APPENDIX A. POST NORTH ANNA 3 COMBINED LICENSE ACTIVITIES – LICENSE CONDITIONS, INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA, AND FINAL SAFETY ANALYSIS REPORT COMMITMENTS

A.1 License Conditions

The United States (U.S.) Nuclear Regulatory Commission's (NRC's) regulations at Title 10 of the *Code of Federal Regulations* (10 CFR) 52.97, "Issuance of combined licenses," requires a combined license (COL) to specify any terms and conditions of the COL the Commission deems appropriate. A license condition is not needed when an existing NRC regulation requires a future regulatory review of a matter to ensure adequate safety during design, construction, inspection activities or operation for a new plant. The staff is proposing that the Commission include the following license conditions, which are set forth below, to control various safety matters.

Proposed License Condition	SER Section	Description
1-1	1.5.5.6	A. This COL applies to North Anna Unit 3, a light-water nuclear reactor and associated equipment (the facility), owned by Dominion. The facility would be located on the existing NAPS site; adjacent to and generally west of the existing Units 1 and 2. The NAPS site is located in Louisa County, Virginia, approximately 40 miles north northwest of Richmond, Virginia. B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
	1.5.5.6	(1)(a) Dominion, pursuant to Sections 103 and 185b. of the Act and 10 CFR Part 52, to construct, possess, use, and operate the facility at the designated location in accordance with the procedures and limitations set forth in this license;
3.3	1.5.5.6	(2)(a) Dominion, pursuant to the Act and 10 CFR Part 70, to receive and possess at any time, special nuclear material as reactor fuel, in accordance with the limitations for storage and in amounts necessary for reactor operation, described in the final safety analysis report (FSAR), as supplemented and amended;

	1.5.5.6	(b)Dominion, pursuant to the Act and 10 CFR Part 70, to use special nuclear material as reactor fuel, after a Commission finding under 10 CFR 52.103(g) has been made, in accordance with the limitations for storage and in amounts necessary for reactor operation, described in the FSAR, as supplemented and amended;
	1.5.5.6	(3)(a) Dominion, pursuant to the Act and 10 CFR Parts 30 and 70, to receive, possess, and use, at any time before a Commission finding under 10 CFR 52.103(g), such byproduct and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as necessary;
	1.5.5.6	(b) Dominion, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use, after a Commission finding under 10 CFR 52.103(g), any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as necessary;
	1.5.5.6	(4)(a) Dominion, pursuant to the Act and 10 CFR Parts 30 and 70, to receive, possess, and use, before a Commission finding under 10 CFR 52.103(g), in amounts not exceeding those specified in 10 CFR 30.35(d) and 10 CFR 70.25(d) required for establishing decommissioning financial assurance, any byproduct or special nuclear material that is (1) in unsealed form; (2) on foils or plated surfaces, or (3) sealed in glass, for sample analysis or instrument calibration or other activity associated with radioactive apparatus or components;

	1.5.5.6	(b) Dominion, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use, after a Commission finding under 10 CFR 52.103(g), in amounts as necessary, any byproduct, source, or special nuclear material without restriction as to chemical or physical form, for sample analysis or instrument calibration or other activity associated with radioactive apparatus or components but not uranium hexafluoride; and
	1.5.5.6	(5) Dominion, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility. C. The license is subject to, and the licensee shall comply with, all applicable provisions of the Act and the rules, regulations, and orders of the Commission, including the conditions set forth in 10 CFR Chapter I, now or hereafter in effect. D. The license is subject to, and Dominion shall comply with, the conditions specified and incorporated below: (1) <u>Changes during Construction</u> (a) Dominion may request use of a preliminary acceptability review (PAR) process, for license amendments, at any time before a Commission finding under 10 CFR 52.103(g). To use the PAR process, Dominion shall submit a written request to the Office of New Reactors (NRO) in accordance with COL-ISG-025, “Changes during Construction under Part 52.” (b) Before NRO’s issuance of a written PAR notification, Dominion shall submit the license amendment request (LAR). Thereafter, NRO will issue a written PAR notification, setting forth whether Dominion may proceed in accordance with the PAR, LAR, and COL-ISG-025. If Dominion elects to proceed and the LAR is subsequently denied, Dominion shall return the facility to its current licensing basis.

3.2.1	13.3.5	(2) Startup Administration Manual (SAM), Preoperational and Startup Test Procedures (a) Prior to initiating the plant's initial test program (ITP), a site-specific SAM (procedures), which includes administrative procedures and requirements that govern the activities associated with the plant ITP, is to be provided to on-site NRC inspectors 60 days prior to beginning of the preparation test phase. (b) Dominion will make available to on-site NRC inspectors preoperational test procedures 60 days prior to their intended use and startup test procedures 60 days prior to fuel load. (c) Dominion will make available to on-site NRC inspectors site-specific preoperational test procedures 60 days prior to their intended use and startup test procedures 60 days prior to fuel load.
3.2.4	13.3.5	(3) Nuclear Fuel Loading and Pre-Critical Testing (a) [RESERVED] (b) Upon a Commission finding in accordance with 10 CFR 52.103(g) that all the acceptance criteria in the inspections, tests, analyses, and acceptance criteria (ITAAC) in Appendix C to this license are met, Dominion is authorized to perform pre-critical tests in accordance with the conditions specified herein; (c) Dominion shall perform the pre-critical tests identified in ESBWR DCD, Revision 10, Sections 14.2.6 "Initial Fuel Loading and Initial Criticality," and 14.2.8.2 "General Discussion of Startup Tests."; (d) Dominion shall review and evaluate the results of the tests identified in Condition 2.D.(3)(c) of this license and confirm that these test results are within the range of acceptable values predicted or otherwise confirm that the tested systems perform their specified functions in accordance with ESBWR DCD, Revision 10, Section 14.2.8.2; and

	14.2.5	(e) Dominion shall notify the Director of NRO, or the Director's designee, in writing, upon successful completion of the pre-critical tests identified in Condition 2.D(3)(c) of this license
	14.2.5	(4) <u>Initial Criticality and Low-Power Testing</u> (a) Upon submission of the notification required by Condition 2.D.(3)(e) of this license, Dominion is authorized to operate the facility at reactor steady-state core power levels not to exceed 5-percent thermal power in accordance with the conditions specified herein; (b) Dominion shall perform the following: 1. the initial criticality and low-power tests identified in ESBWR DCD, Revision 10, Sections 14.2.6, "Initial Fuel Loading and Initial Criticality," 14.2.7, "Test Program Schedule and Sequence," tests and 2. the Reactor Pre Critical Heatup with Reactor Water Cleanup/Shutdown Cooling (RWCU/SDC) Natural Core Circulation Test (first of a kind test as identified in ESBWR DCD, Revision 10, Section 14.2.8.2.35.1, "Reactor Pre Critical Heatup With RWCU/SDC,") and the Isolation Condenser Performance Test and Heatup and Steady State Operation Test (first of a kind test) as identified in ESBWR DCD, Revision 10, Sections 14.2.8.2.34, "Isolation Condenser Performance Test," and 14.2.8.2.35.2, "Isolation Condenser System Heatup and Steady State Operation." (c) Dominion shall review and evaluate the results of the tests identified in: 1. Condition 2.D.(4)(b)1. of this license and confirm that these test results are within the range of acceptable values predicted or otherwise confirm that the tested systems perform their specified functions in accordance with ESBWR DCD, Revision 10, Section 14.2.6, 14.2.7, 14.2.8.2; and

		2. Condition 2.D.(4)(b)2. of this license and confirm that these test results are within the range of acceptable values predicted or otherwise confirm that the tested systems perform their specified functions in accordance with ESBWR DCD, Revision 10, Section 14.2.8.2; and (d) Dominion shall notify the Director of NRO, or the Director's designee, in writing, upon successful completion of initial criticality and low-power tests identified in Condition 2.D.(4)(b) of this license, including the design-specific tests identified therein.
3.2.4.3	14.2.5	(5) Power Ascension Testing (a) Upon submission of the notification required by Condition 2.D.(4)(d) of this license, Dominion is authorized to operate the facility at reactor steady-state core power levels not to exceed 100-percent thermal power in accordance with the conditions specified herein, but only for the purpose of performing power ascension testing; (b) Dominion shall perform: 1. the power ascension tests identified in the ESBWR DCD, Revision 10, Section 14.2.8.2 and Table 14.2-1, "Power Ascension Test Matrix"; and 2. the design-specific startup tests identified below: (i) Core Performance Test (first of a kind test as identified in ESBWR Design Control Document (DCD), Revision 10, Section 14.2.8.2.7); (ii) Power Maneuvering in the Feedwater (FW) Temperature Operation Domain Test (first of a kind test as identified in ESBWR DCD, Revision 10, Section 14.2.8.2.35.3, "Power Maneuvering In the FW Temperature Operating Domain");

		(iii) Load Maneuvering Capability Test (first of a kind test as identified in ESBWR DCD, Revision 10, Section 14.2.8.2.35.4, "Load Maneuvering Capability"); and (iv) Defense-In-Depth Stability Solution Evaluation Test (first of a kind plant test as identified in ESBWR DCD, Revision 10, Section 14.2.8.2.35.5, "Defense-In-Depth Stability Solution Evaluation Test").
	14.2.5	(c) Dominion shall review and evaluate the results of the tests identified in: 1. Condition 2.D.(5)(b)1. of this license and confirm that these test results are within the range of acceptable values predicted or otherwise confirm that the tested systems perform their specified functions in accordance with ESBWR DCD, Revision10, Section 14.2.8.2; and 2. Condition 2.D.(5)(b)2. of this license and confirm that these test results are within the range of acceptable values predicted or otherwise confirm that the tested systems perform their specified functions in accordance with ESBWR DCD, Revision 10, Section 14.2.8.2; and
	14.2.5	(d) Dominion shall notify the Director of NRO, or the Director's designee, in writing, upon successful completion of power ascension tests identified in Condition 2.D.(5)(b) of this license, including the design-specific tests identified therein.
3.2.4.4		(6) Maximum Power Level Upon submission of the notification required by Condition 2.D.(5)(d) of this license, Dominion is authorized to operate the facility at steady state reactor core power levels not to exceed 4500 megawatts thermal (100-percent thermal power), as described in the FSAR, in accordance with the conditions specified herein.

