

## 1.8 Interfaces with Standard Designs and Early Site Permits

This section addresses the requirements of 10 CFR 52.47(a)(25) and describes the standard plant scope interfaces for the U.S. EPR as they relate to design certification between the standard U.S. EPR plant and the COL applicant. The site-specific items that must be included by a COL applicant that references the U.S. EPR design certification are also provided in this section.

Interface requirements for systems, structures, and components (SSCs) that relate to specific mechanical, electrical, nuclear, or structural systems are covered in the appropriate chapter and identified by a specific COL information item to be addressed by the applicant. A COL applicant that references the U.S. EPR design certification will describe where the interface requirements are satisfied in the COL Final Safety Analysis Report (FSAR) to demonstrate compatibility with the U.S. EPR design. Interface requirements in Tier 1 of the U.S. EPR FSAR will demonstrate that conformance with the interface requirements can be verified with inspections, tests, or analyses and that the method for verification is included in the proposed inspections, tests, analyses, and acceptance criteria (ITAAC), per 10 CFR 52.47(a)(26).

The U.S. EPR design plant consists of the following structures and the SSCs therein:

- Reactor Building.
- Safeguard Buildings.
- Fuel Building.
- Nuclear Auxiliary Building.
- Radioactive Waste Processing Building.
- Emergency Power Generating Buildings.
- Ultimate Heat Sink (UHS) Structures.

Site-specific assumptions on which the U.S. EPR standard design is based are presented in Section 1.2.1 and Chapter 2. The physical boundary of the U.S. EPR is provided in the site plan in Section 1.2. A more detailed listing of the systems included in the U.S. EPR standard design is included in Section 3.2.

The representative conceptual designs for the portions of the plant that are not submitted for certification are described in the FSAR to satisfy the requirement of 10 CFR 52.47(a)(24). These conceptual designs are outside the scope of the U.S. EPR standard design, but conceptual design information is provided as discussed below.

- The Access Building, Turbine Building, and the Fire Protection Storage Tanks and Pump Building. Conceptual design information for these structures is included, delineated by double brackets ([[ ]]), in Section 1.2 and Section 3.7.

- The Switchgear Building. Conceptual design information for this structure is included, delineated by double brackets ([[ ]]), in Section 1.2, Section 8.3, and Section 8.4.
- The auxiliary power and generator transformer areas. Conceptual design information for these components is included, delineated by double brackets ([[ ]]), in Section 8.2.
- Buried conduit duct banks, pipe ducts, and piping. Conceptual design information for these components is included, delineated by double brackets ([[ ]]), in Section 3.8.
- The portions of the circulating water supply system outside the Turbine Building. Conceptual design information for this system is presented, delineated by double brackets ([[ ]]), in Section 10.4.5, based upon a cooling tower approach.
- Security structures, systems, and components outside the U.S. EPR buildings listed above. Conceptual design information for these structures, systems, and components is included, delineated by double brackets ([[ ]]), in Section 13.6.
- The offsite power transmission system including the main switchyard area. Conceptual design information for this system is included, delineated by double brackets ([[ ]]), in Section 8.2.
- The lightning protection and grounding system grid. Conceptual design information for this system is included, delineated by double brackets ([[ ]]), in Section 8.3.1.

Table 1.8-1—Summary of U.S. EPR Plant Interfaces with Remainder of Plant, identifies the interfaces between the U.S. EPR standard design and the remainder of the plant. The safety-related interface requirements in Table 1.8-1 have been selected based on a review of interfaces between the U.S. EPR standard design and other COL applicant or site-specific items. The interface types are classified as follows:

- U.S. EPR interface: Assumptions made for the U.S. EPR design that must be verified during the coordination effort between the designer of the U.S. EPR and the COL applicant.
- Site Parameters: Site-related parameters upon which the U.S. EPR design is based.

The classification of SSCs is further described in Section 3.2. The representative conceptual designs for the portions of the plant that are not submitted for certification are described in the FSAR to satisfy the requirement of 10 CFR 52.47(a)(24).

**1.8.1 COL Information Items**

Table 1.8-2—U.S. EPR Combined License Information Items, lists the COL information items and the section where the information is discussed. A COL applicant that references the U. S. EPR design certification will identify the FSAR section, or provide a list, that demonstrates how the COL information items have been

addressed. The applicable FSAR sections and Table 1.8-2 also identify when an activity required by a COL information item requires as-built information or other conditions that are not available when the COL application is submitted. These activities are completed prior to fuel load.

### **1.8.2 Departures**

A COL applicant that references the U. S. EPR design certification will provide a list of any departures from the FSAR in the COL FSAR.

**Table 1.8-1—Summary of U.S. EPR Plant Interfaces with  
Remainder of Plant  
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<b>Item No.</b>	<b>Interface</b>	<b>Interface Type</b>	<b>Section</b>
1-1	Switchgear Building	U.S. EPR Interface	1.2, 8.3, 8.4
1-2	Access Building	U.S. EPR Interface	1.2, 3.7
1-3	Turbine Building	U.S. EPR Interface	1.2, 3.7
1-4	Fire Protection Storage Tanks and Building	U.S. EPR Interface	1.2, 3.7
2-1	Envelope of U.S. EPR site related design	Site Parameter	2.0, Table 2.1-1
2-2	Consequences of potential hazards from nearby industrial, transportation and military facilities	Site Parameter	2.2
2-3	Site-specific $\chi/Q$ values based on site-specific meteorological data at the exclusion area boundary (EAB), low population zone (LPZ), and control room	Site Parameter	2.3
2-4	Site-specific seismic parameters	Site Parameter	2.5, 3.7
2-5	Soil conditions and profiles	Site Parameter	2.5, 3.7
2-6	Bearing pressure of soil beneath the nuclear island basemat	Site Parameter	2.5
2-7	Foundation settlements	Site Parameter	2.5
3-1	Missiles generated from nearby facilities	Site Parameter	3.5
3-2	Missiles generated by tornadoes or extreme winds	Site Parameter	3.5
3-3	Aircraft hazards	Site Parameter	3.5
3-4	Site-specific loads that lie within the standard plant design envelope for Seismic Category I structures	Site Parameter	3.8
3-5	Buried conduit duct banks, pipe ducts, and piping	U.S. EPR Interface	3.8
8-1	Off-site ac power transmission system connections to the switchyard and the connection to the plant power distribution system	U.S. EPR Interface	8.2
8-2	On-site ac power transmission system connections to the switchyard and the connection to the plant power distribution system	U.S. EPR Interface	8.3
8-3	Auxiliary power and generator transformer areas	U.S. EPR Interface	8.2
8-4	Lightning protection and grounding system grid	U.S. EPR Interface	8.3.1
9-1	New fuel and spent fuel storage racks	U.S. EPR Interface	9.1.1, 9.1.2
9-2	Provide support systems such as makeup water, blowdown and chemical treatment (to control biofouling) for the UHS	U.S. EPR Interface	9.2.5

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Remainder of Plant  
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<b>Item No.</b>	<b>Interface</b>	<b>Interface Type</b>	<b>Section</b>
9-3	Raw water system	U.S. EPR Interface	9.2.9
10-1	Design details for circulating water system including makeup water, and water treatment	U.S. EPR Interface	10.4.5
11-1	Process Control program and program aspects of process and effluent monitoring and sampling	U.S. EPR Interface	11.5
13-1	Site-specific information for administrative, operating, emergency, maintenance, and other operating procedures.	U.S. EPR Interface	13.5
13-2	Site-specific emergency plan	U.S. EPR Interface	13.3
13-3	Site-specific security assessment and Physical Security Plan	U.S. EPR Interface	13.6
14-1	Site-specific information for development of the initial test program	U.S. EPR Interface	14

