

PMNorthAnna3COLPEmails Resource

From: Wanda.K.Marshall@dom.com
Sent: Wednesday, March 18, 2009 2:26 PM
Cc: Thomas Kevern; NRC.North.Anna@dom.com; JDebiec@odec.com; rick.kingston@ge.com; smithpw@dteenergy.com; Andrea Johnson; Chandu Patel; Bruce Baval; Tom Tai; Dennis Galvin; Michael Eudy; Rocky Foster; Leslie Perkins; Mark Tonacci; Jerry Hale
Subject: Response to Request for Additional Information Letter No. 032 (FSAR Chapter 8, 11, 13 and 14)
Attachments: 031809 D ltr. Response to Request for Additional Information Letter No. 032 (FSAR Chapter 8, 11, 13 and 14).pdf
Importance: High

cc list:

Please see attached.

Wanda K. Marshall

Secretary to Project Director
COL PROJECT TEAM
Dominion Resources Services
5000 Dominion Blvd
Glen Allen, VA 23060

“Kindness is more than deeds. It is an attitude, an expression, a look, a touch. It is anything that lifts another person...”

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March 18, 2009

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Serial No. NA3-09-007R
Docket No. 52-017
COL/JPH

DOMINION VIRGINIA POWER
NORTH ANNA UNIT 3 COMBINED LICENSE APPLICATION
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION LETTER No. 032
(FSAR CHAPTER 8, 11, 13 and 14)

On February 18, 2009, the NRC requested additional information to support the review of certain portions of the North Anna Unit 3 Combined License Application (COLA). The responses to six of the seven RAIs in the NRC letter are provided in Enclosures 1 through 6:

- RAI Question 08.02-38 NA3 Unit Trip Impact on Switchyard
- RAI Question 11.04-4 Revise Description of SWMS
- RAI Question 11.05-5 Sampling of Batch Liquid Release Added
- RAI Question 13.01.02-13.01.03-5 Add Responsibility for Radiation Manager
- RAI Question 13.01.02-13.01.03-6 Add Responsibilities for RP Technician
- RAI Question 14.03.06-1 Add ITAAC for Off-site Power Interface

This information will be incorporated into a future submission of the North Anna Unit 3 COLA, as described in the Enclosures. The response to the seventh RAI, RAI Question 8.02-39, 230 kV Cable Degradation, will be provided by April 17, 2009.

Please contact Regina Borsh at (804) 273-2247 (regina.borsh@dom.com) if you have questions.

Very truly yours,

Eugene S. Grecheck

COMMONWEALTH OF VIRGINIA

COUNTY OF HENRICO

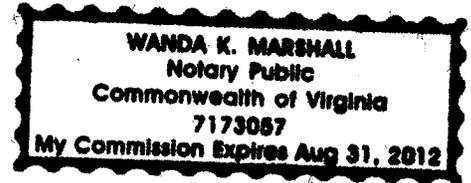
The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by Eugene S. Grecheck, who is Vice President-Nuclear Development of Virginia Electric and Power Company (Dominion Virginia Power). He has affirmed before me that he is duly authorized to execute and file the foregoing document on behalf of the Company, and that the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 18th day of March, 2009

My registration number is 7173057 and my

Commission expires: August 31, 2012

Wanda K. Marshall
Notary Public



Enclosures:

1. Response to RAI Letter 032, RAI Question 08.02-38
2. Response to RAI Letter 032, RAI Question 11.04-4
3. Response to RAI Letter 032, RAI Question 11.05-5
4. Response to RAI Letter 032, RAI Question 13.01.02-13.01.03-5
5. Response to RAI Letter 032, RAI Question 13.01.02-13.01.03-6
6. Response to RAI Letter 032, RAI Question 14.03.06-1

Commitments made by this letter:

1. The information provided in the RAI responses will be incorporated into a future submission of the North Anna Unit 3 COLA, as described in the Enclosures.
2. The response to RAI Question 08.02-39, 230 kV Cable Degradation, will be provided by April 17, 2009.

cc: U. S. Nuclear Regulatory Commission, Region II
T. A. Kevern, NRC
J. T. Reece, NRC
J. J. Debiec, ODEC
R. Kingston, GEH
P. W. Smith, DTE Energy

ENCLOSURE 1

Response to NRC RAI Letter 032

RAI Question 08.02-38

NRC RAI 08.02-38

In response to RAI 8.2-27, the applicant stated that the switchyard voltage limits were established for the operation of Units 1 and 2. Since Unit 3 will be interconnecting into the same switchyard, Unit 3 will be operating under the same voltage limits. The staff finds that the applicant did not address the effect of largest unit (NA 3) trip on the switchyard voltage and frequency limits. Per GDC-17 requirements, the staff requests that the applicant discuss the effect of largest unit (NA 3) trip on the switchyard voltage and frequency.