3.2.5	14.2.4	(7) Reporting Requirements (a) Within 30 days of a change to the initial test program described in FSAR Section 14, "Initial Test Program," made in accordance with 10 CFR 50.59, "Changes, Tests and Experiments," or in accordance with 10 CFR Part 52, Appendix E, Section VIII, "Processes for Changes and Departures," Dominion shall report the change to the Director of NRO, or the Director's designee, in accordance with 10 CFR 50.59(d). (b) Dominion shall report any violation of a requirement in Conditions 2.D.(3), 2.D.(4), 2.D.(5), and 2.D.(6) of this license within 24 hours. Initial notification shall be made to the NRC Operations Center in accordance with 10 CFR 50.72, "Immediate Notification Requirements for Operating Nuclear Power Reactors," with written follow up in accordance with 10 CFR 50.73, "License Event Report System.: (8) Incorporation The Technical Specifications, Environmental Protection Plan, and ITAAC in Appendices A, B, and C, respectively, of this license are hereby incorporated into this license. (9) Technical Specifications The technical specifications in Appendix A to this license become effective upon a Commission finding that the ITAAC are met in accordance with 10 CFR 52.103(g).

3.5	13.4.4	(10) Operational Program Implementation Dominion shall implement the following: (a) the Environmental Qualification Program implemented before initial fuel load; (b) the Flow-Accelerated Corrosion Program implemented prior to commercial service; (c) the Reactor Vessel Material Surveillance Program implemented before initial fuel load; (d) the Preservice Testing Program implemented prior to initial fuel load; (e) the Containment Leakage Rate Testing Program implemented before initial fuel load;
3.4	1.5.5.6	(f) the Fire Protection Program (for elements necessary to support receipt and storage of fuel) prior to initial receipt of fuel: 1. The fire protection measures in accordance with Regulatory Guide (RG) 1.189, “Fire Protection for Nuclear Power Plants,” for designated storage building areas (including adjacent fire areas that could affect the storage area) implemented before initial receipt of byproduct or special nuclear materials that are not fuel (excluding exempt quantities as described in 10 CFR 30.18, “Exempt Quantities”); 2. The fire protection measures in accordance with RG 1.189 for new fuel storage area (including adjacent fire areas that could affect the new fuel storage area) implemented before receipt of fuel onsite; 3. Before receipt of fuel on site, a formal letter of agreement shall be in place with the local fire department specifying the arrangements in support of the Fire Protection Program;

		4. All fire protection program features implemented before initial fuel load; (g) the Standard Radiological Effluent Controls implemented before initial fuel load; (h) the Offsite Dose Calculation Manual implemented before initial fuel load; (i) the Radiological Environmental Monitoring Program implemented before initial fuel load; (j) the Process Control Program implemented before initial fuel load; (k) the Lifecycle Minimization of Contamination Program implemented before initial fuel load; (l) the Radiation Protection Program (RPP) (including ALARA principle) or applicable portions thereof as identified in FSAR Section 12.5, “Operational Radiation Protection Program”: 1. RPP features applicable to receipt of by-product, source, or special nuclear materials (excluding exempt quantities as described in 10 CFR 30.18) implemented before initial receipt of such materials; 2. RPP features (including the ALARA principle) applicable to new fuel implemented before receipt of initial fuel on site; 3. All other RPP features (including the ALARA principle) except for those applicable to control radioactive waste shipment implemented before initial fuel load; and 4. RPP features (including the ALARA principle) applicable to radioactive waste shipment implemented before first shipment of radioactive waste;

3.5.4	14.2.5 9.2.1	(m) the Initial Test Program: 1. Preoperational Test Program implemented 60 days before the first preoperational test; 2. Startup Test Program implemented 60 days before initial fuel load; (n) the Special Nuclear Material Control and Accounting Program implemented before initial receipt of special nuclear material; (o) the Special Nuclear Material Physical Protection Plan implemented before initial receipt of special nuclear material on site; and (p) the Reactor Operator Training Program implemented no later than 18 months before scheduled fuel load.
3.5	13.2.4 13.4.4	(11) Operational Program Implementation Schedule No later than 12 months after issuance of the COL, Dominion shall submit to the Director of NRO, or the Director's designee, a schedule for implementation of the operational programs listed in FSAR Table 13.4-201, "Operational Programs Required by NRC Regulations," including the associated estimated date for initial loading of fuel. The schedule shall be updated every 6 months until 12 months before scheduled fuel loading, and every month thereafter until all the operational programs listed in FSAR Table 13.4-201 have been fully implemented. This schedule shall also address: (a) The implementation of site specific Severe Accident Management Guidelines, and (b) The spent fuel rack coupon monitoring program implementation.

3.10	3.9.5	(12) Site- and Unit-specific Conditions (a) Steam Dryer Monitoring Plan 1. Dominion shall prepare a Steam Dryer Monitoring Plan (SDMP) and submit the SDMP to the NRC no later than 90 days before the scheduled date for initial fuel loading. 2. Dominion shall provide Power Ascension Test (PAT) procedures for steam dryer monitoring to the NRC resident inspectors at least 10 days before the scheduled date for initial fuel loading. The PAT procedures must include the following: (i) Level 1 and Level 2 acceptance limits, as defined in Report NEDE 33313P, "ESBWR Steam Dryer Structural Evaluation," (Revision 5, December 2013), for on-dryer strain gage and on-dryer accelerometer measurements to be used up to 100 percent power; (ii) The power levels at which the steam dryer will be monitored (subject to Conditions 2.D.(12)(a)3. and 2.D.(12)(a)4. of this license) during power ascension, and the duration of monitoring at each power level; (iii) A description of activities to be accomplished during monitoring at each power level; (iv) Plant parameters to be monitored; (v) A description of the actions to be taken if acceptance criteria are not satisfied; and (vi) A description of the process for verification of the completion of commitments and planned actions specified in the PAT procedures. 3. Dominion shall complete the actions specified in Item 2 of the model license condition specified in paragraph (c) of Section 10.2, "Comprehensive Vibration Program Elements for a COL Applicant," in NEDE-33313P, (Revision 5) between 65 and 75 percent thermal power.

		4. Dominion shall measure, record, and evaluate pressures, strains, and accelerations from the steam dryer instrumentation at power levels approximately 5 percent higher than the previous power level at which Dominion measured, recorded, and evaluated such parameters until 100 percent thermal power is reached. Dominion shall generate data trending and a projection of strain levels for each successive power level, including full power. Dominion shall use data trending analysis to assess whether the Level 1 or Level 2 acceptance limits would be exceeded at the next higher power level for which the PAT specifies monitoring. Dominion shall provide the data trending results and revised limit curves to the NRC project manager by facsimile or electronic transmission. 5. At each power level for which Conditions 2.D.(12)(a)3. and 2.D.(12)(a)4. of this license require steam dryer monitoring, Dominion shall measure and record pressure, strain, and acceleration responses over a range of plant conditions sufficient to confirm that loading and fatigue effects from normal variations in plant conditions at power levels up to and including 100 percent thermal power will not adversely affect the life of the dryer. Dominion shall include its evaluation of steam dryer performance during such variations in plant conditions, including during Power Maneuvering in the Feedwater Temperature Operating Domain testing, in the dryer structural response as part of the full stress analysis report described in Condition 2.D.(12)(a)9. of this license. 6. If a flow-induced resonance is identified at any power level at which Conditions 2.D.(12)(a)3and 2.D.(12)(a)4. of this license require steam dryer monitoring, and the strains or vibrations exceed the pre-determined Level 1 or Level 2 limit curve, Dominion shall cease power ascension until completing the actions specified in Item 5 of the model license condition specified in paragraph (c) of Section 10.2 in NEDE-33313P, (Revision 5) and the following:

		(i) If a Level 1 limit curve is exceeded, Dominion shall reduce power to the last power level at which Dominion performed steam dryer monitoring pursuant to Conditions 2.D.(12)(a)3. and 2.D.(12)(a)4. of this license and at which the Level 1 limit curve was not exceeded. Dominion shall perform a stress analysis to develop a new Level 1 limit curve before increasing power to the next level at which Condition 2.D.(12)(a)4. of this license requires steam dryer monitoring. (ii) If a Level 2 limit curve is exceeded, or if data trending indicates that a Level 1 limit curve may be challenged before the next power level at which Condition 2.D.(12)(a)4. of this license requires steam dryer monitoring is reached, Dominion shall evaluate the Level 1 and Level 2 limit curves and perform a stress analysis that demonstrates that the stress acceptance limits are satisfied at the higher power level before power is increased. 7. Dominion shall determine end-to-end bias and uncertainties by comparing the predicted and measured strain or acceleration on the steam dryer at each power level at which Dominion performs steam dryer monitoring pursuant to Conditions 2.D.(12)(a)3. and 2.D.(12)(a)4. of this license and confirm the conservatism of the predicted dryer stress field. At each such power level, Dominion shall adjust the predicted strain and acceleration responses using the frequency-dependent end-to-end bias errors and uncertainty values. If any of the measured sensor data at that power level exceeds the adjusted predictions, Dominion shall either (a) modify the bias errors and uncertainty values and limit curves and ensure measured sensor responses do not exceed the adjusted predictions, or (b) quantitatively evaluate the effect on fatigue life. 8. At the initial power level at which Condition 2.D.(12)(a)3. of this license requires steam dryer monitoring and at approximately 85 and 95 percent power, Dominion shall provide the steam dryer data analysis and results to the NRC project manager by facsimile or electronic transmission; and shall not exceed the power level at which it performed the steam dryer monitoring for at least 72 hours after the NRC project manager has confirmed receipt of the transmission.