**Table 1.8-2—U.S. EPR Combined License Information Items  
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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
1.1-1	A COL applicant that references the U.S. EPR design certification and proposes a multi-unit license application will provide the changes and additional information needed to license a multi-unit plant.	1.1	Y	
1.1-2	A COL applicant that references the U.S. EPR design certification will identify the specific plant site location.	1.1.1	Y	
1.1-3	A COL applicant that references the U.S. EPR design certification will provide the estimated schedules for completion of construction and commercial operation.	1.1.5	Y	
1.2-1	A COL applicant that references the U.S. EPR design certification will identify those site-specific features of the plant likely to be of special interest because of their relationship to safety. The COL applicant will also highlight items such as unusual site characteristics, solutions to particularly difficult engineering, construction problems, and significant extrapolations in technology represented by the site specific design.	1.2	Y	
1.2-2	A COL applicant that references the U.S. EPR design certification will provide a site-specific layout figure.	1.2.2	Y	
1.2-3	A COL applicant that references the U.S. EPR design certification will provide site-specific general arrangement drawings for the Turbine Building and Access Building.	1.2.2	Y	
1.4-1	A COL applicant that references the U.S. EPR design certification will identify the prime agents or contractors for the construction and operation of the nuclear power plant.	1.4.2	Y	
1.6-1	A COL applicant that references the U.S. EPR design certification will include any site-specific topical reports that are incorporated by reference as part of the COL application in Table 1.6-1.	1.6	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
1.7-1	A COL applicant that references the U.S. EPR design certification will list additional site specific instrumentation and control functional diagrams and electrical one-line diagrams included in the COL FSAR in Table 1.7-1 and supplement the figure legends, if applicable.	1.7.1	Y	
1.7-2	A COL applicant that references the U.S. EPR design certification will list additional site specific P&IDs included in the COL FSAR in Table 1.7-2 and supplement the figure legend, if applicable.	1.7.2	Y	
1.8-1	A COL applicant that references the U.S. EPR design certification will describe where the interface requirements are satisfied in the COL FSAR to demonstrate compatibility with the U.S. EPR design.	1.8.1	Y	
1.8-2	A COL applicant that references the U. S. EPR design certification will identify the FSAR section, or provide a list, that demonstrates how the COL information items have been addressed.	1.8	Y	
1.8-3	A COL applicant that references the U. S. EPR design certification will provide a list of any departures from the FSAR in the COL FSAR.	1.8.2	Y	
1.9-1	A COL applicant that references the U.S. EPR design certification will review and address the conformance with Regulatory Criteria in effect six months before the docket date of the COL application for the site-specific portions and operational aspects of the facility design.	1.9	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
2.0-1	A COL applicant that references the U.S. EPR design certification will compare site-specific data to the design parameter data in Table 2.1-1. If the specific data for the site falls within the assumed design parameter data and characteristics in Table 2.1-1, then the U.S. EPR standard design is bounding for the site. For site-specific design parameter data or characteristics that are outside the bounds of the assumptions presented in Table 2.1-1, the COL applicant will confirm that the U.S. EPR design acceptably meets any additional requirements that may be imposed by the more limiting site-specific design parameter data or characteristic, and that the design maintains conformance to the design commitments and acceptance criteria described in this FSAR	2.0	Y	
2.1-1	A COL applicant that references the U.S. EPR design certification will provide site-specific information related to site location and description, exclusion area authority and control, and population distribution.	2.1	Y	
2.2-1	A COL applicant that references the U.S. EPR design certification will provide site-specific information related to the identification of potential hazards stemming from nearby industrial, transportation, and military facilities within the site vicinity, including an evaluation of potential accidents (such as explosions, toxic chemicals, and fires).	2.2	Y	
2.2-2	A COL applicant that references the U.S. EPR design certification will provide information concerning site-specific evaluations to determine the consequences that potential accidents at nearby industrial, transportation, and military facilities could have on the site. The information provided by the COL applicant will include specific changes made to the U.S. EPR design to qualify the design of the site against potential external accidents with an unacceptable probability of severe consequences.	2.2.3	Y	