Dominion Response

The effect of a North Anna Unit 3 trip on the switchyard voltage and frequency limits is addressed as a part of the ITAAC process.

GEH created ITAAC supporting interface requirements between the onsite and offsite portions of the preferred power system in its response to DCD RAI 14.3-394 S01. ITAAC 9 in DCD Table 2.13.1-2 will specify the required voltage and frequency at the interface point necessary to operate the Isolation Power Center (IPC) buses during design basis operating modes.

Dominion has added new COLA ITAAC 2.4.7 for the offsite portion of the preferred power system in response to RAI 14.03.06-1 (see Enclosure 6 to this letter). In COLA ITAAC Table 2.4.7-1, Items 3 and 4 require verification that the offsite portion of the preferred power system has the capability to provide required voltage and frequency to meet the requirements determined as part of completing DCD ITAAC Table 2.13.1-2, Item 9.

Proposed COLA Revision

None.

ENCLOSURE 2

Response to NRC RAI Letter 032

RAI Question 11.04-4

NRC RAI 11.04-4

A review of FSAR, Rev. 1, Section 11.4.1 (top of p.11-8) indicates that the commitment on the development of certain types of operating procedures refers to the "mobile/portable SWMS." The ESBWR DCD, Rev. 5, Sections 11.4.1 and 11.4.2 no longer refer to the use of portable and mobile SWMS. Accordingly, the applicant is requested to revise the description of the type of SWMS in FSAR Section 11.4.1 and make it consistent with the ESBWR DCD, Rev. 5, Sections 11.4.1 and 11.4.2.

Dominion Response

The FSAR will be revised to make the description of the type of SWMS in FSAR Section 11.4.1 consistent with DCD Sections 11.4.1 and 11.4.2.

Proposed COLA Revision

FSAR Section 11.4.1 will be revised as shown in the attached markup.

Markup of North Anna COLA

The attached markup represents Dominion's good faith effort to show how the COLA will be revised in a future COLA submittal in response to the subject RAI. However, the same COLA content may be impacted by revisions to the ESBWR DCD, responses to other COLA RAIs, other COLA changes, plant design changes, editorial or typographical corrections, etc. As a result, the final COLA content that appears in a future submittal may be somewhat different than as presented herein.

exceeds the cost-benefit ratio of \$1000/person-thyroid-rem prescribed in 10 CFR 50, Appendix I, and is eliminated from further consideration.

1000 cfm Charcoal/HEPA Filtration System

As discussed above for 15,000 cfm HEPA filtration systems, the Unit 3 building exhaust system flow rates greatly exceed 472 l/sec (1000 cfm). Therefore, this augment is not effective for Unit 3 and is eliminated from further consideration.

Conclusion

None of the gaseous radwaste augments are cost-beneficial in reducing the annual thyroid dose from gaseous effluents for Unit 3.

11.4 Solid Waste Management System

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

11.4.1 SWMS Design Bases

Add the following after the second paragraph.

STD SUP 11.4-1

The LWMS offsite dose calculations, which are described in Section 12.2.2.4, include the offsite doses from the SWMS liquid effluents, as they are processed by the LWMS. Similarly, the GWMS offsite dose calculations, which are described in Section 12.2.2.2, include the offsite doses from the SWMS gaseous effluents, as they are inputs processed by the GWMS. The cost-benefit analyses in Section 11.2.1 for the LWMS and in Section 11.3.1 for the GWMS address the liquid and gaseous effluents that are generated from solid waste processing by the SWMS. Because these two cost-benefit analyses include the liquid and gaseous effluents from the SWMS, the augments considered for the LWMS and GWMS apply to the SWMS, which provides inputs to those systems. As described in Sections 11.2.1 and 11.3.1, no augments are needed for the LWMS and GWMS to comply with 10 CFR 50, Appendix I, Section II.D. Therefore, no augments are needed for the SWMS to comply with 10 CFR 50, Appendix I, Section II.D.