		9. Dominion shall provide data collected from the steam dryer monitoring required by Condition 2.D.(12)(a)4. of this license at 100 percent power to the NRC project manager by facsimile or electronic transmission within 72 hours of completing the collection of that data, with receipt confirmation from the NRC project manager. Dominion shall submit a full stress analysis report and evaluation to the NRC document control desk in accordance with 10 CFR 52.3within 90 days of first reaching 100 percent thermal power. The report must include the minimum stress ratio and the final dryer load definition using steam dryer data, and associated bias errors and uncertainties, and must demonstrate that the steam dryer will maintain its structural integrity over its design life considering variations in plant parameters, including, but not limited to, reactor pressure and core flow rate. If the structural integrity of the steam dryer for the full plant life is not demonstrated by the stress analysis, Dominion shall describe its compensatory actions, such as future dryer replacement, in the stress analysis report. 10. Dominion shall implement a periodic steam dryer inspection program as follows: (i) During the first two refueling outages after first reaching 100 percent thermal power, Dominion shall perform a visual inspection of all accessible areas and susceptible locations of the steam dryer in accordance with industry guidance on steam dryer inspections in the latest NRC staff-approved version of BWRVIP-139-A, “BWR Vessel and Internals Project, Steam Dryer Inspection and Flaw Evaluation Guidelines,” with any conditions or limitations specified in the NRC staff approval. The results of these baseline inspections shall be submitted to the NRC within 60 days following startup after each outage. (ii) At the end of the second refueling outage after reaching 100 percent thermal power, Dominion shall update the Steam Dryer Monitoring Program to include a long-term inspection plan based on plant-specific and industry operating experience, and shall submit the updated program to the NRC within 180 days following startup from the second refueling outage.

3.7.1	13.3.5	(b) No later than one hundred eighty (180) days before the date scheduled for initial fuel load set forth in the notification submitted in accordance with 10 CFR 52.103(a), Dominion shall submit to the Director of NRO, or the Director's designee, in writing, a fully developed set of plant-specific emergency action levels (EALs), in accordance with NEI 07-01, "Methodology for Development of Emergency Action Levels – Advanced Passive Light Water Reactors," Revision 0, with no deviations. The EALs shall have been discussed and agreed upon with State and local officials.
	13.3.4	(c) No later than eighteen (18) months before the latest date set forth in the schedule submitted in accordance with 10 CFR 52.99(a) for completing the inspections, tests, and analyses in the ITAAC, Dominion shall have performed a detailed staffing analysis, in accordance with NEI 10-05, "Assessment of On-Shift Emergency Response Organization Staffing and Capabilities," Revision 0. No later than one hundred eighty (180) days before the date scheduled for initial fuel load set forth in the notification submitted in accordance with 10 CFR 52.103(a), Dominion shall have revised the Emergency Plan to incorporate any changes identified in the staffing analysis that are needed to staffing to the required levels.
3.9.		(d) Before initial fuel load, Dominion shall: 1. Implement a surveillance program for explosively actuated valves (squib valves) in the Gravity Driven Cooling System and the Automatic Depressurization System at North Anna Unit 3 that includes the following provisions in addition to the requirements specified in the American Society of Mechanical Engineers (ASME) "Code for Operation and Maintenance of Nuclear Power Plants" (OM Code) as incorporated by reference in 10 CFR 50.55a.
	3.9.5	

3.9.a	3.9.5	(i) Preservice Testing All explosively actuated valves shall be preservice tested by verifying the operational readiness of the actuation logic and associated electrical circuits for each explosively actuated valve with its pyrotechnic charge removed from the valve. This must include confirmation that sufficient electrical parameters (voltage, current, and resistance) are available at the explosively actuated valve from each circuit that is relied upon to actuate the valve. In addition, a sample of at least 20 percent of the pyrotechnic charges in all explosively actuated valves shall be tested in the valve or a qualified test fixture to confirm the capability of each sampled pyrotechnic charge to provide the necessary motive force to operate the valve to perform its intended function without damage to the valve body or connected piping. The sampling must select at least one explosively actuated valve from each redundant safety train. Corrective action shall be taken to resolve any deficiencies identified in the operational readiness of the actuation logic or associated electrical circuits, or the capability of a pyrotechnic charge. If a charge fails to fire or its capability is not confirmed, all charges with the same batch number shall be removed, discarded, and replaced with charges from a different batch number that has demonstrated successful 20 percent sampling of the charges.
3.9.b	3.9.5	(ii) Operational Surveillance Explosively actuated valves shall be subject to the following surveillance activities after commencing plant operation: a. At least once every 2 years, each explosively actuated valve shall undergo visual external examination and remote internal examination (including evaluation and removal of fluids or contaminants that may interfere with operation of the valve) to verify the operational readiness of the valve and its actuator. This examination shall also verify the appropriate position of the internal actuating mechanism and proper operation of remote position indicators. Corrective action shall be taken to resolve any deficiencies identified during the examination with post-maintenance testing conducted that satisfies the PST requirements.

		b. At least once every 10 years, each explosively actuated valve shall be disassembled for internal examination of the valve and actuator to verify the operational readiness of the valve assembly and the integrity of individual components and to remove any foreign material, fluid, or corrosion. The examination schedule shall provide for each valve design used for explosively actuated valves at the facility to be included among the explosively actuated valves to be disassembled and examined every 2 years. Corrective action shall be taken to resolve any deficiencies identified during the examination with post-maintenance testing conducted that satisfies the PST requirements. c. For explosively actuated valves selected for test sampling every 2 years in accordance with the ASME OM Code, the operational readiness of the actuation logic and associated electrical circuits shall be verified for each sampled explosively actuated valve following removal of its charge. This must include confirmation that sufficient electrical parameters (voltage, current, resistance) are available for each valve actuation circuit. Corrective action shall be taken to resolve any deficiencies identified in the actuation logic or associated electrical circuits. d. For explosively actuated valves selected for test sampling every 2 years in accordance with the ASME OM Code, the sampling must select at least one explosively actuated valve from each redundant safety train. Each sampled pyrotechnic charge shall be tested in the valve or a qualified test fixture to confirm the capability of the charge to provide the necessary motive force to operate the valve to perform its intended function without damage to the valve body or connected piping. Corrective action shall be taken to resolve any deficiencies identified in the capability of a pyrotechnic charge in accordance with the PST requirements.

		This license condition shall expire upon (1) incorporation of the above surveillance provisions for explosively actuated valves into the facility's in-service testing program, or (2) incorporation of in-service testing requirements for explosively actuated valves in new reactors (i.e., plants receiving a construction permit, or COL for construction and operation, after January 1, 2000) to be specified in a future edition of the ASME OM Code as incorporated by reference in 10 CFR 50.55a, including any conditions imposed by the NRC, into the facility's in-service testing program. (e) Dominion shall perform detailed geologic mapping of excavations for safety related structures; examine and evaluate geologic features discovered in these excavations; and shall notify the Director of NRO, or the Director's designee, in writing, no later than 30 days before any such excavations are open for NRC examination and evaluation.
3.8.2	13.4.3.2 20.1.4 20.2.4	(f) Mitigation Strategies for Beyond-Design-Basis External Events 1. Dominion shall complete development of an overall integrated plan of strategies to mitigate a beyond-design-basis external event at least 1 year before the completion of the last ITAAC on the schedule required by 10 CFR 52.99(a). 2. The overall integrated plan required by this condition must include guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities. The overall integrated plan must include provisions to ensure that all accident mitigation procedures and guidelines (including the guidance and strategies required by this section, emergency operating procedures, abnormal operating procedures, and extensive damage management guidelines) are coherent and comprehensive.

		3. The guidance and strategies required by this condition must be capable of (i) mitigating a simultaneous loss of all alternating current (ac) power, both from the onsite and offsite power systems, and loss of normal access to the normal heat sink and (ii) providing for adequate capacity to perform the functions upon which the guidance and strategies rely for all units on the NAPS site and in all modes at each unit on the site. 4. Before initial fuel load, Dominion shall fully implement the guidance and strategies required by this condition, including: (i) Procedures; (ii) Training; (iii) Acquisition, staging, or installation of equipment and consumables relied upon in the strategies; and (iv) Configuration controls and provisions for maintenance and testing (including testing procedures and frequencies for preventative maintenance) of the equipment upon which the strategies and guidance required by this condition rely. 5. The training required by Condition 2.D.(12)(f)4.(ii) of this license must use a Systematic Approach to Training (SAT) to evaluate training for station personnel, and must be based upon plant equipment and procedures upon which the guidance and strategies required by Condition 2.D.(12)(f) of this license rely. 6. Dominion shall maintain the guidance and strategies described in the application upon issuance of the license, and the integrated plan of strategies upon its completion as required by Condition 2.D.(12)(f)1. of this license. Dominion may change the strategies and guidelines required by this Condition provided that Dominion evaluates each such change to ensure that the provisions of Conditions 2.D.(12)(f)2. and 2.D.(12)(f)3. of this license continue to be satisfied and Dominion documents the evaluation in an auditable form.

