL 13.5(7) ***13.5(7)*** *Classifications of maintenance and other operating procedures*
This COL item is addressed in Subsection 13.5.2.2.

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13.6 SECURITY

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

STD COL 13.6(1) Replace the first paragraph in DCD Subsection 13.6 with the following:

The comprehensive physical security program is addressed in the Security Plan. The Security Plan consists of the physical security plan, training and qualification plan, the safeguards contingency plan. The Security Plan (provided in Combined License Application Part 8) and Cyber Security Plan are submitted to the NRC to fulfill the requirements of 10 CFR 52.79(a)(35) and 10 CFR 52.79(a)(36). The Security Plan and Cyber Security Plan meet the requirements contained in 10 CFR 26 and 10 CFR 73 and will be maintained in accordance with the requirements of 10 CFR 52.98. The Security Plan is categorized as security safeguards Information and is withheld from public disclosure pursuant to 10 CFR 73.21.

Special Nuclear Material (SNM) Physical Protection Program

The Special Nuclear Material (SNM) Physical Protection Program describes the 10 CFR Part 70 required protection program in effect for the period of time during which new fuel as SNM is received and stored in a controlled access area (CAA) in accordance with the requirements of 10 CFR 73.67.

CP COL 13.6(2) **13.6.1 Physical Security – Combined License**

Replace the content of DCD Subsection 13.6.1 with the following:

As stated above, the Security Plan and the Cyber Security Plan are submitted to the NRC to fulfill the requirements of 10 CFR 52.79(a)(35) and 10 CFR 52.79(a)(36). The site specific physical security features and capabilities that are beyond the scope of the certified standard plant design are described in the CPNPP Units 3 and 4 physical security plan (PSP) (Ref. 13.6-201), Appendix A of the High Assurance Evaluation Assessment (Ref. 13.6-7) and in Section 13.6.2 below.

CP COL 13.6(2) **13.6.2 US-APWR Physical Security**

Replace the second paragraph of DCD Subsection 13.6.2 with the following two paragraphs:

[ ] (SRI)

(SRI)

CP COL 13.6(2) **13.6.2.1 Barriers, Isolation Zone, and Controlled Access Points**

Replace the content of DCD Subsection 13.6.2.1 with the following:

(SRI)

[ ] (SRI)

13.6.2.2 Vital Areas and Vital Equipment

CP COL 13.6(3) Replace the last sentence of the first paragraph in DCD Subsection 13.6.2.2 with the following:

[ ] (SRI)

CP COL 13.6(4) Replace the last paragraph in DCD Subsection 13.6.2.2 with the following:

[ ] (SRI)

CP COL 13.6(2) ### 13.6.2.3 Alarm Systems and Detection Aids

Replace the second paragraph in DCD Subsection 13.6.2.3 with the following:

[ ] (SRI)

[ ] (SRI)

CP COL 13.6(2) **13.6.2.4 Security Lighting**

Replace the content of DCD Subsection 13.6.2.4 with the following:

[ ] (SRI)

CP COL 13.6(5) **13.6.2.5 Security Communication Systems**

Delete the last sentence of the first paragraph in DCD Subsection 13.6.2.5.

Replace the last sentence of the last paragraph in DCD Subsection 13.6.2.5 with the following:

[ ] (SRI)

CP COL 13.6(2) **13.6.2.6 Security Power**

Delete the last paragraph in DCD Subsection 13.6.2.6.

13.6.4 Combined License Information

Replace the content of DCD Subsection 13.6.4 with the following.

STD COL 13.6(1) ***13.6(1)*** *The plant overall security plan and implementation schedule*
This COL item is addressed in Section 13.6, Table 13.4-201 and Section 3 of Part 10.

CP COL 13.6(2) ***13.6(2)*** *Site specific security features and capabilities.*
This COL item is addressed in Section 13.6.1, 13.6.2.1, 13.6.2.3, 13.6.2.4 and 13.6.2.6.

CP COL 13.6(3) ***13.6(3)*** Identification of Vital Equipment by Subsequent COL Applicants.
To the extent applicable, this COL item is addressed in Section 13.6.2.2.

CP COL 13.6(4) ***13.6(4)*** *Provision of the secondary alarm station by single unit sites.*
To the extent applicable, this COL item is addressed in Section 13.6.2.2.

CP COL 13.6(5) ***13.6(5)*** *Communication capability with local law enforcement agencies.*
This COL item is addressed in Section 13.6.2.5.

13.6.5 References

Add the following reference after the last reference in DCD Subsection 13.6.5.

13.6-201 Comanche Peak Nuclear Power Plant - Units 3 and 4 Security Plan, Training and Qualification Plan, Safeguards Contigency Plan, Revision 1, 2009.

13.7 FITNESS FOR DUTY

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

STD COL 13.7(1) Replace the contents of DCD Section 13.7 with the following.