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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
2.3-1	If a COL applicant that references the U.S. EPR design certification identifies site-specific meteorology values outside the range of the design parameters in Table 2-1, then the COL applicant will demonstrate the acceptability of the site-specific values in the appropriate sections of the Combined License application.	2.3	Y	
2.3-2	A COL applicant that references the U.S. EPR design certification will provide site-specific characteristics for regional climatology.	2.3.1	Y	
2.3-3	A COL applicant that references the U.S. EPR design certification will provide site-specific characteristics for local meteorology.	2.3.2	Y	
2.3-4	A COL applicant that references the U.S. EPR design certification will provide the site-specific, onsite meteorological measurement program.	2.3.3	Y	
2.3-5	A COL applicant that references the U.S. EPR design certification will provide a description of the atmospheric dispersion modeling used in evaluating potential design basis events to calculate concentrations of hazardous materials (e.g., flammable or toxic clouds) outside building structures resulting from the onsite and/or offsite airborne releases of such materials.	2.3.4	Y	
2.3-6	A COL applicant that references the U.S. EPR design certification will confirm that site-specific $\gamma/Q$ values, based on site-specific meteorological data, are bounded by those specified in Table 2-1 at the EAB and LPZ and by Table 2.3-1 at the control room. For site-specific $X/Q$ values that exceed the bounding $X/Q$ values, a COL applicant that references the U.S. EPR design certification will demonstrate that the radiological consequences associated with the controlling design basis accident continue to meet the dose reference values given in 10 CFR 50.34 and the control room operator dose limits given in GDC 19 using site-specific $X/Q$ values.	2.3.4	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
2.3-7	A COL applicant that references the U.S. EPR design will provide X/Q values for each cumulative frequency distribution which exceeds the median value (50 percent of the time) as part of the assessment of the postulated impact of an accident on the environment.	2.3.4	Y	
2.3-8	A COL applicant that references the U.S. EPR design certification will provide the site-specific, long-term diffusion estimates for routine releases. In developing this information, the COL applicant should consider the guidance provided in Regulatory Guides 1.23, 1.109, 1.111, and 1.112.	2.3.5	Y	
2.3-9	A COL applicant that references the U.S. EPR design certification will also provide estimates of annual average atmospheric dispersion ( $\chi/Q$ values) and deposition (D/Q values) for 16 radial sectors to a distance of 50 miles (80 km) from the plant as part of its environmental assessment.	2.3.5	Y	
2.3-10	A COL applicant that references the U.S. EPR design certification will describe the means for providing UHS makeup sufficient to meet the maximum evaporative and drift water loss after 72 hours through the remainder of the 30 day period consistent with RG 1.27.	2.3.1.1	Y	
2.4-1	A COL applicant that references the U.S. EPR design certification will provide a site-specific description of the hydrologic characteristics of the plant site.	2.4.1	Y	
2.4-2	A COL applicant that references the U.S. EPR design certification will identify site-specific information related to flood history, flood design considerations, and effects of local intense precipitation.	2.4.2	Y	
2.4-3	A COL applicant that references the U.S. EPR design certification will provide site-specific information to describe the probable maximum flood of streams and rivers and the effect of flooding on the design.	2.4.3	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
2.4-4	A COL applicant that references the U.S. EPR design certification will verify that the site-specific potential hazards to the safety-related facilities due to the seismically-induced failure of upstream and downstream water control structures are within the hydrogeologic design basis.	2.4.4	Y	
2.4-5	A COL applicant that references the U.S. EPR design certification will provide site-specific information on the probable maximum surge and seiche flooding and determine the extent to which safety-related plant systems require protection. The applicant will also verify that the site-parameter envelope is within the design maximum flood level, including consideration of wind effects.	2.4.5	Y	
2.4-6	A COL applicant that references the U.S. EPR design will provide site-specific information and determine the extent to which safety-related facilities require protection from tsunami effects.	2.4.6	Y	
2.4-7	A COL applicant that references the U.S. EPR design certification will provide site-specific information regarding ice effects and design criteria for protecting safety-related facilities from ice-produced effects and forces with respect to adjacent water bodies.	2.4.7	Y	
2.4-8	A COL applicant that references the U.S. EPR design certification will evaluate the potential for freezing temperatures that may affect the performance of the ultimate heat sink makeup, including the potential for frazil and anchor ice, maximum ice thickness, and maximum cumulative degree-days below freezing.	2.4.7	Y	
2.4-9	A COL applicant that references the U.S. EPR design certification will provide site-specific information and describe the design basis for cooling water canals and reservoirs used for makeup to the UHS cooling tower basins.	2.4.8	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
2.4-10	A COL applicant that references the U.S. EPR design certification will provide site-specific information and demonstrate that in the event of upstream diversion or rerouting of the source of cooling water, alternate water supplies will be available to safety-related equipment.	2.4.9	Y	
2.4-11	A COL applicant that references the U.S. EPR design certification will use site-specific information to compare the location and elevations of safety-related facilities, and of structures and components required for protection of safety-related facilities, with the estimated static and dynamic effects of the design basis flood conditions.	2.4.10	Y	
2.4-12	A COL applicant that references the U.S. EPR design certification will identify natural events that may reduce or limit the available cooling water supply, and will verify that an adequate water supply exists for operation or shutdown of the plant in normal operation, anticipated operational occurrences, and in low water conditions.	2.4.11	Y	
2.4-13	A COL applicant that references the U.S. EPR design certification will provide site-specific information to identify local and regional groundwater reservoirs, subsurface pathways, onsite use, monitoring or safeguard measures, and to establish the effects of groundwater on plant structures.	2.4.12	Y	
2.4-14	A COL applicant that references the U.S. EPR design certification will provide site-specific information on the ability of the groundwater and surface water environment to delay, disperse, dilute, or concentrate accidental radioactive liquid effluent releases, regarding the effects that such releases might have on existing and known future uses of groundwater and surface water resources.	2.4.13	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
2.4-15	A COL applicant that references the U.S. EPR design certification will describe any emergency measures required to implement flood protection in safety-related facilities and to verify there is an adequate water supply for shutdown purposes.	2.4.14	Y	
2.5-1	A COL applicant that references the U.S. EPR design certification will use site-specific information to investigate and provide data concerning geological, seismic, geophysical, and geotechnical information.	2.5.1	Y	
2.5-2	A COL applicant that references the U.S. EPR design certification will review and investigate site-specific details of seismic, geophysical, geological, and geotechnical information to determine the safe shutdown earthquake (SSE) ground motion for the site and compare site-specific ground motion to the Certified Seismic Design Response Spectra (CSDRS) for the U.S. EPR.	2.5.2	Y	
2.5-3	A COL applicant that references the U.S. EPR design certification will verify that the site-specific seismic parameters are enveloped by the CSDRS (anchored at 0.3 g PGA) and the 10 generic soil profiles discussed in Sections 2.5.2 and 3.7.1 and summarized in Table 3.7.1-6.	2.5.2.6	Y	
2.5-4	A COL applicant that references the U.S. EPR design certification will verify that site-specific foundation soils beneath the foundation basemats of Seismic Category I structures have the capacity to support the bearing pressure with a factor of safety of 3.0 under static conditions.	2.5.4.10.1	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
2.5-5	A COL applicant that references the U.S. EPR design certification will investigate site-specific surface and subsurface geologic, seismic, geophysical, and geotechnical aspects within 25 miles around the site and evaluate any impact to the design. The COL applicant will demonstrate that no capable faults exist at the site in accordance with the requirements of 10 CFR 100.23 and of 10 CFR 50, Appendix S. If non-capable surface faulting is present under foundations for safety-related structures, the COL applicant will demonstrate that the faults have no significant impact on the structural integrity of safety-related structures, systems, or components.	2.5.3	Y	
2.5-6	A COL applicant that references the U.S. EPR design certification will present site-specific information about the properties and stability of soils and rocks that may affect the nuclear power plant facilities under both static and dynamic conditions, including the vibratory ground motions associated with the CSDRS and the site-specific SSE.	2.5.4	Y	
2.5-7	A COL applicant that references the U.S. EPR design certification will verify that the differential settlement value of ½ in per 50 ft in any direction across the foundation basemat of a Seismic Category I structure is not exceeded. Settlement values larger than this may be demonstrated acceptable by performing additional site-specific evaluations.	2.5.4.10.2	Y	
2.5-8	A COL applicant that references the U.S. EPR design certification will evaluate site-specific information concerning the stability of earth and rock slopes, both natural and manmade (e.g., cuts, fill, embankments, dams, etc.), of which failure could adversely affect the safety of the plant.	2.5.5	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
2.5-9	A COL applicant that references the U.S. EPR design certification will reconcile the site-specific soil properties with those used for design of U.S. EPR Seismic Category I structures and foundations described in Section 3.8.	2.5.4.2	Y	
2.5-10	A COL applicant that references the U.S. EPR design certification will investigate and determine the uniformity of the underlying layers of site specific soil conditions beneath the foundation basemats. The classification of uniformity or non-uniformity will be established by a geotechnical engineer.	2.5.4.10.3	Y	
3.1-1	A COL applicant that references the U.S. EPR design certification will identify the site-specific QA Program Plan that demonstrates compliance with GDC-1.	3.1.1.1.1	Y	
3.2-1	A COL applicant that references the U.S. EPR design certification will identify the seismic classification of applicable site-specific SSCs that are not identified in Table 3.2.2-1.	3.2.1	Y	
3.2-2	A COL applicant that references the U.S. EPR design certification will identify the quality group classification of applicable site-specific SSCs important to safety that are not identified in Table 3.2.2-1.	3.2.2	Y	
3.3-1	A COL applicant that references the U.S. EPR design certification will determine site-specific wind and tornado design parameters and compare these to the standard plant criteria. If the site-specific wind and tornado parameters are not bounded, then the COL applicant will evaluate the design for site-specific wind and tornado events and demonstrate that these loadings will not adversely affect the ability of safety-related structures to perform their safety functions during or after such events.	3.3	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
3.3-2	A COL applicant that references the U.S. EPR design certification will demonstrate that failure of site-specific structures or components not included in the U.S. EPR standard plant design, and not designed for wind loads, will not affect the ability of other structures to perform their intended safety functions.	3.3.1	Y	
3.3-3	A COL applicant that references the U.S. EPR design certification will demonstrate that failure of site-specific structures or components not included in the U.S. EPR standard plant design, and not designed for tornado loads, will not affect the ability of other structures to perform their intended safety functions.	3.3.2	Y	
3.4-1	A COL applicant that references the U.S. EPR design certification will confirm the potential site specific external flooding events are bounded by the U.S. EPR design basis flood values or otherwise demonstrate that the design is acceptable.	3.4.3.2	Y	
3.4-2	A COL applicant that references the U.S. EPR design certification will perform a flooding analysis for the ultimate heat sink makeup water intake structure based on the site-specific design of the structures and the flood protection concepts provided herein.	3.4.3.10	Y	
3.4-3	A COL applicant that references the U.S. EPR design certification will define the need for a site-specific permanent dewatering system.	3.4.4	Y	
3.5-1	A COL applicant that references the U.S. EPR design certification will describe controls to confirm that unsecured maintenance equipment, including that required for maintenance and that are undergoing maintenance, will be removed from containment prior to operation, moved to a location where it is not a potential hazard to SSCs important to safety, or seismically restrained to prevent it from becoming a missile.	3.5.1.2.3	Y	