3.8.3	20.2.4	(g) Reliable Spent Fuel Pool/Buffer Pool Level Instrumentation Prior to initial fuel load, Dominion shall address the following requirements using the guidance contained in JLD-ISG-2012-03, “Compliance with Order EA 2012-051, Reliable Spent Fuel Pool Instrumentation,” Revision 0: The spent fuel pool/buffer pool instrumentation shall be maintained available and reliable through the development and implementation of a training program. The training program shall include provisions to ensure trained personnel can route the temporary power lines from the alternate power source to the appropriate connection points, and connect the alternate power source to the safety-related level instrument channels.
3.7	13.3.4.2	(h) Emergency Planning Actions 1. Communications (i) No later than eighteen (18) months before the latest date set forth in the schedule submitted in accordance with 10 CFR 52.99(a) for completing the inspections, tests, and analyses in the ITAAC, Dominion shall have performed an assessment of on-site and off-site communications systems and equipment relied upon during an emergency event to ensure communications capabilities can be maintained during an extended loss of alternating current power. The communications capabilities assessment shall be performed in accordance with NEI 12-01, “Guideline for Assessing Beyond Design Basis Accident Response Staffing and Communications Capabilities,” Revision 0. (ii) No later than one hundred eighty (180) days before the date scheduled for initial fuel load set forth in the notification submitted in accordance with 10 CFR 52.103(a), Dominion shall have completed implementation of corrective actions identified in the communications capability assessment, including revisions to the Emergency Plan.

3.7.2	13.3.4.2	2. Staffing (i) No later than eighteen (18) months before the latest date set forth in the schedule submitted in accordance with 10 CFR 52.99(a) for completing the inspections, tests, and analyses in the ITAAC, Dominion shall have performed an assessment of the on-site and augmented staffing capability for response to a multi-unit event. The staffing assessment shall be performed in accordance with NEI 12-01, "Guideline for Assessing Beyond Design Basis Accident Response Staffing and Communications Capabilities," Revision 0.
	13.3.4.2	(ii) No later than one hundred eighty (180) days before the date scheduled for initial fuel load, as set forth in the notification submitted in accordance with 10 CFR 52.103(a), Dominion shall revise the Emergency Plan to include the following: a. Incorporation of corrective actions identified in the staffing assessment required by this license condition; and b. Identification of how the augmented staff will be notified, given degraded communications capabilities.
	13.3.4.2	(i) No later than one hundred eighty (180) days before the date scheduled for initial fuel load set forth in the notification submitted in accordance with 10 CFR 52.103(a), Dominion shall update its North Anna Units 1 and 2 Letters of Agreement with the following entities, or their successors, and revise the Unit 3 Emergency Plan to include these updated Letters of Agreement after they have been executed. These updated Letters of Agreement shall identify the specific nature of arrangements in support of emergency preparedness for the NAPS site, including North Anna Unit 3, and reflect expected assistance associated with hostile action at the NAPS site, as defined in 10 CFR Part 50, Appendix E, Section IV.A.7.

		1. Commonwealth of Virginia Department of Emergency Management 2. Commonwealth of Virginia Department of Health 3. Commonwealth of Virginia Department of State Police 4. Commonwealth of Virginia Department of Game and Inland Fisheries 5. Virginia Commonwealth University Medical Center 6. Louisa County Administrator 7. Louisa County Sheriff 8. Louisa County Department of Fire and Emergency Medical Services 9. Spotsylvania County Sheriff 10. Spotsylvania Department of Fire, Rescue, and Emergency Management 11. Orange County Administrator 12. Orange County Sheriff 13. Caroline County Sheriff 14. Caroline County Department of Fire, Rescue, and Emergency Management 15. Hanover County Administrator 16. Hanover County Sheriff These Letters of Agreement shall identify the specific nature of arrangements in support of emergency preparedness for operation of North Anna Unit 3. The Emergency Plan shall be revised to include these Letters of Agreement after they have been executed. (j) Reactor Vessel Material Surveillance Program Dominion shall, as part of its reactor vessel material surveillance program, withdraw and test three surveillance capsules in accordance with the schedule provided in Column 1 (Predicted transition temperature shift at vessel inner surface of less than or equal to 100 oF) of Table 1, “Minimum Recommended Number of Surveillance Capsules and Their Withdrawal Schedule,” in the 1982 Revision of ASTM Standard E185 (ASTM E185-82), “Standard Practice for Conducting Surveillance Tests of Light-Water Cooled Nuclear Power Reactor Vessels.” The scheduling of capsule withdrawals to meet this condition shall be in accordance with ASTM E185-82.

3.11	1.5.1	E. Dominion shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
	1.5.1	(1) Prior to the scheduled date of initial fuel load, and within ninety (90) days after the NRC publishes the notice of intended operation in the Federal Register, Dominion shall provide evidence to the Director of NRO, or the Director's designee, that it would have the ability to pay into the industry self-insurance program in the event of a nuclear incident and in the amount specified in 10 CFR 140.11(a)(4) for one calendar year using one of the methods specified in 10 CFR 140.21, "Licensee Guarantees of Payment of Deferred Premiums." Thereafter, Dominion shall annually provide evidence of the guarantees of payment of deferred premiums in accordance with the provisions specified in 10 CFR 140.21.
	1.5.1	(2) Before the scheduled date for initial fuel load, and within ninety (90) days after the NRC publishes the notice of intended operation in the Federal Register, Dominion shall provide satisfactory documentary evidence to the Director of NRO, or the Director's designee, that it has obtained the appropriate amount of secondary financial protection pursuant to 10 CFR 140.11(a)(4), and the appropriate amount of financial protection pursuant to 10 CFR 50.54(w).

A.2 Inspections, Tests, Analyses, and Acceptance Criteria

The staff has identified the certain inspections, tests, analyses, and acceptance criteria (ITAAC) that it will recommend the Commission impose with respect to a COL issued to the applicant. The COL application ITAAC consists of the following four parts:

1. Design Certification ITAAC
2. Physical Security ITAAC
3. Emergency Planning ITAAC
4. Site-specific ITAAC

1. Design Certification ITAAC

The design certification ITAAC are in the ESBWR DCD, Revision 10, Tier 1, which will be incorporated by reference into the COL should a COL be issued to the applicant.

2. Physical Security ITAAC

The physical security ITAAC are provided in Table 2-1. The licensee shall perform and satisfy the ITAAC defined in Table 2-1 (from North Anna 3 SER Table 13.6-1 and North Anna 3 COL Application Part 10, Table 2.2-1).

Table 2-1
ITAAC For Site-Specific Security System

Table 2.2.1-1 ITAAC for the Site-Specific Security System		
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
1(a). Vital equipment will be located only within a vital area.	1(a). All vital equipment locations will be inspected.	1(a). Vital equipment is located only within a vital area.
1(b). Access to vital equipment will require passage through at least two physical barriers.	1(b). All vital equipment physical barriers will be inspected.	1(b). Vital equipment is located within a protected area such that access to the vital equipment requires passage through at least two physical barriers.
2(a). Physical barriers for the protected area perimeter will not be part of vital area barriers.	2(a). The protected area perimeter barriers will be inspected.	2(a). Physical barriers at the perimeter of the protected area are separated from any other barrier designated as a vital area barrier.
2(b). Penetrations through the protected area barrier will be secured and monitored.	2(b). All penetrations through the protected area barrier will be inspected.	2(b). All penetrations and openings through the protected area barrier are secured and monitored by intrusion detection equipment.
2(c). Unattended openings that intersect a security boundary, such as underground pathways, will be protected by a physical barrier and monitored by intrusion detection equipment or provided surveillance at a frequency sufficient to detect exploitation.	2(c). All unattended openings within the protected area barriers will be inspected.	2(c). All unattended openings (such as underground pathways) that intersect a security boundary (such as the protected area barrier), are protected by a physical barrier and monitored by intrusion detection equipment or provided surveillance at a frequency sufficient to detect exploitation.