The Fitness for Duty (FFD) Program is implemented and maintained in multiple phases dependent on the activities, duties, or access afforded to certain individuals at the construction site. In general, two different FFD programs will be implemented: a construction FFD program and an operations FFD program. The construction and operation FFD programs are illustrated in Table 13.4-201.

The construction FFD program is consistent with NEI 06-06 (Reference 13.7-201). NEI-06-06 applies to persons constructing or directing the construction of safety- and security-related structures systems, or components performed onsite where the new reactor will be installed and operated. Management and oversight personnel, as further described in NEI 06-06, and security personnel prior to the receipt of special nuclear material in the form of fuel assemblies (with certain exceptions) will be subject to the operation FFD program that meets the requirements of 10 CFR Part 26, Subparts A through H, N and O. Following the receipt of special nuclear material onsite in the form of fuel assemblies, security personnel as described in 10 CFR 26.4(a)(5) will meet the requirements of the operations FFD program. The construction FFD program for those subject to Subpart K (as described by NEI 06-06 and 10 CFR Part 26) will be reviewed and revised as necessary should substantial revisions occur to either NEI 06-06 following NRC endorsement or the requirements of 10 CFR Part 26.

The operations FFD program is consistent with all subparts of 10 CFR Part 26, except Subpart K. There is no intention to deviate or take exception to the requirements of 10 CFR Part 26.

CP COL 13.7(1) The following site-specific information is provided:

- 10 CFR Part 26, Subpart F, Licensee Testing Facilities is not applicable because CPNPP does not have a Licensee Testing Facility.

- The existing Luminant FFD program (Reference 13.7-202) will be revised to include a section for Units 3 and 4. This new section will address the specific items identified in NEI 06-06, i.e., add definitions and references regarding Construction Site and Construction Workers, Excluded Workers, etc. During the construction phase for CPNPP Units 3 and 4, the unique aspects of construction FFD will be separated from the operations portion of the FFD program. One example is the construction site random testing pool, which will be separated from the random testing pool for the operating units (i.e., provided in a separate section within

the program) due to the differing requirements. CPNPP Units 3 and 4 will not have a laboratory certified by the Department of Health and Human Services (HHS) located on site, but fully intends to contract an HHS-certified laboratory located offsite to perform the FFD testing. As such, 10 CFR Part 26, Subpart F, "Licensee Testing Facilities," does not apply but Subpart G, "Laboratories Certified by the Department of Health and Human Services," is applicable to the laboratories used by CPNPP. It is anticipated that all of the processes for collection, review and record keeping for Units 3 and 4 will be consistent with the existing program for Units 1 and 2.

13.7.1 Combined License Information

Replace the content of DCD Subsection 13.7.1 with the following.

STD COL 13.7(1)
CP COL 13.7(1)

13.7(1) *Operating and construction plant fitness-for-duty programs*
This COL item is addressed in Section 13.7.

13.7.2 References

Add the following reference after the last reference in DCD Subsection 13.7.2.

13.7-201 Nuclear Energy Institute, (NEI), NEI-06-06, "Fitness for Duty Program Guidance for New Nuclear Power Plant Construction Sites," Revision 5, August 2009 (ML091730415).

13.7-202 Comanche Peak Nuclear Power Plant Procedure STA-910, "Fitness for Duty Program," Revision II, December 2009.

CP COL 13.1(1)

APPENDIX 13AA

DESIGN, CONSTRUCTION AND PRE-OPERATIONAL ACTIVITIES

APPENDIX 13AA DESIGN, CONSTRUCTION AND PRE-OPERATIONAL ACTIVITIES

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13AA.1 Design and Construction Activities

Mitsubishi Nuclear Energy Systems, Inc. (MNES) was selected to design, fabricate, deliver, and install the US-APWRs for CPNPP Units 3 and 4, and to provide technical direction for installation and startup of the reactors and related equipment. Subsection 1.4.2.4 provides information regarding MNES, and DCD Subsection 1.4.1 provides information regarding Mitsubishi Heavy Industries, Ltd. (MHI) past experience in the design, development, and manufacturing of nuclear power facilities. Operating experience from design, construction, and operation of earlier MHI pressurized-water reactors is applied in the design, construction, and operation of the US-APWR.

An engineering, procurement, and construction (EPC) contractor is responsible for construction of CPNPP Units 3 and 4, and for additional design engineering of selected site-specific portions of the plant. The EPC contractor is selected based on experience and proven technical capability in nuclear construction projects, and projects of similar scope and complexity. Other design and construction activities are contracted to qualified specialty suppliers. Implementation or delegation of design and construction responsibilities is described in the subsections below. Quality assurance aspects of these activities are described in Chapter 17.

The principal site engineering study activities accomplished towards the construction and operation of CPNPP Units 3 and 4 are:

- Meteorology - Information concerning local (site) meteorological parameters is developed and applied to assess the impact of the station on local meteorological conditions. Onsite meteorological measurements are obtained to produce data for atmospheric dispersion estimates for postulated accidental and expected routine airborne releases of effluents. Maintenance procedures are established for surveillance, calibration, and repair of instruments. Meteorological information is summarized in Section 2.3.