Add the following to the seventh bullet.

STD COL 11.4-4-A

The site does not utilize any temporary storage facilities to support plant operation.

Replace the fourth sentence of the fifth paragraph with the following:

STD COL 11.4-5-A

Section 12.6 discusses how the ESBWR design features and procedures for operation will minimize contamination of the facility and environment, facilitate decommissioning, and minimize the generation of radioactive wastes, in compliance with 10 CFR 20.1406. Section 13.5 describes the requirement for procedures for operation of the radioactive waste processing system. Operating procedures for ~~mobile/portable~~ SWMS Processing Subsystems required by Sections 12.4, 12.5, and 13.5 address requirements of 10 CFR 20.1406.

11.4.2.3 Detailed System Component Description

11.4.2.3.5 SWMS Processing Subsystem

Replace the last three sentences of the second paragraph with the following.

STD COL 11.4-1-A

Testing of the SWMS includes testing specified in Table 1 of RG 1.143. Implementation of the programs described in Section 12.1, for maintaining occupational dose ALARA, and Section 12.5, Radiation Protection Program, ensure that operation, maintenance, and testing of the SWMS satisfy the guidance contained in RG 8.8.

STD COL 11.4-2-A

Specific equipment connection configuration and plant sampling procedures are used to implement the guidance in Inspection and Enforcement (IE) Bulletin 80-10 (DCD Reference 11.4-19). The permanent and mobile/portable non-radioactive systems, which are connected to radioactive or potentially radioactive portions of SWMS, are protected from contamination with an arrangement of double check valves in each line. The configuration of each line is also equipped with a tell-tale connection, which permits periodic checks to confirm the integrity of the line and its check valve arrangement. Plant procedures describe sampling of non-radioactive systems that could potentially become contaminated by cross-connection with systems that contain radioactive material. In accordance with the guidance in RG 1.109, exposure pathways that may arise due to unique conditions are considered for incorporation into the plant-specific ODCM if they are likely to contribute significantly to the total dose.

STD COL 11.4-3-A

Waste classification and process controls are described in the PCP. NEI 07-10, "Generic FSAR Template Guidance for Process Control

ENCLOSURE 3

Response to NRC RAI Letter 032

RAI Question 11.05-5

NRC RAI 11.05-5

A review of FSAR, Rev. 1, Section 11.5.4.5 (p.11-10) indicates that the provisions for sampling liquid and gaseous waste stream is missing an ESBWR DCD table citation. The citation of ESBWR DCD Table 11.5-6 is appropriate for gaseous streams, but a corresponding ESBWR DCD table citation is missing for liquid streams, such as ESBWR DCD Table 11.5-7. Accordingly, the applicant is requested to revise the applicable references in FSAR, Rev. 1, Section 11.5.4.5 describing liquid and gaseous sampling provisions and make it consistent with ESBWR DCD, Rev. 5 tables.

Dominion Response

FSAR Section 11.5.4.5 references provisions for sampling liquid and gaseous waste streams that will be included in the Offsite Dose Calculation Manual (ODCM). For liquid waste streams, FSAR Section 11.5.4.5 references FSAR Table 11.5-201, *Provisions for Sampling Liquid Streams*, which replaces DCD Table 11.5-5, *Provisions for Sampling Liquid Streams*. DCD Table 11.5-7, *Radiological Analysis Summary of Liquid Effluent Samples*, addresses analysis to be performed for batch liquid releases, and will be added to FSAR Section 11.5.4.5.

Proposed COLA Revision

FSAR Section 11.5.4.5 will be revised as shown in the attached markup.

Markup of North Anna COLA

The attached markup represents Dominion's good faith effort to show how the COLA will be revised in a future COLA submittal in response to the subject RAI. However, the same COLA content may be impacted by revisions to the ESBWR DCD, responses to other COLA RAIs, other COLA changes, plant design changes, editorial or typographical corrections, etc. As a result, the final COLA content that appears in a future submittal may be somewhat different than as presented herein.

11.5.4.5 Offsite Dose Calculation Manual

Replace this section with the following.

STD COL 11.5-2-A

The methodology and parameters used for calculation of offsite dose and monitoring are described in the ODCM. NEI 07-09, Generic FSAR Template Guidance for Offsite Dose Calculation Manual (ODCM) Program Description, which is under review by the NRC, is incorporated by reference. (Reference 11.5-201) The milestone for development and implementation of the ODCM is addressed in Section 13.4. The provisions for sampling liquid and gaseous waste streams identified in Table 11.5-201 and DCD Table 11.5-6, and the provisions for batch liquid releases identified in DCD Table 11.5-7, will be included in the ODCM.