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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
3.5-2	A COL applicant that references the U.S. EPR design certification will confirm the evaluation of the probability of turbine missile generation for the selected turbine generator, P1, is less than $1 \times 10^{-4}$ for turbine-generators favorably oriented with respect to containment.	3.5.1.3	Y	
3.5-3	A COL applicant that references the U.S. EPR design certification will assess the effect of potential turbine missiles from turbine generators within other nearby or co-located facilities.	3.5.1.3	Y	
3.5-4	A COL applicant that references the U.S. EPR design certification will evaluate the potential for other missiles generated by natural phenomena, such as hurricanes and extreme winds, and their potential impact on the missile protection design features of the U.S. EPR.	3.5.1.4	Y	
3.5-5	A COL applicant that references the U.S. EPR design certification will evaluate the potential for site proximity explosions and missiles generated by these explosions for their potential impact on missile protection design features.	3.5.1.5	Y	
3.5-6	A COL applicant that references the U.S. EPR design certification will evaluate site-specific aircraft hazards and their potential impact on plant SSCs.	3.5.1.6	Y	
3.5-7	For sites with surrounding ground elevations higher than plant grade, a COL applicant that references the U.S. EPR design certification will confirm that automobile missiles cannot be generated within a 0.5 mile radius of safety-related SSCs that would lead to impact higher than 30 ft above plant grade.	3.5.1.4	Y	
3.6-1	A COL applicant that references the U.S. EPR design certification will perform the pipe break hazards analysis and reconcile deviations in the as-built configuration to this analysis.	3.6.1		Y

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
3.6-2	A COL applicant that references the U.S. EPR design certification will perform the pipe break hazards analysis and reconcile deviations in the as-built configuration to this analysis.	3.6.2.1		Y
3.6-3	A COL applicant that references the U.S. EPR design certification will confirm that the design LBB analysis remains bounding for each piping system and provide a summary of the results of the actual as-built plant specific LBB analysis, including material properties of piping and welds, stress analyses, leakage detection capability, and degradation mechanisms.	3.6.3		Y
3.6-4	A COL applicant that references the U.S. design certification will provide diagrams showing the final as-designed configurations, locations, and orientations of the pipe whip restraints in relation to break locations in each piping system.	3.6.2.5.1		Y
3.7-1	A COL applicant that references the U.S. EPR design certification will confirm that the site-specific seismic response is within the parameters of section 3.7 of the U.S. EPR standard design.	3.7.2	Y	
3.7-2	A COL applicant that references the US EPR design certification will provide the site-specific separation distances for the access building and turbine building.	3.7.2.8	Y	
3.7-3	A COL applicant that references the U.S. EPR design certification will provide a description of methods used for seismic analysis of site-specific Category I concrete dams, if applicable.	3.7.3.13	Y	
3.7-4	A COL applicant that references the U.S. EPR design certification will determine whether essentially the same seismic response from a given earthquake is expected at each of the units in a multi-unit site or instrument each unit. In the event that only one unit is instrumented, annunciation shall be provided to each control room.	3.7.4.2	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
3.7-5	A COL applicant that references the U.S. EPR design certification will determine if a suitable location exists for the free-field acceleration sensor. The mounting location must be such that the effects associated with surface features, buildings, and components on the recordings of ground motion are insignificant. The acceleration sensor must be based on material representative of that upon which the Nuclear Island (NI) and other Seismic Category I structures are founded.	3.7.4.2.1	Y	
3.7-6	A COL applicant that references the US EPR design certification will provide the seismic design basis for the sources of fire protection water supply for safe plant shutdown in the event of a SSE.	3.7.2.8	Y	
3.8-1	A COL applicant that references the U.S. EPR design certification will confirm that site-specific loads lie within the standard plant design envelope for the Reactor Containment Building, or perform additional analyses to verify structural adequacy.	3.8.1.3	Y	
3.8-2	A COL applicant that references the U.S. EPR design certification will describe any differences between the standard plant layout and design of Seismic Category I structures required for site-specific conditions.	3.8.4.1	Y	
3.8-3	A COL applicant that references the U.S. EPR design certification will confirm that site-specific loads lie within the standard design envelope for other Seismic Category I structures, or perform additional analyses to verify structural adequacy.	3.8.4.3	Y	
3.8-4	A COL applicant that references the U.S. EPR design certification will provide a description of Seismic Category I buried conduit and duct banks.	3.8.4.1.8	Y	
3.8-5	A COL applicant that references the U.S. EPR design certification will provide a description of Seismic Category I buried pipe and pipe ducts.	3.8.4.1.9	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
3.8-6	A COL applicant that references the U.S. EPR design certification will confirm that site-specific loads lie within the standard design envelope for RB internal structures, or perform additional analyses to verify structural adequacy.	3.8.3.3	Y	
3.8-7	A COL applicant that references the U.S. EPR design certification will confirm that site-specific conditions for Seismic Category I buried conduit, electrical duct banks, pipe, and pipe ducts satisfy the requirements specified in Section 3.8.4.4.5 and those specified in AREVA NP Topical Report ANP-10264(NP), U.S. EPR Piping Analysis and Support Design, September 2006.	3.8.4.5	Y	
3.8-8	A COL applicant that references the U.S. EPR design certification will address site-specific Seismic Category I structures that are not described in this section.	3.8.4.1	Y	
3.8-9	A COL applicant that references the U.S. EPR design certification will describe site-specific foundations for Seismic Category I structures that are not described in this section.	3.8.5.1	Y	
3.8-10	A COL applicant that references the U.S. EPR design certification will evaluate site-specific methods for shear transfer between the foundation basemats and underlying soil for soil parameters that are not within the envelope specified in Section 2.5.4.2.	3.8.5.5	Y	
3.8-11	A COL applicant that references the U.S. EPR design certification will evaluate and identify the need for the use of waterproofing membranes and epoxy coated rebar based on site-specific groundwater conditions.	3.8.5.6.1	Y	
3.8-12	A COL applicant that references the U.S. EPR design certification will describe the program to examine inaccessible portions of below-grade concrete structures for degradation and monitoring of groundwater chemistry.	3.8.5.7	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
3.8-13	A COL applicant that references the U.S. EPR design certification will identify if any site-specific settlement monitoring requirements are required for Seismic Category I foundations based on site-specific soil conditions.	3.8.5.7	Y	
3.8-14	A COL applicant that references the U.S. EPR design certification will describe the design and analysis procedures used for buried conduit and duct banks, and buried pipe and pipe ducts.	3.8.4.4.5	Y	
3.8-15	A COL applicant that references the U.S. EPR design certification will use results from site-specific investigations to determine the routing of buried pipe and pipe ducts.	3.8.4.4.5	Y	
3.8-16	A COL applicant that references the U.S. EPR design certification will perform geotechnical engineering analyses to determine if the surface load will cause lateral and/or vertical displacement of bearing soil for the buried pipe and pipe ducts and consider the effect of wide or extra heavy loads.	3.8.4.4.5	Y	
3.9-1	A COL applicant that references the U.S. EPR design certification will submit the results from the vibration assessment program for the U.S. EPR RPV internals, in accordance with RG 1.20.	3.9.2.4		Y
3.9-2	A COL applicant that references the U.S. EPR design certification will prepare the design specifications and design reports for ASME Class 1, 2, and 3 components, piping, supports and core support structures that comply with and are certified to the requirements of Section III of the ASME Code.	3.9.3		Y
3.9-3	A COL applicant that references the U.S. EPR design certification will examine the feedwater line welds after hot functional testing prior to fuel loading and at the first refueling outage, in accordance with NRC Bulletin 79-13. A COL applicant that references the U.S. EPR design certification will report the results of inspections to the NRC, in accordance with NRC Bulletin 79-13.	3.9.3.1.1		Y