- Geology - Information relating to site and regional geotechnical conditions is developed and evaluated to determine if geologic conditions could present a challenge to safety of the plant. Items of interest include geologic structure, seismicity, geological history, and groundwater conditions. During construction, foundations within the power block area are mapped or visually inspected and photographed. Section 2.5 provides details of these investigations.

- Seismology - Information relating to seismological conditions is developed and evaluated to determine if the site location and area surrounding the site is appropriate from a safety standpoint for the construction and operation of a nuclear power plant. Information regarding tectonics, seismicity, correlation of seismicity with tectonic structure, characterization of seismic sources, and ground motion are assessed to

estimate the potential for strong earthquake ground motions or surface deformation at the site. Section 2.5 provides details of these investigations.

- Hydrology - Information relating to hydrological conditions at the plant site and the surrounding area is developed and evaluated. The study includes hydrologic characteristics of streams, lakes, shore regions, the regional and local groundwater environments, and existing or proposed water control structures that could influence flood control and plant safety. Section 2.4 includes more detailed information regarding this subject.

- Demography - Information relating to local and surrounding area population distribution is developed and evaluated. The data is used to determine if requirements are met for establishment of exclusion area, low population zone, and population center distance. Section 2.1 includes more detailed information regarding population in the vicinity of the plant site.

- Environmental Effects - Monitoring procedures are developed to enable the collection of data necessary to determine possible impact on the environment due to construction, startup, and operational activities and to establish a baseline from which to evaluate future environmental monitoring.

Design of Plant and Ancillary Systems - Responsibility for design and construction of systems outside the power block, such as circulating water, service water, switchyard, and secondary fire protection systems, is delegated to qualified contractors.

Review and Approval of Plant Design Features - Design engineering review and approval is performed in accordance with the MNES vendor QA program and FSAR Chapter 17. Verification is performed by competent individuals or groups other than those who performed the original design. Design issues arising during construction are addressed and implemented with notification and communication of changes to the manager in charge of engineering for review. As systems are tested and approved for turnover and operation, control of design is turned over to plant staff. The Director, NuBuild Project, along with functional managers and staff, assumes responsibility for review and approval of modifications, additions, or deletions in plant design features, as well as control of design documentation, in accordance with the operational QA program. Design control becomes the responsibility of the Director, NuBuild Project prior to loading fuel. During construction, startup, and operation, changes to human-system interfaces of control room design are approved using a human factors engineering evaluation addressed within Chapter 18.

Site Layout with Respect to Environmental Effects and Security Provisions - Site layout was considered when determining the expected environmental effects from construction, and in developing the Security Plan. The Physical Security Plan is designed with provisions that meet the applicable NRC regulations.

Development of Safety Analysis Reports - Information regarding the development of the FSAR is found in Section 1.1.

Review and Approval of Material and Component Specifications - Safety-related material and component specifications of SSCs designed by MNES are reviewed and approved in accordance with the MNES quality assurance program and Chapter 17. The MNES QA Manual ensures that MNES either reviews vendor designs, or ensures that the vendor performs design reviews in accordance with a QA program accepted by MNES.

Management and Review of Construction Activities - Overall management and responsibility for construction activities are assigned to the Director, NuBuild Project. The project manager of the EPC contractor is accountable to the Director, NuBuild Project for construction activities. Monitoring and review of construction activities by Luminant personnel is a continuous process at the CPNPP Units 3 and 4 site. Contractor performance is monitored to provide objective data to utility management in order to identify problems early and develop solutions. Monitoring of construction activities verifies that contractors are in compliance with contractual obligations for quality, schedule, and cost. Monitoring and review of construction activities is divided functionally across the various disciplines of the utility construction staff, and schedule progress and performance is tracked by system and major plant components/areas. After each system is turned over to plant staff, the construction organization relinquishes responsibility for that system. At that time they will be responsible for completion of construction activities as directed by plant staff and available to provide support for preoperational and start-up testing as necessary.

13AA.2 Pre-Operational Activities

Pre-operational activities are those activities required to transition the unit from the construction phase to the operational phase. These activities include turnover of systems from construction, preoperational testing, schedule management, procedure development for tests, fuel load, integrated startup testing, and turnover of systems to plant staff. Preoperational and startup testing are conducted by the Pre-operational and Startup Test organization, which, under the Startup Test Manager, reports directly to the Plant Manager. The functions and responsibilities of this organization, and the content of the pre-operational test program, are addressed and described in Section 14.2. Sufficient numbers of personnel are assigned to perform preoperational and startup testing safely and efficiently. Plant-specific training provides instruction on the administrative controls of the test program, and CPNPP Units 3 and 4 operations and technical staff are engaged to support the test program and review test results.