11.5.4.6 Process and Effluent Monitoring Program

Replace this section with the following.

STD COL 11.5-3-A

The program for process and effluent monitoring and sampling is described in the ODCM. Refer to Section 11.5.4.5 for a discussion regarding ODCM development and implementation.

11.5.4.7 Sensitivity or Subsystem Lower Limit of Detection

Replace this section with the following.

STD COL 11.5-1-A

The ODCM describes the methodology for deriving the lower limit of detection for each effluent monitor. Refer to Section 11.5.4.5 for a discussion regarding ODCM development and implementation. The estimated sensitivities (i.e., the dynamic detection ranges) of process radiation monitors are described in DCD Tables 11.5-2 and 11.5-4. The bases for these values are provided in DCD Table 11.5-9. These ranges are adjusted according to unique plant configurations and radiation background in accordance with written procedures. The processes described in these procedures are consistent with the bases defined in DCD Table 11.5-9. If changes to the values in DCD Tables 11.5-2 or 11.5-4 are necessary, the FSAR is updated to reflect these new values.

ENCLOSURE 4

Response to NRC RAI Letter 032

RAI Question 13.01.02-13.01.03-5

NRC RAI 13.01.02-13.01.03-5

A review of FSAR, Rev. 1, Section 13.1.2.1.1.8 indicates that the listing of responsibilities for the Manager of Radiation Protection and Chemistry is incomplete. The 7th item in the listing should be revised to include programs for managing radioactive liquid and gaseous effluent releases and associated offsite doses, in addition to radioactive wastes. The applicant is requested to revise the responsibilities of the Manager in demonstrating compliance with Part 20.1301 and Appendix I to Part 50.

Dominion Response

FSAR Section 13.1.2.1.1.8 will be revised to include an additional responsibility for the Manager of Radiation Protection and Chemistry regarding the management of programs addressing radioactive liquid and gaseous effluent releases and associated offsite doses.

Proposed COLA Revision

FSAR Section 13.1.2.1.1.8 will be revised as shown in the attached markup.

Markup of North Anna COLA

The attached markup represents Dominion's good faith effort to show how the COLA will be revised in a future COLA submittal in response to the subject RAI. However, the same COLA content may be impacted by revisions to the ESBWR DCD, responses to other COLA RAIs, other COLA changes, plant design changes, editorial or typographical corrections, etc. As a result, the final COLA content that appears in a future submittal may be somewhat different than as presented herein.

13.1.2.1.1.8 **Manager of Radiation Protection and Chemistry**

The manager radiation protection and chemistry has the direct responsibility for providing adequate protection of the health and safety of personnel working at the plant and members of the public during activities covered within the scope and extent of the license. This manager's radiation protection responsibilities are consistent with the guidance in RG 8.8 and RG 8.10. They include:

- Managing the radiation protection organization
- Establishing, implementing, and enforcing the radiation protection program
- Providing radiation protection input to facility design and work planning
- Tracking and analyzing trends in radiation work performance and taking necessary actions to correct adverse trends
- Supporting the plant emergency preparedness program and assigning emergency duties and responsibilities within the radiation protection organization
- Delegating authority to appropriate radiation protection staff to stop work or order an area evacuated (in accordance with approved procedures) when, in his or her judgment, the radiation conditions warrant such an action and such actions are consistent with plant safety
- Managing the radioactive waste programs
- Managing programs that address radioactive liquid and gaseous effluent releases and associated offsite doses

The manager radiation protection and chemistry reports to the director of safety and licensing and is assisted by the supervisors in charge of radiation protection and the functional manager in charge of chemistry.

13.1.2.1.1.9 **Supervisors in Charge of Radiation Protection**

The supervisors in charge of radiation protection are responsible for carrying out the day-to-day operations and programs of the radiation protection department as listed in Section 13.1.1.2.3, to promote safe and efficient plant operation.

Supervisors in charge of radiation protection report to the manager of radiation protection and chemistry.