Table 2.2.1-1 ITAAC for the Site-Specific Security System		
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
3(a). Isolation zones will exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and will be designed of sufficient size to permit observation and assessment on either side of the barrier.	3(a). The isolation zones in outdoor areas adjacent to the protected area perimeter barrier will be inspected.	3(a). The isolation zones exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and are of sufficient size to permit observation and assessment of activities on either side of the barrier in the event of its penetration or attempted penetration.
3(b). Isolation zones will be monitored with intrusion detection and assessment equipment that is designed to provide detection and assessment of activities within the isolation zone.	3(b). The intrusion detection equipment within the isolation zones will be inspected.	3(b). Isolation zones are equipped with intrusion detection and assessment equipment capable of providing detection and assessment of activities within the isolation zone.
3(c). Areas where permanent buildings do not allow sufficient observation distance between the intrusion detection system and the protected area barrier (e.g., the building walls are immediately adjacent to, or are an integral part of the protected area barrier) will be monitored with intrusion detection and assessment equipment that is designed to detect the attempted or actual penetration of the protected area perimeter barrier before completed penetration of the barrier and assessment of detected activities.	3(c). Inspections of areas of the protected area perimeter barrier that do not have isolation zones will be performed.	3(c). Areas where permanent buildings do not allow sufficient observation distance between the intrusion detection system and the protected area barrier (e.g., the building walls are immediately adjacent to, or an integral part of, the protected area barrier) are monitored with intrusion detection and assessment equipment that detects attempted or actual penetration of the protected area perimeter barrier before completed penetration of the barrier and assessment of detected activities.
4(a). The perimeter intrusion detection system will be designed to detect penetration or attempted penetration of the protected area perimeter barrier before completed penetration of the barrier, and for subsequent alarms to annunciate concurrently in at least two continuously manned onsite alarm stations (central and secondary alarm stations).	4(a). Tests, inspections, or a combination of tests and inspections of the intrusion detection system will be performed.	4(a). The intrusion detection system can detect penetration or attempted penetration of the protected area perimeter barrier before completed penetration of the barrier, and subsequent alarms annunciate concurrently in at least two continuously manned on site alarms stations (central and secondary alarm stations).
4(b). The perimeter assessment equipment will be designed to provide video image recording with real-time and playback capability that can provide assessment of detected activities before and after each alarm annunciation	4(b). Tests, inspections, or a combination of tests and inspections of the video assessment equipment will be performed.	4(b). The perimeter assessment equipment is capable of real-time and playback video image recording that provides assessment of detected activities before and after each

Table 2.2.1-1 ITAAC for the Site-Specific Security System		
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
at the protected area perimeter barrier.		alarm at the protected area perimeter barrier.
4(c). The intrusion detection and assessment equipment at the protected area perimeter will be designed to remain operable from an uninterruptible power supply in the event of the loss of normal power.	4(c). Tests, inspections, or a combination of tests and inspections of the uninterruptible power supply will be performed.	4(c). All Intrusion detection and assessment equipment at the protected area perimeter remains operable from an uninterruptible power supply in the event of the loss of normal power.
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
5. Isolation zones and exterior areas within the protected area will be provided with illumination to permit assessment in the isolation zones and observation of activities within exterior areas of the protected area.	5. The illumination in isolation zones and exterior areas within the protected area will be inspected.	5. Illumination in isolation zones and exterior areas within the protected area is 0.2 foot candles measured horizontally at ground level or alternatively augmented, sufficient to permit assessment and observation.
6. The external walls, doors, ceiling, and floors in the Secondary Alarm Station, and the last access control function for access to the protected area will be bullet resistant, to at least Underwriters Laboratories Ballistic Standard 752, “The Standard of Safety for Bullet-Resisting Equipment,” Level 4, or National Institute of Justice Standard 0108.01, “Ballistic Resistant Protective Materials,” Type III.	6. Type test, analysis, or a combination of type test and analysis of the external walls, doors, ceiling, and floors in the Secondary Alarm Station, and the last access control function for access to the protected area will be performed.	6. A report exists and concludes that the walls, doors, ceilings, and floors in the Secondary Alarm Station, and the last access control function for access to the protected area are bullet resistant to at least Underwriters Laboratories Ballistic Standard 752, Level 4, or National Institute of Justice Standard 0108.01, Type III.
7. The vehicle barrier system will be designed, installed, and located at the necessary standoff distance to protect against the design-basis threat vehicle bombs.	7. Type test, inspections, analysis or a combination of type tests, inspections, and analysis will be performed for the vehicle barrier system	7. A report exists and concludes that the vehicle barrier system will protect against the threat vehicle bombs based on the standoff distance for the system.
8(a). Access control points will be established and designed to control personnel and vehicle access into the protected area.	8(a). Tests, inspections, or a combination of tests and inspections of installed systems and equipment will be performed.	8(a). Access control points exist for the protected area and are configured to control access.
8(b). Access control points will be established and designed with equipment for the detection of firearms, explosives, and incendiary devices at the protected area personnel access points.	8(b). Tests, inspections, or a combination of tests and inspections of installed systems and equipment will be performed.	8(b). Detection equipment exists and is capable of detecting firearms, explosives, and incendiary devices at the protected area personnel access control points.
9. An access control system with a numbered photo	9. The access control system and the numbered photo	9. The access authorization system with a numbered photo

Table 2.2.1-1 ITAAC for the Site-Specific Security System		
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
identification badge system will be installed and designed for use by individuals who are authorized access to protected areas and vital areas without escort.	identification badge system will be tested.	identification badge system is installed and provides authorized access to protected and vital areas only to those individuals with unescorted access authorization.
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
10. Unoccupied vital areas will be designed with locking devices and intrusion detection devices that annunciate in the Secondary Alarm Station.	10. Tests, inspections, or a combination of tests and inspections of unoccupied vital area intrusion detection equipment and locking devices will be performed.	10. Unoccupied vital areas are locked, and intrusion is detected and annunciated in the Secondary Alarm Station.
11(a). Intrusion detection equipment and video assessment equipment will annunciate and be displayed concurrently in at least two continuously manned onsite alarm stations (Central and Secondary Alarm Stations).	11(a). Tests, inspections, or a combination of tests and inspections of intrusion detection equipment and video assessment equipment will be performed.	11(a). Intrusion detection equipment and video assessment equipment annunciate and display concurrently in at least two continuously manned onsite alarm stations (Central and Secondary Alarm Stations).
11(b). The Secondary Alarm Station will be located inside the protected area and will be designed so that the interior of the alarm station is not visible from the perimeter of the protected area.	11(b). The Secondary Alarm Station location will be inspected.	11(b). The Secondary Alarm Station is located inside the protected area, and the interior of the alarm station is not visible from the perimeter of the protected area.
11(c). The alarm system will not allow the status of a detection point, locking mechanism or access control device to be changed without the knowledge and concurrence of the alarm station operator in the other alarm station.	11(c).Tests, inspections, or a combination of tests and inspections of intrusion detection equipment and access control equipment will be performed.	11(c). The alarm system will not allow the status of a detection point, locking mechanism or access control device to be changed without the knowledge and concurrence of the alarm station operator in the other alarm station.
11(d). Central and Secondary Alarm Stations will be designed, equipped and constructed such that no single act, in accordance with the design-basis threat of radiological sabotage, can simultaneously remove the ability of both the central and secondary alarm stations to (1) detect and assess alarms, (2) initiate and coordinate an adequate response to alarms, (3) summon offsite assistance, and (4) provide effective command and control.	11(d). Tests, inspections, or a combination of tests and inspections of the Central and Secondary Alarm Stations will be performed.	11(d). Central and Secondary Alarm Stations are designed, equipped, and constructed such that no single act, in accordance with the design-basis threat of radiological sabotage, can simultaneously remove the ability of both the central and secondary alarm stations to (1) detect and assess alarms, (2) initiate and coordinate an adequate response to alarms, (3) summon offsite assistance, and (4) provide effective command and control.

Table 2.2.1-1 ITAAC for the Site-Specific Security System		
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
11(e). Both the Central and Secondary Alarm Stations will be constructed, located, protected, and equipped to the standards for the Central Alarm Station (alarm stations need not be identical in design but shall be equal and redundant, capable of performing all functions required of alarm stations).	11(e). Tests, inspections, or a combination of tests and inspections of the Central and Secondary Alarm Stations will be performed.	11(e). The Central and Secondary Alarm Stations are located, constructed, protected, and equipped to the standards of the Central Alarm Station and are functionally redundant (stations need not be identical in design).
12. The secondary security power supply system for alarm annunciator equipment contained in the Secondary Alarm Station and non-portable communications equipment contained in the Secondary Alarm Station is located within a vital area.	12. The secondary security power supply system will be inspected.	12. The secondary security power supply system for alarm annunciator equipment contained in the Secondary Alarm Station and non-portable communications equipment contained in the Secondary Alarm Station is located within a vital area.
13(a). Security alarm devices, including transmission lines to annunciators, will be tamper-indicating and self-checking (e.g., an automatic indication is provided when failure of the alarm system or a component occurs or when on standby power), and alarm annunciation indicates the type of alarm (e.g., intrusion alarms, emergency exit alarm) and location.	13(a). All security alarm devices and transmission lines will be tested.	13(a). Security alarm devices including transmission lines to annunciators are tamper indicating and self-checking (e.g., an automatic indication is provided when failure of the alarm system or a component occurs, or when the system is on standby power), and the alarm annunciation indicates the type of alarm (e.g., intrusion alarm, emergency exit alarm) and location.
13(b). Intrusion detection and assessment systems will be designed to provide visual display and audible annunciation of alarms in the Secondary Alarm Station.	13(b). Intrusion detection and assessment systems will be tested.	13(b). The intrusion detection and assessment systems provide a visual display and audible annunciation of alarms in the Secondary Alarm Station (concurrently with the display and annunciation in the Central Alarm Station).
14. No Site-Specific ITAAC specified.	14. No Site-Specific ITAAC specified.	14. No Site-Specific ITAAC specified.

Table 2.2.1-1 ITAAC for the Site-Specific Security System		
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
15. Emergency exits through the protected area perimeter and vital area boundaries will be alarmed with intrusion detection devices and secured by locking devices that allow prompt egress during an emergency.	15. Tests, inspections, or a combination of tests and inspections of emergency exits through the protected area perimeter and vital area boundaries will be performed.	15. Emergency exits through the protected area perimeter and vital area boundaries are alarmed with intrusion detection devices and secured by locking devices that allow prompt egress during an emergency.
16(a). The Secondary Alarm Station will have conventional (land line) telephone service with the Main Control Room and local law enforcement authorities.	16(a). Tests, inspections, or a combination of tests and inspections of the Secondary Alarm Stations' conventional (land line) telephone service will be performed.	16(a). The Secondary Alarm Station is equipped with conventional (land line) telephone service with the Main Control Room and local law enforcement authorities.
16(b).The Secondary Alarm Station will be capable of continuous communication with on-duty security force personnel.	16(b). Tests, inspections, or a combination of tests and inspections of the Secondary Alarm Stations' continuous communication capabilities will be performed.	16(b). The Secondary Alarm Station is capable of continuous communication with on-duty watchmen, armed security officers, armed responders, or other security personnel who have responsibilities within the physical protection program and during contingency response events.
16(c). Non-portable communications equipment in the Secondary Alarm Station will remain operable from an independent power source in the event of loss of normal power.	16(c). Tests, inspections, or a combination of tests and inspections of the non-portable communications equipment will be performed.	l6(c). All non-portable communication devices (including conventional telephone systems) in the Secondary Alarm Station are wired to an independent power supply that enables those systems to remain operable (without disruption) during the loss of normal power.