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
3.9-4	As noted in ANP-10264(NP), a COL applicant that references the U.S. EPR design certification will confirm that thermal deflections do not create adverse conditions during hot functional testing.	3.9.3.1.1		Y
3.9-5	As noted in ANP-10264(NP), should a COL applicant that references the U.S. EPR design certification find it necessary to route Class 1, 2, and 3 piping not included in the U.S. EPR design certification so that it is exposed to wind and tornadoes, the design must withstand the plant design-basis loads for this event.	3.9.3.1.1	Y	
3.9-6	A COL applicant that references the US EPR design certification will identify any additional site-specific valves in Table 3.9.6-2 to be included within the scope of the IST program.	3.9.6.3	Y	
3.9-7	A COL applicant that references the U.S. EPR design certification will submit the preservice testing (PST) program and IST program for pumps, valves, and snubbers as required by 10 CFR 50.55a.	3.9.6		Y
3.9-8	A COL applicant that references the US EPR design certification will identify any additional site-specific pumps in Table 3.9.6-1 to be included within the scope of the IST program.	3.9.6.2	Y	
3.9-9	COL applicant that references the U.S. EPR design certification will either use a piping analysis program based on the computer codes described in Section 3.9.1 and Appendix 3C or will implement an NRC-approved benchmark program using models specifically selected for the U.S. EPR.	3.9.1.2		Y
3.9-10	Pipe stress and support analysis will be performed by a COL applicant that references the U.S. EPR design certification.	3.9.1.2		Y

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
3.9-11	A COL applicant that references the U.S. EPR design certification will provide a summary of the maximum total stress, deformation (where applicable), and cumulative usage factor values for each of the component operating conditions for ASME Code Class 1 components. For those values that differ from the allowable limits by less than 10 percent, the COL applicant will provide the contribution of each of the loading categories (e.g., seismic, pipe rupture, dead weight, pressure, and thermal) to the total stress for each maximum stress value identified in this range.	3.9.3.1		Y
3.9-12	A COL applicant that references the U.S. EPR design certification will provide a table identifying the safety-related systems and components that use snubbers in their support systems, including the number of snubbers, type (hydraulic or mechanical), applicable standard, and function (shock, vibration, or dual-purpose snubber). For snubbers identified as either a dual-purpose or vibration arrester type, the COL applicant shall indicate whether the snubber or component was evaluated for fatigue strength.	3.9.6.4		Y
3.9-13	A COL applicant that references the U.S. EPR design certification will identify the implementation milestones and applicable ASME OM Code for the preservice and inservice examination and testing programs. These programs will be consistent with the requirements in the latest edition and addenda of the OM Code incorporated by reference in 10 CFR 50.55a on the date 12 months before the date for initial fuel load.	3.9.6	Y	
3.10-1	If experience data is used to establish equipment qualification, a COL applicant that references the U.S. EPR design certification will document the qualification methodology and supporting data.	3.10.2		Y

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
3.10-2	A COL applicant that references the U.S. EPR design certification will create and maintain the SQDP file during the equipment selection and procurement phase.	3.10.4		Y
3.10-3	A COL applicant that references the U.S. EPR design certification will identify any additional site specific components that need to be added to the equipment list in Table 3.10-1.	3.10.1.1	Y	
3.10-4	If the seismic and dynamic qualification testing is incomplete at the time of the COL application, a COL applicant that references the U.S. EPR design certification will submit an implementation program, including milestones and completion dates, for NRC review and approval prior to installation of the applicable equipment.	3.10.4	Y	
3.11-1	A COL applicant that references the U.S. EPR design certification will maintain the equipment qualification test results and qualification status file during the equipment selection, procurement phase and throughout the installed life in the plant.	3.11		Y
3.11-2	A COL applicant that references the U.S. EPR design certification will identify additional site specific components that need to be added to the environmental qualification list in Table 3.11-1.	3.11.1.1	Y	
3.11-3	If the equipment qualification testing is incomplete at the time of the COL application, a COL applicant that references the U.S. EPR design certification will submit an implementation program, including milestones and completion dates, for NRC review and approval prior to installation of the applicable equipment.	3.11.3	Y	



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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
3.12-1	A COL applicant that references the U.S. EPR design certification will perform a review of the impact of contributing mass of supports on the piping analysis following the final support design to confirm that the mass of the support is no more than ten percent of the mass of the adjacent pipe span.	3.12.4.2		Y
3.12-2	As indicated in Section 5.3 of topical report ANP-10264(NP), pipe and support stress analysis will be performed by the COL applicant that references the U.S. EPR design certification. If the COL applicant that references the U.S. EPR design certification chooses to use a piping analysis program other than those listed in Section 5.1 of the topical report, the COL applicant will implement a benchmark program using models specifically selected for the U.S. EPR.	3.12.4.3		Y
3.13-1	A COL applicant referencing the U.S. EPR design certification will submit the inservice inspection plan for ASME Code Class 1, Class 2, and Class 3 threaded fasteners, to the NRC prior to performing the first inspection.	3.13.2		Y
3E-1	A COL applicant that references the U.S. EPR design certification will address critical sections relevant to site-specific Seismic Category I structures.	3E	Y	
5.2-1	A COL applicant that references the U.S. EPR design certification will identify subsequent ASME Code editions or addenda that may be used and will determine the consistency of the U.S. EPR design with construction practices (including inspection and examination methods) reflected within the subsequent code editions and addenda identified in the COL application.	5.2.1.1	Y	
5.2-2	A COL applicant that references the U.S. EPR design certification will identify additional ASME code cases to be used.	5.2.1.2	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
5.2-3	A COL applicant that references the U.S. EPR design certification will identify the implementation milestones for the site-specific ASME Section XI preservice and inservice inspection program for the reactor coolant pressure boundary, consistent with the requirements of 10 CFR 50.55a (g). The program will identify the applicable edition and addenda of the ASME Code Section XI, and will identify additional relief requests and alternatives to Code requirements.	5.2.4	Y	
5.3-1	A COL applicant that references the U.S. EPR design certification will identify the implementation milestones for the material surveillance program.	5.3.1.6	Y	
5.3-2	A COL applicant that references the U.S. EPR design certification will provide a plant-specific pressure and temperature limits report (PTLR), consistent with an approved methodology.	5.3.2.1		Y
5.4-1	A COL applicant that references the U.S. EPR design certification will identify the edition and addenda of ASME Section XI applicable to the site specific Steam Generator inspection program.	5.4.2.5.2.2	Y	
6.1-1	A COL applicant that references the U.S. EPR design certification will review the fabrication and welding procedures and other QA methods of ESF component vendors to verify conformance with RGs 1.44 and 1.31.	6.1.1.1	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
6.1-2	If components cannot be procured with DBA-qualified coatings applied by the component manufacturer, a COL applicant that references the U.S. EPR design certification must do one of the following: procure the component as uncoated and apply a DBA-qualified coating system in accordance with 10 CFR 50 Appendix B, Criterion IX; confirm that the DBA-unqualified coating is removed and the component is recoated with DBA-qualified coatings in accordance with 10 CFR 50 Appendix B, Criterion IX; or add the quantity of DBA-unqualified coatings to a list that documents those DBA-unqualified coatings already existing within containment.	6.1.2.3.2	Y	
6.2-1	A COL applicant that references the U.S. EPR design certification will identify the implementation milestones for the CLRT program described under 10 CFR 50, Appendix J.	6.2.6	Y	
6.3-1	A COL applicant that references the U.S. EPR design certification will describe the containment cleanliness program which limits debris within containment.	6.3.2	Y	
6.4-1	A COL applicant that references the U.S. EPR design certification will identify any Seismic Category I Class IE toxic gas sensors necessary for control room operator protection.	6.4.2.4	Y	
6.4-2	A COL applicant that references the U.S. EPR design certification will provide written emergency planning and procedures in the event of a radiological or a hazardous chemical release within or near the plant, and will provide training of control room personnel.	6.4.3.2		Y
6.4-3	A COL applicant that references the U.S. EPR design certification will evaluate the results of the toxic chemical accidents from Section 2.2.3 and address their impact on control room habitability in accordance with RG 1.78.	6.4.4	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
6.4-4	A COL applicant that references the U.S. EPR design certification will confirm that the radiation exposure of main control room occupants resulting from a design basis accident at a nearby unit on a multi-unit site is bounded by the radiation exposure from the postulated design basis accidents analyzed for the U.S. EPR; or confirm that the limits of GDC-19 are met.	6.4.4	Y	
6.6-1	A COL applicant that references the U.S. EPR design certification will identify the implementation milestones for the site-specific ASME Section XI preservice and inservice inspection program for the Class 2 and Class 3 components, consistent with the requirements of 10 CFR 50.55a (g). The program will identify the applicable edition and addenda of the ASME Code Section XI, and will identify additional relief requests and alternatives to Code requirements.	6.6	Y	
8.1-1	A COL applicant that references the U.S. EPR design certification will provide site-specific information describing the interface between the offsite transmission system, and the nuclear unit, including switchyard interconnections.	8.1.1	Y	
8.1-2	A COL applicant that references the U.S. EPR design certification will identify site-specific loading differences that raise EDG or Class 1E battery loading, and demonstrate the electrical distribution system is adequately sized for the additional load.	8.1.3	Y	
8.2-1	A COL applicant that references the U.S. EPR design certification will provide site specific information regarding the offsite transmission system and their connections to the station SWYD.	8.2.1.1	Y	
8.2-2	A COL applicant that references the U.S. EPR design certification will provide site-specific information for the switchyard layout design.	8.2.2	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
8.2-3	A COL applicant that references the U.S. EPR design certification will provide site-specific information that identifies actions necessary to restore offsite power and use available nearby power sources when offsite power is unavailable.	8.2.2.7	Y	
8.2-4	A COL applicant that references the U.S. EPR design certification will provide a site-specific grid stability analysis.	8.2.2.4	Y	
8.2-5	A COL applicant that references the U.S. EPR design certification will provide site-specific information for the protective devices that control the switchyard breakers and other switchyard relay devices.	8.2.1.2	Y	
8.2-6	A COL applicant that references the U.S. EPR design certification will provide site-specific information for the station switchyard equipment inspection and testing plan.	8.2.2.5	Y	
8.2-7	A COL applicant that references the U.S. EPR design certification will provide site specific information regarding the communication agreements and protocols between the station and the transmission system operator, independent system operator, or reliability coordinator/authority. Additionally, the applicant will provide a description of the analysis tool used by the transmission system operator to determine, in real time, the impact that the loss or unavailability of various transmission system elements will have on the condition of the transmission system to provide post-trip voltages at the switchyard.	8.2.1.1	Y	
8.2-8	A COL applicant that references the U.S. EPR design certification will provide site-specific information regarding indication and control of switchyard components.	8.2.1.2	Y	
8.3-1	A COL applicant that references the U.S. EPR design certification will monitor and maintain EDG reliability during plant operations to verify the selected reliability level target is being achieved as intended by RG 1.155.	8.3.1.1.6		Y