ENCLOSURE 5

Response to NRC RAI Letter 032

RAI Question 13.01.02-13.01.03-6

NRC RAI 13.01.02-13.01.03-6

A review of FSAR, Rev. 1, Section 13.1.2.1.1.10 indicates that the listing of responsibilities for Radiation Protection Technicians is incomplete. Specifically:

- a. The 4th item in the listing should be revised to include radioactive wastes destined for offsite processing, storage, and disposal.*
- b. A new item should be added to the listing in identifying responsibilities for managing radioactive liquid and gaseous effluent releases, and conducting radiological environmental monitoring in assessing offsite doses to members of the public.*
- c. The applicant is requested to revise the responsibilities of Technicians in demonstrating compliance with Part 20.1301 and Appendix I to Part 50.*

Dominion Response

FSAR Section 13.1.2.1.1.10 will be revised to include additional responsibilities for Radiation Protection Technicians that address:

- Control over radioactive wastes destined for offsite processing, storage, and disposal
- Management of radioactive liquid and gaseous effluent releases
- Conduct of radiological environmental monitoring in assessing offsite doses to members of the public

Proposed COLA Revision

FSAR Section 13.1.2.1.1.10 will be revised as shown in the attached markup.

Markup of North Anna COLA

The attached markup represents Dominion's good faith effort to show how the COLA will be revised in a future COLA submittal in response to the subject RAI. However, the same COLA content may be impacted by revisions to the ESBWR DCD, responses to other COLA RAIs, other COLA changes, plant design changes, editorial or typographical corrections, etc. As a result, the final COLA content that appears in a future submittal may be somewhat different than as presented herein.

13.1.2.1.1.10 Radiation Protection Technicians

Radiation protection technicians (RPTs) directly carry out responsibilities defined in the radiation protection program and procedures. In accordance with Technical Specifications, an RPT is on site whenever there is fuel in the vessel.

The following are some of the duties and responsibilities of the RPTs:

- In accordance with authority delegated by the manager in charge of radiation protection, stop work or order an area evacuated (in accordance with approved procedures) when, in his or her judgment, the radiation conditions warrant such an action and such actions are consistent with plant safety
- Provide coverage and monitor radiation conditions for jobs potentially involving significant radiation exposure
- Conduct surveys, assess radiation conditions, and establish radiation protection requirements for access to and work within restricted, radiation, high radiation, very high radiation, airborne radioactivity areas, and areas containing radioactive materials
- Provide control over the receipt, storage, movement, use, and shipment of licensed radioactive materials, including radioactive wastes destined for offsite processing, storage, and disposal
- Review work packages, proposed design modifications, and operations and maintenance procedures to facilitate integration of adequate radiation protection controls and dose-reduction measures
- Review and oversee implementation of plans for the use of process or other engineering controls to limit the concentrations of radioactive materials in the air
- Provide personnel monitoring and bioassay services
- Maintain, prescribe, and oversee the use of respiratory protection equipment
- Perform assigned emergency response duties
- Manage radioactive liquid and gaseous effluent releases and conduct radiological environmental monitoring in assessing offsite doses to members of the public

ENCLOSURE 6

Response to NRC RAI Letter 032

RAI Question 14.03.06-1

NRC RAI 14.03.06-1

Section 4, "Interface material" of ESBWR DCD, Tier 1, rev.5 states that an applicant for a COL that reference the ESBWR certified design must provide design features or characteristics that comply with the interface requirements for the plant design and inspections, tests, analyses, and acceptance criteria (ITAAC) for the site specific portion of the facility design, in accordance with 10 CFR 52.79(c). However, no interface requirements were identified for the offsite power system in the certified design. In RAIs 14.3-394 and 14.3-394 S1, the NRC staff asked GEH to revise Section 4 of DCD, Tier 1 to include interface requirements for the offsite power system for demonstrating the capacity and capability of the offsite power system. In response to RAI 14.3-394 S1, GEH stated that a COL applicant referencing the ESBWR certified design shall develop an ITAAC to verify that the as-built offsite portion of the preferred power supply (PPS) from the transmission network to the interface with the onsite portions of the PPS satisfy the applicable provisions of GDC 17. Specifically, the ITAAC shall verify:

- a. At least two independent circuits supply electric power from the transmission network to the interface with the onsite portions of the PPS.
- b. Each offsite circuit interfacing with the onsite portions of the PPS is adequately rated to supply the load requirements during design basis operating modes.
- c. During steady state operation, the offsite portion of the PPS is capable of supplying voltage at the interface with the onsite portions of the PPS that will support operation of safety-related loads during design basis operating modes.
- d. During steady state operation, the offsite portion of the PPS is capable of supplying required frequency at the interface with the onsite portions of the PPS that will support operation of safety-related loads during design basis operating modes.
- e. The fault current contribution of the offsite portion of the PPS is compatible with the interrupting capability of the onsite fault current interrupting devices.