3. Emergency Planning ITAAC.

The emergency planning (EP)-ITAAC are provided in Table 3-1. The licensee shall perform and satisfy the ITAAC defined in Table 3.-1 (from North Anna 3 COL Application Part 10, Table 2.3-1)

Table 3-1
ITAAC For Emergency Planning

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
1.0 Emergency Classification System			
10 CFR 50.47(b)(4) – A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.	1.1 A standard emergency classification and emergency action level (EAL) scheme exists, and identifies facility system and effluent parameters constituting the bases for the classification scheme. [D.1**] [**D.1 corresponds to NUREG-0654/FEMA-REP-1 evaluation criteria.] ITAAC element addressed in: Combined license (COL) Emergency Plan (EP) II.D.1	1.1 An inspection of the control room, technical support center (TSC), and emergency operations facility (EOF) will be performed to verify that they have displays for retrieving facility system and effluent parameters that constitute the bases for the classification scheme identified in the Emergency Plan Implementing Procedures (EPIPs).	1.1.1 The specific parameters identified in the EAL thresholds listed in the EPIPs have been retrieved and displayed in the control room, TSC, and EOF. 1.1.2 The ranges available in the control room, TSC, and EOF encompass the values for the specific parameters identified in the EAL thresholds listed in the EPIPs.
2.0 Notification Methods and Procedures			
10 CFR 50.47(b)(5) – Procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations; the content of initial and follow-up messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone	2.1 The means exist to notify responsible State and local organizations within 15 minutes after the licensee declares an emergency. [E.1] ITAAC element addressed in: COL EP II.E.1	2.1 A test will be performed of the capabilities.	2.1 A means to notify responsible organizations, within 15 minutes after the licensee declares an emergency, has been established via the Operational Hot Line among the control room, the Commonwealth of Virginia, Caroline County, Hanover County, Louisa County, Orange County, and Spotsylvania County.

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
(EPZ) have been established.			
	2.2 The means exist to notify emergency response personnel. [E.2] ITAAC element addressed in: COL EP II.E.2	2.2 A test will be performed of the capabilities.	2.2 A means exists to notify the North Anna 3 emergency response organization.
	2.3 The means exist to notify and provide instructions to the populace within the plume exposure EPZ. [E.6] ITAAC element addressed in: COL EP II.E.6	2.3 The full test of notification capabilities will be conducted.	2.3 A means exists to notify and provide instructions to the public in accordance with the emergency plan requirements.
3.0 Emergency Communications			
10 CFR 50.47(b)(6) – Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.	3.1 The means exist for communications among the control room, TSC, EOF, principal State and local emergency operations centers (EOCs), and radiological field assessment teams. [F.1.d] ITAAC element addressed in: COL EP II.F.1.d	3.1 A test will be performed of the capabilities.	3.1.1 Communications have been established between the control room and TSC. 3.1.2 Communications have been established among the control room, TSC, and EOF. 3.1.3 Communications via the Operational Hot Line have been established among the TSC and EOCs, which include the Commonwealth of Virginia, Caroline County, Hanover County, Louisa County, Orange County, and Spotsylvania County. 3.1.4 Communications have been established between the TSC and radiological monitoring teams. 3.1.5 Communications have been established between the EOF and radiological monitoring teams.
	3.2 The means exist for communications	3.2 A test will be performed of the capabilities.	3.2 Communications have been established from the control room,

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	from the control room, TSC, and EOF to the Nuclear Regulatory Commission (NRC) headquarters and regional office EOCs (including establishment of the Emergency Response Data System (ERDS) between the onsite computer system and the NRC Operations Center). [F.1.f] ITAAC element addressed in: COL EP II.F.1.f		TSC, and EOF to the NRC headquarters and Region II EOCs and an access port for ERDS is provided.
4.0 Public Education and Information			
[Deleted]	[Deleted]	[Deleted]	[Deleted]
5.0 Emergency Facilities and Equipment			
10 CFR 50.47(b)(8) – Adequate emergency facilities and equipment to support the emergency response are provided and maintained.	5.1 The licensee has established a TSC and onsite operational support center (OSC). [H.1] ITAAC element addressed in: COL EP II.H.1	5.1 An inspection of the as-built TSC and OSC will be performed.	5.1.1 The TSC has at least 1950 square feet of floor space. 5.1.2 The following communications equipment have been provided in the TSC and voice transmission and reception have been accomplished: a. NRC systems: Emergency Notification System (ENS), Health Physics Network (HPN), Reactor Safety Counterpart Link (RSCL), Protective Measures Counterpart Link (PMCL),

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			Management Counterpart Link (MCL) b. Dedicated telephone to EOF c. Dedicated telephone to control room d. Dedicated telephone to OSC 5.1.3 The TSC has been located in the Electrical Building. 5.1.4 The TSC includes radiation monitors and a ventilation system with a high efficiency particulate air (HEPA) and charcoal filter. 5.1.5 A back-up electrical power supply is available for the TSC.
			5.1.6 The OSC is in a location separate from the control room. 5.1.7 The following communications equipment have been provided in the OSC and voice transmission and reception have been accomplished: a. Dedicated telephone to control room b. Dedicated telephone to TSC c. Plant page system (voice transmission only)
	5.2 The licensee has established an EOF. [H.2] ITAAC element addressed in: COL EP II.H.2	5.2 An inspection of the EOF will be performed.	5.2.1 A report exists that confirms the EOF has at least 243 square meters (2625 square feet). 5.2.2 Voice transmission and reception have been accomplished between the EOF and TSC. 5.2.3 A report exists that confirms voice transmission and reception have been accomplished via the Operational Hot Line among the EOF, Commonwealth of Virginia, Caroline County, Hanover County, Louisa County, Orange

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			County, and Spotsylvania County. 5.2.4 The EOF has the means to acquire, display and evaluate radiological, meteorological, and plant system data pertinent to determining offsite protective measures.
6.0 Accident Assessment			
10 CFR 50.47(b)(9) – Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.	6.1 The means exist to provide initial and continuing radiological assessment throughout the course of an accident. [I.2] ITAAC element addressed in: COL EP II.I.2, Appendix 2	6.1 A test of the emergency plan will be conducted by performing an exercise or drill to verify the capability to perform accident assessment.	6.1 An exercise or drill has been accomplished, including use of selected monitoring parameters identified in the EAL thresholds listed in the EPIPs, to assess simulated degraded plant conditions and initiate protective actions in accordance with the following criteria: A. *Accident Assessment and Classification* 1. Initiating conditions identified, EAL parameters determined, and the emergency correctly classified throughout the drill. 2. Protective action recommendations developed and communicated to appropriate authorities. B. *Radiological Assessment and Control* 1. Onsite radiological surveys performed and samples collected. 2. Radiation exposure of emergency workers monitored and controlled. 3. Field monitoring teams assembled and deployed. 4. Field team data collected and disseminated. 5. Dose projections developed. .

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			6. The decision whether to issue radioprotective drugs to NAPS 6. The NAPS emergency workers made.
	6.2 The means exist to determine the source term of releases of radioactive material within plant systems, and the magnitude of the release of radioactive materials based on plant system parameters and effluent monitors. [I.3] ITAAC element addressed in: COL EP II.I.3, Appendix 2	6.2 An analysis of EPIPs and the Offsite Dose Calculation Manual (ODCM) will be completed to verify the ability to determine the source term and magnitude of release.	6.2 The EPIPs and ODCM correctly calculate source terms and magnitudes of postulated releases.
	6.3 The means exist to continuously assess the impact of the release of radioactive materials to the environment, accounting for the relationship between effluent monitor readings, and onsite and offsite exposures and contamination for various meteorological conditions. [I.4] ITAAC element addressed in: COL EP II.I.4, Appendix 2	6.3 An analysis of EPIPs and the ODCM will be completed to verify the relationship between effluent monitor readings and offsite exposures and contamination for various meteorological conditions has been established.	6.3 The EPIPs and ODCM calculate the relationship between effluent monitor readings and offsite exposures and contamination for various meteorological conditions.
	6.4 The means exist to acquire and evaluate meteorological information. [I.5] ITAAC element addressed in: COL EP II.I.5	6.4 An inspection of the control room, TSC, and EOF will be performed to verify the availability of the following meteorological data: • Wind speed (at 10 meters (m) and 48.4 m) • Wind direction (at 10 m and 48.4 m)	6.4 The following meteorological data is available in the control room, TSC, and EOF: • Wind speed (at 10 m and 48.4 m) • Wind direction (at 10 m and 48.4 m) • Ambient air temperature (at 10 m) • Differential air temperature (between 10 m and 48.4 m)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
		• Ambient air temperature (at 10 m) • Differential air temperature (between 10 m and 48.4 m)	
	6.5 The means exist to make rapid assessments of actual or potential magnitude and locations of any radiological hazards through liquid or gaseous release pathways, including activation, notification means, field team composition, transportation, communication, monitoring equipment, and estimated deployment times. [I.8] ITAAC element addressed in: COL EP II.I.8	6.5 A test will be performed of the capabilities.	6.5 Demonstrate the capability for making rapid assessment of the actual or potential magnitude and locations of any radiological hazards through liquid or gaseous release pathways.
	6.6 The capability exists to detect and measure radioiodine concentrations in air in the plume exposure EPZ, as low as 10^{-7} µCi/cc (microcuries per cubic centimeter) under field conditions. [I.9] ITAAC element addressed in: COL EP II.I.9	6.6 A test of NAPS field survey instrumentation will be performed to verify the capability to detect airborne concentrations as low as 1E-07 µCi/cc.	6.6 Instrumentation used for monitoring I-131 to detect airborne concentrations as low as 1E-07 µCi/cc has been provided.
	6.7 The means exist to estimate integrated dose from the projected and actual dose rates, and for comparing these estimates with the Environmental Protection Agency (EPA) protective	6.7 An analysis of EPIPs will be performed to verify that a methodology is provided to establish means for relating contamination levels and airborne radioactivity levels to dose rates and gross radioactivity	6.7 A report exists and concludes a methodology has been established for relating contamination levels and airborne radioactivity levels to dose rates and gross radioactivity measurements for the specified isotopes (Kr-88, Ru-106, I-131, I-132,