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
8.4-1	A COL applicant that references the U.S. EPR design certification will provide site-specific information that identifies any additional local power sources and transmission paths that could be made available to resupply the power plant following a loss of offsite power (LOOP).	8.4.1.3	Y	
8.4-2	A COL applicant that references the U.S. EPR design certification will address the RG 1.155 position C.3.4 related to procedures and training to cope with SBO.	8.4.2.6.4	Y	
9.1-1	A COL applicant that references the U.S. EPR design certification will provide site-specific information on the heavy load handling program, including a commitment to procedures for heavy load lifts in the vicinity of irradiated fuel or safe shutdown equipment, and crane operator training and qualification.	9.1.5.2.5	Y	
9.1-2	A COL applicant that references the U.S. EPR design certification will demonstrate that the design satisfies the criticality analysis requirements for the new and spent fuel storage racks, and describe the results of the analyses for normal and credible abnormal conditions, including a description of the methods used, approximations and assumptions made, and handling of design tolerances and uncertainties.	9.1.1.3	Y	
9.1-3	A COL applicant that references the U.S. EPR design certification will describe the new fuel storage racks, including a description of confirmatory structural dynamic and stress analyses	9.1.2.2.1	Y	
9.1-4	A COL applicant that references the U.S. EPR design certification will describe the spent fuel storage racks, including a description of confirmatory structural dynamic and stress analyses and thermal-hydraulic cooling analyses.	9.1.2.2.2	Y	
9.2-1	A COL applicant that references the U.S. EPR design certification will provide site specific information for the UHS make up.	9.2.5.2	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
9.2-2	A COL applicant that references the U.S. EPR design certification will provide site-specific details related to the sources and treatment of makeup to the potable and sanitary water system along with a simplified piping and instrument diagram.	9.2.4.2	Y	
9.2-3	The raw water supply system (RWSS) and the design requirements of the RWSS are site-specific and will be addressed by the COL applicant.	9.2.9	Y	
9.5-1	A COL applicant referencing the U.S. EPR certified design will identify additional site-specific communication locations necessary to support effective communication between plant personnel in all vital areas of the plant during normal operation, as well as during accident conditions.	9.5.2.3	Y	
9.5-2	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.1.7.1, Design and Procurement Document Control.	Table 9.5-1 C.1.7.1	Y	
9.5-3	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.1.7.2, Instructions, Procedures and Drawings.	Table 9.5-1 C.1.7.2	Y	
9.5-4	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.1.7.3, Control of Purchased Material, Equipment, and Services.	Table 9.5-1 C.1.7.3	Y	
9.5-5	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.1.8, Fire Protection Program Changes/Code Deviations.	Table 9.5-1 C.1.8	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
9.5-6	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.1.8.1, Change Evaluations.	Table 9.5-1 C.1.8.1	Y	
9.5-7	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.1.8.5, 10 CFR 50.72 Notification and 10 CFR 50.73 Reporting.	Table 9.5-1 C.1.8.5	Y	
9.5-8	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.1.8.7, Fire Modeling.	Table 9.5-1 C.1.8.7	Y	
9.5-9	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.5.5, Post-Fire Safe-Shutdown Procedures.	Table 9.5-1 C.5.5	Y	
9.5-10	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.5.5.1, Safe-Shutdown Procedures.	Table 9.5-1 C.5.5.1	Y	
9.5-11	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.5.5.2, Alternative/Dedicated Shutdown Procedures.	Table 9.5-1 C.5.5.2	Y	
9.5-12	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.5.5.3, Repair Procedures.	Table 9.5-1 C.5.5.3	Y	
9.5-13	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.6.2.4, Independent Spent Fuel Storage Areas.	Table 9.5.1-1, Section C.6.2.4	Y	