The applicant is requested to provide an ITAAC to verify that the as-built offsite portion of the PPS from the transmission network to the interface with the onsite portions of the PPS satisfy the applicable provisions of GDC 17.

Dominion Response

Dominion worked with General Electric-Hitachi during the development of the response to DCD RAI 14.3-394 S01, to develop site-specific ITAAC to address the offsite power system interface requirements. ESBWR DCD interface requirements described in the response to DCD RAI 14.3-394 S01 will be incorporated into DCD Rev 6. Following formal incorporation of these interface requirements for offsite power into the docketed ESBWR DCD, Part 10 of the COLA, Tier 1 ITAAC, will be revised to incorporate the corresponding site-specific ITAAC.

Proposed COLA Revision

Proposed COLA ITAAC 2.4.7, ITAAC for Offsite Power Systems, is provided in the attached markup.

Markup of North Anna COLA

The attached markup represents Dominion's good faith effort to show how the COLA will be revised in a future COLA submittal in response to the subject RAI. However, the same COLA content may be impacted by revisions to the ESBWR DCD, responses to other COLA RAIs, other COLA changes, plant design changes, editorial or typographical corrections, etc. As a result, the final COLA content that appears in a future submittal may be somewhat different than as presented herein.

2.4.3 Circulating Water System (portion outside the scope of the certified design)

No entry for this system.

2.4.4 Station Water System (including intake structure and servicing equipment)

No entry for this system.

2.4.5 Yard Fire Protection System (portions outside scope of certified design)

No entry for this system.

2.4.6 Potable & Sanitary Water Systems

No entry for this system.

2.4.7 Offsite Power Systems

Design Description

The offsite portion of the Preferred Power Supply (PPS) consists of at least two electrical circuits and associated equipment that are used to interconnect the offsite transmission system with the plant main generator and the onsite portions of the PPS. The PPS consists of the normal preferred and alternate preferred power sources and includes those portions of the offsite power system and the onsite power system required for power flow from the offsite transmission system to the safety-related Isolation Power Centers (IPC) incoming line breakers.

The interface between the normal preferred ESBWR certified plant onsite portion of the PPS and the site-specific offsite portion of the PPS is at the switchyard side terminals of the high side motor operated disconnects (MODs) of the UAT circuit breaker and main generator circuit breaker. The interface between the alternate preferred ESBWR certified plant onsite portion of the PPS and the site specific offsite portion of the PPS is at the switchyard side terminals of the RAT high side MODs.

The as-built offsite portion of the PPS, from the transmission network to the interface with the onsite portions of the PPS, satisfies the applicable provisions of GDC 17. Specifically, the offsite portion of the PPS shall meet the following interface requirements:

1. At least two independent circuits supply electric power from the transmission network to the interface with the onsite portions of the PPS.
2. Each offsite circuit interfacing with the onsite portions of the PPS is adequately rated to supply the load requirements during design basis operating modes (refer to DCD ITAAC 2.13.1-2, Item 9).
3. Under normal steady state operation of the transmission system, the offsite portion of the PPS is capable of supplying voltage at the interface with the onsite portions of the PPS that will support operation of safety-related loads during design basis operating modes.

-
4. Under normal steady state operation of the transmission system, the offsite portion of the PPS is capable of supplying required frequency at the interface with the onsite portions of the PPS that will support operation of safety-related loads during design basis operating modes.
 5. The fault current contribution of the offsite portion of the PPS is compatible with the interrupting capability of the onsite fault current interrupting devices.

Inspection, Test, Analyses and Acceptance Criteria

Table 2.4.7-1 provides a definition of the inspections, tests, and/or analyses, together with associated acceptance criteria for the Offsite Power Systems.