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	action guides (PAGs). [I.10] ITAAC element addressed in: COL EP II.I.10, Appendix 2	measurements for the following isotopes: Kr-88, Ru-106, I-131, I-132, I-133, I-134, I-135, Te-132, Xe-133, Xe-135, Cs-134, Cs-137, Ce-144	I-133, I-134, I-135, Te-132, Xe-133, Xe-135, Cs-134, Cs-137, Ce-144), and for comparing the dose estimates with the EPA PAGs.
7.0 Protective Response			
10 CFR 50.47(b)(10) – A range of protective actions has been developed for the plume exposure EPZ for emergency workers and the public. In developing this range of actions, consideration has been given to evacuation, sheltering, and, as a supplement to these, the prophylactic use of potassium iodide (KI), as appropriate. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure EPZ appropriate to the locale have been developed.	7.1 The means exist to warn and advise onsite individuals of an emergency, including those in areas controlled by the operator, including: [J.1] a. employees not having emergency assignments; b. visitors; c. contractor and construction personnel; and d. other persons who may be in the public access areas, on or passing through the site, or within the owner controlled area. ITAAC element addressed in: COL EP II.J.1	7.1 A test of the onsite warning and communications capability will be performed during a drill or exercise.	7.1.1 During a drill or exercise, notification and instructions were provided to onsite workers and visitors, within the Protected Area, over the plant public announcement system. 7.1.2 During a drill or exercise, audible warnings were provided to individuals outside the Protected Area, but within the Owner Controlled Area.

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
8.0 Exercises and Drills			
10 CFR 50.47(b)(14) – Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.	8.1 Licensee conducts a full-participation exercise to evaluate major portions of emergency response capabilities, which includes participation by each State and local agency within the plume exposure EPZ, and each State within the ingestion control EPZ. [N.1] ITAAC element addressed in: COL EP II.N.1	8.1 A full-participation exercise (test) will be conducted within the specified time periods of Appendix E to 10 CFR Part 50.	8.1.1 The exercise is completed within the specified time periods of 10 CFR Part 50, Appendix E, and a report exists that confirms onsite exercise objectives listed below have been met and there are no uncorrected onsite exercise deficiencies. A. *Accident Assessment and Classification* 1. Demonstrate the ability to identify initiating conditions, determine EAL parameters, and correctly classify the emergency throughout the exercise. Standard Criteria: a. Determine the correct highest emergency classification level based on events which were in progress, considering past events and their impact on the current conditions, within 15 minutes from the time the initiating condition(s) or EAL(s) is (are) identified. B. *Notifications* 1. Demonstrate the ability to alert, notify, and mobilize site emergency response personnel. Standard Criteria: a. Initiate activation of the emergency recall system following initial event classification for an Alert or higher. 2. Demonstrate the ability to notify responsible State and local government agencies within 15 minutes and the NRC within 60 minutes after declaring an emergency. a. Initiate transmittal of initial information to the Commonwealth of

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			Virginia and risk jurisdictions using the designated EPIP within 15 minutes of event classification. b. Initiate transmittal of follow-up information to the Commonwealth of Virginia and risk jurisdictions using the designated EPIP within appropriate interval. c. Initiate transmittal of initial information to the NRC using the designated EPIP within 60 minutes of event classification. 3. Demonstrate the ability to warn or advise onsite individuals of emergency conditions. Standard Criteria: a. Initiate notification of onsite individuals (via plant page or telephone), using the designated EPIP within 15 minutes of notification. 4. Demonstrate the capability of the Alert and Notification System (ANS) sirens to operate properly when required. Standard Criteria: a. 90 percent of the sirens operate properly. C. *Emergency Response* 1. Demonstrate the capability to direct and control emergency operations. Standard Criteria: a. Command and control is demonstrated by the control room in the early phase of the emergency and the TSC, after its activation. 2. Demonstrate the ability to transfer emergency direction from the control room (simulator) to the TSC. Standard Criteria:

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			a. Briefings were conducted prior to turnover responsibility. Personnel document transfer of duties. 3. Demonstrate the ability to prepare for around-the-clock staffing requirements. Standard Criteria: a. Complete 24-hour staff assignments. 4. Demonstrate the ability to perform assembly and accountability for all onsite individuals during an emergency requiring Protected Area assembly and accountability. Standard Criteria: a. Protected Area personnel assembly and accountability completed within 30 minutes following initiation of assembly and accountability measures. D. *Emergency Response Facilities* 1. Demonstrate activation of the OSC, and full functional operation of the TSC and EOF. Standard Criteria: a. The TSC, OSC, and EOF are activated within about 60 minutes of the initial notification. 2. Demonstrate the adequacy of equipment, security provisions, and habitability precautions for the TSC, OSC, EOF, and Joint Information Center (JIC), as appropriate. Standard Criteria: a. Demonstrate the adequacy of the emergency equipment in the emergency response facilities. b. The Security Team Leader implements and follows applicable EPIPs.

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			c. The Health Physics (HP) personnel implement the designated EPIP provisions if an onsite or offsite release has occurred. 3. Demonstrate the adequacy of communications for all emergency support resources. Standard Criteria: a. Emergency response facility personnel are able to operate all specified communication systems. b. Clear primary or backup communications links are established and maintained for the duration of the exercise. E. *Radiological Assessment and Control* 1. Demonstrate the ability to obtain onsite radiological surveys and samples. Standard Criteria: a. HP personnel demonstrate the ability to obtain appropriate instruments (range and type) and take surveys. b. Airborne samples are taken when the conditions indicate the need for the information. 2. Demonstrate the ability to continuously monitor and control radiation exposure to emergency workers. Standard Criteria: a. Emergency workers are issued self-reading dosimeters when radiation levels require, and exposures are controlled to 10 CFR Part 20 occupational dose limits (unless the Emergency Coordinator/EOF

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			Director authorizes emergency limits). b. Exposure records are available. c. Emergency workers include Security and personnel within all emergency facilities. 3. Demonstrate the ability to assemble and deploy field monitoring teams. Standard Criteria: a. One field monitoring team is ready to be deployed within 60 minutes of being requested, and no later than 90 minutes from the declaration of an Alert or higher emergency. 4. Demonstrate the ability to satisfactorily collect and disseminate field team data. Standard Criteria: a. Field team data to be collected is dose rate or counts per minute (cpm) from the plume, both open and closed window, and air sample (gross/net cpm) for particulate and iodine, if applicable. b. Satisfactory data dissemination is from the field team to HP (Plume Tracking/Dose Assessment) personnel. 5. Demonstrate the ability to develop dose projections. Standard Criteria: a. Timely and accurate dose projections are performed in accordance with EPIPs. 6. Demonstrate the ability to make the decision whether to issue radioprotective drugs to emergency workers. Standard Criteria: a. Radioprotective drugs are taken (simulated) if the estimated dose to the

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			thyroid will exceed 25 rem committed dose equivalent (CDE). 7. Demonstrate the ability to develop appropriate protective action recommendation(s) (PAR(s)) and notify appropriate authorities within 15 minutes of development. Standard Criteria: a. Total effective dose equivalent (TEDE) and CDE dose projections from the dose assessment computer code are compared to criteria in EPIPs. b. PAR(s) is (are) developed within 15 minutes of data availability, as appropriate. c. PAR(s) is (are) transmitted to responsible State and local government agencies within 15 minutes of development. F. *Public Information* 1. Demonstrate the capability to develop and disseminate clear, accurate, and timely information to the news media. Standard Criteria: a. Media information (e.g., press releases, press briefings, electronic media) is made available following notification of Dominion External Affairs personnel. 2. Demonstrate the capability to establish and effectively operate rumor control in a coordinated fashion. Standard Criteria: a. Calls are answered in a timely manner with the correct information.

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			b. Rumors are identified and addressed. G. *Evaluation* 1. Demonstrate the ability to conduct a post-exercise critique, to determine areas requiring improvement and corrective action. Standard Criteria: a. An exercise time-line is developed, followed by an evaluation of the objectives. b. Significant problems in achieving the objectives are discussed to ensure understanding of why objectives were not fully achieved. c. Recommendations for improvement in non-objective areas are discussed.