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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
9.5-14	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.6.2.6, Cooling Towers.	Table 9.5.1-1, Section C.6.2.6	Y	
9.5-15	A COL applicant that references the U.S. EPR design certification will submit site specific information to address Regulatory Guide 1.189, Regulatory Position C.7.6, Nearby Facilities.	Table 9.5.1-1, Section C.7.6	Y	
10.0-1	A COL applicant that references the U.S. EPR design certification will select Sections 10.1, 10.2 and 10.4.7 or 10.1A, 10.2A and 10.4.7A for inclusion in the COL FSAR as applicable to the chosen turbine-generator design option.	10.0	Y	
10.2-1	A COL applicant that references the U.S. EPR design certification will provide the site-specific turbine rotor inservice inspection program consistent with the recommendations of the manufacturer.	10.2A.3.6	Y	
10.2-2	A COL applicant that references the U.S. EPR design certification will provide applicable material data for the turbine rotor after the site-specific turbine has been procured.	10.2.3.3 10.2A.3.3		Y
10.2-3	A COL applicant that references the U.S. EPR design certification will provide applicable turbine disk rotor specimen test data, load-displacement data from the compact tension specimens and the fracture toughness properties after the site-specific turbine has been procured.	10.2.3.2 10.2A.3.2		Y
10.3-1	A COL applicant that references the U.S. EPR design certification will identify the authority responsible for implementation and management of the secondary side water chemistry program.	10.3.5	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
10.3-2	A COL applicant that references the U.S. EPR design certification will develop a FAC condition monitoring program that is consistent with Generic Letter 89-08 and NSAC-202L-R3 for the carbon steel portions of the steam and power conversion systems that contain water or wet steam.	10.3.6.3	Y	
10.4-1	A COL applicant that references the U.S. EPR design certification will describe the site-specific main condenser materials.	10.4.1.2	Y	
10.4-2	A COL applicant that references the U.S. EPR design certification will describe the site-specific design pressure and test pressure for the main condenser.	10.4.1.2	Y	
10.4-3	A COL applicant that references the U.S. EPR design certification will provide the description of the site-specific portions of the CWS.	10.4.5.2.1	Y	
10.4-4	A COL applicant that references the U.S. EPR design certification will provide the specific chemicals used within the chemical treatment system as determined by the site-specific water conditions.	10.4.5.2.2	Y	
10.4-5	A COL applicant that references the U.S. EPR design certification will provide the site-specific CWS piping design pressure.	10.4.5.2.2	Y	
10.4-6	If a vacuum priming system is required, a COL applicant that references the U.S. EPR design certification will provide the site-specific information.	10.4.5.2.2	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
11.4-1	A COL Applicant that references the U.S. EPR design certification will fully describe, at the functional level, elements of the Process Control Program (PCP). This program description will identify the administrative and operational controls for waste processing process parameters and surveillance requirements which demonstrate that the final waste products meet the requirements of applicable federal, state, and disposal site waste form requirements for burial at a 10 CFR Part 61 licensed low level disposal site and will be in accordance with the guidance provided in RG 1.21, NUREG-0800 Branch Technical Position 11-3, ANSI/ANS-55.1-1992, and Generic Letters 80-09, 81-38, and 81-39.	11.4.3	Y	
11.5-1	A COL applicant that references the U.S. EPR design certification will fully describe, at the functional level, elements of the process and effluent monitoring and sampling programs required by 10 CFR Part 50 Appendix I, and 10 CFR 52.79 (a)(16). This program description, Offsite Dose Calculation Manual (ODCM), will specify how a licensee controls, monitors, and performs radiological evaluations of releases. The program will also document and report radiological effluents discharged to the environment.	11.5.6	Y	
12.1-1	A COL applicant that references the U.S. EPR design certification will fully describe, at a functional level, elements of the ALARA program for ensuring that occupational radiation exposures are ALARA. This program will comply with provisions of 10 CFR Part 20 and be consistent with the guidance in RGs 1.8, 8.2, 8.7, 8.8, 8.9, 8.10, 8.13, 8.15, 8.27, 8.28, 8.29, 8.34, 8.35, 8.36, and 8.38, and the applicable portions of NUREG-1736.	12.1.3	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
12.2-1	A COL applicant that references the U.S. EPR design certification will provide site-specific information for required radiation sources containing byproduct, source, and special nuclear material that may warrant shielding design considerations. This site-specific information will include a listing of isotope, quantity, form, and use of all sources in this latter category that exceed 100 millicuries.	12.2.1.13	Y	
12.3-1	A COL applicant that references the U.S. EPR design certification will provide site-specific information on the extent to which the guidance provided by RG 1.21, 1.97, 8.2, 8.8, and ANSI/HPS-N13.1-1999 is employed in sampling recording and reporting airborne releases of radioactivity.	12.3.4.5	Y	
12.3-2	A COL applicant that references the U.S. EPR design certification will provide site-specific information on estimated annual doses to construction workers in a new unit construction area as a result of radiation from onsite radiation sources from the existing operating plant(s). This information will include bases, models, assumptions, and input parameters associated with these annual doses.	12.3.5.1	Y	
12.3-3	A COL applicant that references the U.S. EPR design certification will describe the use of portable instruments, and the associated training and procedures, to accurately determine the airborne iodine concentration within the facility where plant personnel may be present during an accident, in accordance with requirements of 10 CFR 50.34(f)(2)(xxvii) and the criteria in Item III.D.3.3 of NUREG-0737. The procedures for locating suspected high-activity areas will be described.	12.3.4.5	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
12.5-1	A COL applicant that references the U.S. EPR design certification will fully describe, at the functional level, elements of the Radiation Protection Program. The purpose of the Radiation Protection Program is to maintain occupational and public doses ALARA. The program description will identify how the program is developed, documented, and implemented through plant procedures that address quality requirements commensurate with the scope and extent of licensed activities. This program will comply with the provisions of 10 CFR Parts 19, 20, 50, 52, and 72 and be consistent with the guidance in RGs 1.8, 8.2, 8.4, 8.5, 8.6, 8.8, 8.9, 8.10, 8.19, 8.15, 8.20, 8.26, 8.27, 8.28, 8.29, 8.32, 8.35, 8.36, 8.38, and the consolidated guidance in NUREG-1736.	12.5	Y	
13.1-1	A COL applicant that references the U.S. EPR design certification will provide site-specific information for management, technical support, and operating organizations.	13.1	Y	
13.2-1	A COL applicant that references the U.S. EPR design certification will provide site-specific information for training programs for plant personnel.	13.2	Y	
13.3-1	A COL applicant that references the U.S. EPR design certification will provide a site-specific emergency plan in accordance with 10 CFR 50.47 and 10 CFR 50 Appendix E.	13.3	Y	
13.4-1	A COL applicant that references the U.S. EPR design certification will provide site-specific information for operational programs and schedule for implementation.	13.4	Y	
13.5-1	A COL applicant that references the U.S. EPR design certification will provide site-specific information for administrative, operating, emergency, maintenance, and other operating procedures.	13.5	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
13.6-1	A COL applicant that references the U.S. EPR design certification will provide a site-specific security assessment that addresses identification of vital equipment, development of target sets, vulnerability assessments, defensive analyses, design features to enhance security, the portions of the NRC orders to the current operating plants that impact U.S. EPR design, and the other security features of the U.S. EPR that establish the security system design.	13.6	Y	
13.6-2	A COL applicant that references the U.S. EPR design certification will provide a PSP to the NRC to fulfill the requirements of 10 CFR 52.79(a)(35).	13.6		
13.7-1	A COL applicant that references the U.S. EPR design certification will submit a physical security plan to the NRC to fulfill the fitness for duty requirements of 10 CFR Part 26.	13.7	Y	
14.2-1	A COL applicant that references the U.S. EPR certified design will provide site specific information that describes the organizational units that manage, supervise, or execute any phase of the test program.	14.2.2	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
14.2-2	A COL applicant that references the U.S. EPR certified design will develop a test program considers the following five guidance components: 1. The applicant should allow at least 9 months to conduct preoperational testing. 2. The applicant should allow at least 3 months to conduct startup testing, including fuel loading, low power tests, and power ascension tests. 3. Overlapping test program schedules (for multi-unit sites) should not result in significant divisions of responsibilities or dilutions of the staff provided to implement the test program. 4. The sequential schedule for individual startup tests should establish, insofar as practicable, that test requirements should be completed prior to exceeding 25 percent power for SSCs that are relied upon to prevent, limit, or mitigate the consequences of postulated accidents. 5. Approved test procedures should be in a form suitable for review by regulatory inspectors at least 60 days prior to their intended use or at least 60 days prior to fuel loading for fuel loading and startup test procedures.	14.2.11		Y
14.2-3	A COL Applicant that references the US EPR design certification will provide site-specific information for review and approval of test procedures.	14.2.3	Y	
14.2-4	A COL Applicant that references the US EPR design certification will address the site-specific administrative procedures for review and approval of test results.	14.2.5	Y	
14.2-5	A COL applicant that references the U.S. EPR design certification will provide site-specific test information for the circulating water supply system.	14.2.12.7.11	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
14.2-6	The first COL applicant that references the U.S. EPR certified design will commit to review results from European predecessors concerning the new, unique, or novel EPR features (such as reactor internals (vibration measurement), natural circulation of the reactor coolant system, reactor coolant pump stand-still seal, pressurizer surge line (thermal stratification)) and propose supplemental testing if necessary.	14.2.8.1		Y
14.2-7	A COL applicant that references the U.S. EPR design certification will provide site-specific test information for the cooling tower.	14.2.12.21.6	Y	
14.3-1	A COL applicant that references the U.S. EPR design certification will provide ITAAC for emergency planning, physical security, and site-specific portions of the facility that are not included in the Tier 1 ITAAC associated with the certified design (10 CFR 52.80(a)).	14.3	Y	
14.3-2	A COL applicant that references the U.S. EPR design certification will describe the selection methodology for site-specific SSCs to be included in ITAAC, if the selection methodology is different from the methodology described within the FSAR, and will also provide the selection methodology associated with emergency planning and physical security hardware.	14.3	Y	
16.0-1	Brackets are used to identify information or parameters that are plant specific or are based on preliminary design information. A COL applicant that references the U.S. EPR design certification will replace preliminary information provided in brackets of the Technical Specifications and Technical Specification Bases with plant specific values.	16.0	Y	
17.2-1	A COL applicant that references the U.S. EPR design certification will provide the Quality Assurance Programs associated with the construction and operations phases.	17.2	Y	