Table 2.4.7-1 ITAAC for Offsite Power Systems

<u>Design Commitment</u>	<u>Inspections, Tests, Analyses</u>	<u>Acceptance Criteria</u>
<u>1. Independent offsite power sources supply electric power from the transmission network to the interface with the onsite PPS.</u>		
<u>a. A minimum of two offsite power circuits are provided to the interface with the onsite PPS and are physically separate.</u>	<u>a. Inspections of the as-built offsite power supply transmission system will be performed.</u>	<u>a. A report exists and concludes the following inspection results:</u> <ul style="list-style-type: none"><u>i) At least two offsite transmission circuits are provided to the interface with the onsite PPS.</u><u>ii) The two offsite power circuits are physically separated by distance or physical barriers so as to minimize to the extent practical the likelihood of their simultaneous failure under design basis conditions.</u><u>iii) The two offsite power circuits do not have a common takeoff structure or use a common structure for support.</u>
<u>b. The two offsite power circuits interfacing with the onsite PPS are electrically independent.</u>	<u>b. Test of the as-built offsite power system will be conducted by providing a test signal in only one offsite power circuit at a time.</u>	<u>b. A report exists and concludes that a test signal exists in only the circuit under test.</u>
<u>c. The breaker control power, instrumentation, and control circuits for the two offsite power circuits interfacing with the onsite PPS are electrically independent.</u>	<u>c. Tests of the as-built offsite breaker control power, instrumentation, and control circuits will be conducted by providing a test signal in only one offsite power circuit at a time.</u>	<u>c. A report exists and concludes that a test signal exists in only the circuit under test.</u>

Table 2.4.7-1 ITAAC for Offsite Power Systems

<u>Design Commitment</u>	<u>Inspections, Tests, Analyses</u>	<u>Acceptance Criteria</u>
<p><u>2. At least two offsite power circuits interfacing with the onsite portions of the PPS are each adequately rated to supply necessary load requirements during design basis operating modes.</u></p>	<p><u>2. Analyses of the offsite power system will be performed to evaluate the as-built ratings of each offsite power circuit interfacing with the onsite portions of the PPS against the load requirements determined in DCD ITAAC 2.13.1-2, Item 9.</u></p>	<p><u>2. A report exists and concludes that at least two offsite power circuits from the transmission network up to the interface with the onsite portions of the PPS are each rated to supply the load requirements, during design basis operating modes, of their respective safety-related and nonsafety-related load groups.</u></p>
<p><u>3. Under normal steady state operation of the transmission system, the offsite portion of the PPS is capable of supplying required voltage to the interface with the onsite portions of the PPS that will support operation of safety-related loads during design basis operating modes.</u></p>	<p><u>3. Analyses of the as-built offsite portion of the PPS will be performed to evaluate the capability of each offsite power circuit to supply the voltage requirements at the interface with the onsite portion of the PPS determined in DCD ITAAC 2.13.1-2, Item 9.</u></p>	<p><u>3. A report exists and concludes that as-built offsite portion of the PPS, under normal steady state operation of the transmission system, is capable of supplying voltage at the interface with the onsite portions of the PPS that will support operation of safety-related loads during design basis operating modes.</u></p>
<p><u>4. Under normal steady state operation of the transmission system, the offsite portion of the PPS is capable of supplying required frequency to the interface with the onsite portions of the PPS that will support operation of safety-related loads during design basis operating modes.</u></p>	<p><u>4. Analyses of the as-built offsite portion of the PPS will be performed to evaluate the capability of each offsite power circuit to supply the frequency requirements at the interface with the onsite portions of the PPS determined in DCD ITAAC 2.13.1-2, Item 9.</u></p>	<p><u>4. A report exists and concludes that as-built offsite portion of the PPS, under normal steady state operation of the transmission system, is capable of supplying required frequency at the interface with the onsite portions of the PPS that will support operation of safety-related loads during design basis operating modes.</u></p>

Table 2.4.7-1 ITAAC for Offsite Power Systems

<u>Design Commitment</u>	<u>Inspections, Tests, Analyses</u>	<u>Acceptance Criteria</u>
<u>5. The fault current contribution of the offsite portion of the PPS is compatible with the interrupting capability of the onsite short circuit interrupting devices.</u>	<u>5. Analyses of the as-built offsite portion of the PPS will be performed to evaluate the fault current contribution of each offsite power circuit at the interface with the onsite portions of the PPS.</u>	<u>5. A report exists and concludes the short circuit contribution of the as-built offsite portion of the PPS at the interface with the onsite portions of the PPS is compatible with the interrupting capability of the onsite fault current interrupting devices as determined in DCD ITAAC 2.13.1-2, Item 10.</u>