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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
17.4-1	A COL applicant that references the U.S. EPR design certification will identify the site-specific SSCs within the scope of the RAP.	17.4.2	Y	
17.4-2	A COL applicant that references the U.S. EPR design certification will provide the information requested in Regulatory Guide 1.206, Section C.I.17.4.4.	17.4.4	Y	
17.6-1	A COL applicant that references the U.S. EPR design certification will describe the process for determining which plant structures, systems, and components (SSC) will be included in the scope of the Maintenance Rule Program in accordance with 10 CFR 50.65(b). The program description will identify that additional SSC functions may be added to or subtracted from the Maintenance Rule scope prior to fuel load, when additional information is developed (e.g., emergency operating procedures, or EOP), and after the license is issued.	17.6.1	Y	
17.6-2	A COL applicant that references the U.S. EPR design certification will provide the process for determining which SSC within the scope of the Maintenance Rule program will be tracked to demonstrate effective control of their performance or condition in accordance with 10 CFR 50.65(a)(2).	17.6.2	Y	
17.6-3	A COL applicant that references the U.S. EPR design certification will provide a program description for monitoring SSC in accordance with 10 CFR 50.65(a)(1).	17.6.2	Y	
17.6-4	A COL applicant that references the U.S. EPR design certification will identify and describe the program for periodic evaluation of the Maintenance Rule program in accordance with 10 CFR 50.65(a)(3).	17.6.3	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
17.6-5	A COL applicant that references the U.S. EPR design certification will describe the program for maintenance risk assessment and management in accordance with 10 CFR 50.65(a)(4). Since the removal of multiple SSC from service can lead to a loss of Maintenance Rule functions, the program description will address how removing SSC from service will be evaluated. For qualitative risk assessments, the program description will explain how the risk assessment and management program will preserve plant-specific key safety functions.	17.6.4	Y	
17.6-6	A COL applicant that references the U.S. EPR design certification will describe the program for selection, training, and qualification of personnel with Maintenance-Rule-related responsibilities consistent with the provisions of Section 13.2 as applicable. Training will be commensurate with maintenance rule responsibilities, including Maintenance Rule Program administration, the expert panel process, operations, engineering, maintenance, licensing, and plant management.	17.6.5	Y	
17.6-7	A COL applicant that references the U.S. EPR design certification will describe the relationship and interface between Maintenance Rule Program and the Reliability Assurance Program.	17.6.6	Y	
17.6-8	A COL applicant that references the U.S. EPR design certification will describe the plan or process for implementing the Maintenance Rule Program as described in the COL application, which includes establishing program elements through sequence and milestones and monitoring or tracking the performance and/or condition of SSC as they become operational. The Maintenance Rule Program will be implemented by the time that fuel load is authorized.	17.6.7	Y	
17.6-9	A COL applicant that references the U.S. EPR design certification will describe the program for Maintenance Rule implementation.	17.6	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
18.1-1	A COL applicant that references the U.S. EPR design certification will execute the NRC approved HFE program as described in this section	18.1		Y
18.1-2	A COL applicant that references the U.S. EPR design certification will be responsible for HFE design implementation for a new Emergency Operations Facility (EOF) or changes resulting from the addition of the U.S. EPR to an existing EOF.	18.1.1.3	Y	
18.5-1	A COL applicant that references the U.S. EPR design will confirm that actual staffing levels and qualifications of plant personnel specified in Section 13.1 of the COL application remain bounded by regulatory requirements and results of the staffing and qualifications analysis.	18.5	Y	
18.8-1	A COL applicant that references the U.S. EPR design certification will describe how HFE principles and criteria are incorporated into the development program for site procedures.	18.8	Y	
18.9-1	A COL applicant that references the U.S. EPR design certification will describe how HFE principles and criteria are incorporated into the development of training program scope, structure, and methodology.	18.9	Y	
18.12-1	A COL applicant that references the U.S. EPR design certification will implement a human performance monitoring program similar to that which is described in this section.	18.12		Y
19.0-1	A COL applicant that references the U.S. EPR design certification will either confirm that the PRA in the design certification bounds the site-specific design information and any design changes or departures, or update the PRA to reflect the site-specific design information and any design changes or departures.	19.0	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
19.1-1	A COL applicant that references the U.S. EPR design certification will describe the uses of PRA in support of licensee programs and identify and describe risk-informed applications being implemented during the combined license application phase.	19.1.1.2	Y	
19.1-2	A COL applicant that references the U.S. EPR design certification will describe the uses of PRA in support of licensee programs and identify and describe risk-informed applications being implemented during the construction phase.	19.1.1.3	Y	
19.1-3	A COL applicant that references the U.S. EPR design certification will describe the uses of PRA in support of licensee programs and identify and describe any risk-informed applications being implemented during the operational phase.	19.1.1.4	Y	
19.1-4	A COL applicant that references the U.S. EPR design certification will conduct a peer review of the PRA relative to the ASME PRA Standard prior to use of the PRA to support risk-informed applications or before fuel load.	19.1.2.3		Y
19.1-5	A COL applicant that references the U.S. EPR design certification will describe the applicant's PRA maintenance and upgrade program.	19.1.2.4	Y	
19.1-6	A COL applicant that references the U.S. EPR design certification will confirm that the design-specific U.S. EPR PRA-based seismic margins assessment is bounding for their specific site.	19.1.5.1.2.4	Y	
19.1-7	A COL applicant that references the U.S. EPR design certification will perform the site-specific external event screening analysis for external events applicable to their site.	19.1.5.4	Y	
19.1-8	A COL applicant that references the U.S. EPR design certification will describe the uses of PRA in support of site-specific design programs and processes during the design phase.	19.1.1.1	Y	

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Item No.	Description	Section	Action Required by COL Applicant	Action Required by COL Holder
19.1-9	A COL applicant that references the U.S. EPR design certification will review as-designed and as-built information and conduct walk-downs as necessary to confirm that the assumptions used in the PRA (including PRA inputs to RAP and SAMDA) remain valid with respect to internal events, internal flood and fire events (routings and locations of pipe, cable and conduit), and HRA analyses (development of operating procedures, emergency operating procedures and severe accident management guidelines and training), external events including PRA-based seismic margins HCLPF fragilities, and LPSD procedures.	19.1.2.2		Y