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			8.1.2 Onsite emergency response personnel are mobilized in sufficient number to fill the emergency positions identified in COL EP II.B, Onsite Emergency Organization, and a report exists that confirms they successfully perform their assigned responsibilities as outlined in Acceptance Criterion 8.1.1.D, Emergency Response Facilities.
			8.1.3 The exercise is completed within the specified time periods of 10 CFR Part 50, Appendix E, a report exists that confirms offsite exercise objectives have been met and there are no uncorrected offsite deficiencies, or a license condition requires offsite deficiencies to be corrected prior to operation above 5 percent of rated power.
9.0 Implementing Procedures			
10 CFR Part 50, Appendix E.V – No less than 180 days prior to the scheduled issuance of an operating license for a nuclear power reactor or a license to possess nuclear material, the applicant's detailed implementing procedures for its emergency plan shall be submitted to the Commission.	9.1 The licensee has submitted detailed implementing procedures for its emergency plan no less than 180 days prior to fuel load.	9.1 An inspection will be performed to confirm that the detailed implementing procedures for the North Anna 3 Emergency Plan were submitted to the NRC.	9.1 Each of the detailed implementing procedures for the North Anna 3 Emergency Plan, as defined in Appendix 5 of the Emergency Plan, are submitted to the NRC no less than 180 day prior to fuel load.

4. Site-Specific ITAAC

The site-specific ITAAC are provided in Table 4-1 through 4-8.

4.1 ITAAC for Fill Concrete Under Seismic Category I Structure

ITAAC for Fill Concrete Under and Around the Sides of Seismic Category I Structures is provided in Table 4-1. The licensee shall perform and satisfy the ITAAC defined in Table 4-1 (from North Anna 3 COL Application Part 10, Table 2.4.1-1).

Table 4-1
ITAAC for Fill Concrete Under and Around Seismic Category I Structures

Design Commitment	Inspections, Tests, and Analyses	Acceptance Criteria
1. The foundation grade for the FWSC will be established using fill concrete. Fill concrete placed under and around the sides of Seismic Category I Structures to a thickness greater than 5 feet is designed and tested as specified in FSAR Section 2.5..	Testing will be performed to determine the mean compressive strength for the fill concrete.	A report exists that demonstrates that the mean 28-day compressive strength of the fill concrete is equal to, or greater than, 17.2 MPa (2,500 psi).

4.2 ITAAC for Backfill Surrounding Seismic Category I Structures

Structural fill surrounding the embedded walls for Seismic Category I structures meets properties for (1) the angle of internal friction; (2) the local effect on wall pressure as determined by the product of: peak ground acceleration α, (in g), Poisson's ratio v, and density γ; and (3) soil density. is provided in Table 4-2. The licensee shall perform and satisfy the ITAAC defined in Table 4-2 (from North Anna 3 COL Application Part 10, Table 2.4.2-1).

Table 4-2
ITAAC for Structural Fill Surrounding Seismic Category I Structures

Design Commitment	Inspections, Tests, and Analyses	Acceptance Criteria
1. The structural fill material surrounding Seismic Category I structures meets the following properties: • the angle of internal friction ≥35 degrees • the local effect on wall lateral pressures ≤1220 kg/m3 (76 lbf/ft3), as determined by the following equation: α (0.95v + 0.65)γ where: α = peak ground acceleration (in g) v = Poisson's ratio γ = density • the soil density γ ≥2000 kg/m3 (125 lbf/ft3).	Tests, inspections, analyses, or a combination thereof, will be performed to evaluate the properties of the structural fill.	A report exists and concludes that the tests, inspections, analyses, or a combination thereof, confirm that the structural fill material surrounding Seismic Category I structures meets the following properties: • the angle of internal friction ≥35 degrees • the local effect on wall lateral pressures ≤1220 kg/m3 (76 lbf/ft3), as determined by the following equation: α (0.95v + 0.65)γ where: α = peak ground acceleration (in g) v = Poisson's ratio γ = density • the soil density γ ≥2000 kg/m3 (125 lbf/ft3).

4.3 ITAAC for Plant Service Water System

The site-specific ITTAC for the plant service water system are related to plant service water reserve storage capacity as listed in Table 4-3. The licensee shall perform and satisfy the ITAAC defined in Table 4-3 (from North Anna 3 COL Application Part 10, Table 2.4.3-1).

Table 4-3
ITAAC for Plant Service Water Reserve Storage Capacity

Design Commitment	Inspections, Tests, and Analyses	Acceptance Criteria
1. The volume of water in the PSWS basin shall be sufficient such that:		
a. No active makeup shall be necessary to remove 2.02 × 107 MJ (1.92 × 1010 BTU) over a period of seven days.	Inspections and analysis will be performed of the PSWS basin and cooling towers.	A report exists and concludes that the volume of water in the PSWS basin is sufficient such that no active makeup is necessary to remove 2.02 × 107 MJ (1.92 × 1010 BTU) over a period of seven days.
b. The PSWS pumps must have sufficient available net positive suction head at the pump suction location for the lowest probable water level of the heat sink.	Inspections and analysis will be performed of the PSWS basin.	A report exists and concludes that the PSWS pumps have sufficient available net positive suction head at the pump suction location for the lowest probable water level of the heat sink.

4.4 Offsite Power Systems ITAAC

Table 4-4 provides the site-specific offsite power ITAAC. The licensee shall perform and satisfy the ITAAC defined in Table 4-4 (from North Anna 3 COL Application Part 10, Table 2.4.8-1).

Table 4-4
ITAAC for offsite Power Systems

Design Commitment	Inspections, Tests, and Analyses	Acceptance Criteria
1.Independent offsite power sources supply electric power from the transmission network to the interface with the onsite plant power system (PPS)		
a. A minimum of two offsite power circuits are provided to the interface with the onsite PPS and are physically separate.	a. Inspections of the as-built offsite power supply transmission system will be performed.	a. A report exists and concludes the following inspection results: i) At least two offsite transmission circuits are provided to the interface with the onsite PPS. 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. iii) The two offsite power circuits do not have a common takeoff structure or use a common structure for support.
b. The two offsite power circuits interfacing with the onsite PPS are electrically independent.	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.	b. A report exists and concludes that a test signal exists in only the circuit under test.
c. The breaker control power. Instrumentation and control circuits for the two offsite Dower circuits interfacing with the onsite PPS are electrically independent.	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.	c. A report exists and concludes that a test signal exists in only the circuit under test.
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.	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.	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.
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	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	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

PPS that will support operation of safety-related loads during design basis operating modes.	of the PPS determined in DCD ITAAC 2.13.1-2, Item 9.	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 to the interface with the onsite portions of the PPS that will support operation of safety-related loads during design basis operating modes.	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.	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.
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.	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.	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.

4.5 Turbine Building ITAAC

Table 4-5 provides the site-specific turbine building (TB) ITAAC. The licensee shall perform and satisfy the ITAAC defined in Table 4-5 (from North Anna 3 COL Application Part 10, Table 2.4.15-1).

Table 4-5
ITAAC for the Turbine Building

Design Commitment	Inspections, Tests, and Analyses	Acceptance Criteria
1. The site-specific seismic load demands for the Turbine Building structure are within acceptable limits to ensure that the structure is seismically adequate, using the same analysis methodology as a Seismic Category I structure, considering associated loads as described in DCD Tier 1 ITAAC Table 2.16.8-1, Item 1.	Perform site-specific SSI analysis, following the methodology specified for Seismic Category I structures in FSAR Section 3.7.2, to address ground motion exceedances and site-specific effects of subgrade properties. If the Turbine Building structure seismic load demands exceed the standard design seismic loads, perform a structural design evaluation of the Turbine Building in the same manner as for a Seismic Category I structure, including the load combinations and the acceptance criteria, for the associated loads.	The Turbine Building structure seismic load demands obtained from the site-specific SSI analysis are acceptable if at least one of the following two criteria are satisfied: (1) the site-specific seismic loads are bounded by the standard design seismic loads used for the Turbine Building; or, (2) the results from the site-specific structural design evaluation demonstrate that the Turbine Building total stresses are bounded by the Code allowable stress limits for a Seismic Category I structure, for the associated loads.. Site-specific foundation input response spectra (FIRS) developed using site-specific soil properties and FSAR Sections 2.5.2 and 3.7.1 methodology are used in the SSI analysis.
2. Seismic SSSI of the non-Seismic Category I Turbine Building will not impair the ability of the adjacent Seismic Category I Reactor Building to perform its safety functions.	Perform site-specific SSSI analyses to evaluate seismic interaction between the Turbine Building and adjacent Seismic Category I Reactor Building, using methodology consistent with that used for the Seismic Category I structures.	Site-specific analyses conclude that there is no seismic SSSI of the non-Seismic Category I Turbine Building that impairs the ability of the adjacent Seismic Category I Reactor Building to perform its safety functions.

4.6 Radwaste Building ITAAC

Table 4-6 provides the site-specific radwaste building (RWB) ITAAC. The licensee shall perform and satisfy the ITAAC defined in Table 4-6 (from North Anna 3 COL Application Part 10, Table 2.4.16-1).

Table 4-6
ITAAC for the Radwaste Building

Design Commitment	Inspections, Tests, and	Acceptance Criteria
1. The site-specific seismic load demands for the Radwaste Building structure are within acceptable limits to ensure that the structure is seismically adequate, using the same analysis methodology as a Seismic Category I structure, considering associated loads as described in DCD Tier 1 ITAAC Table 2.16.9-1, Item 1. The SSI analysis uses site-specific foundation input response spectra (FIRS) developed using site-specific soil properties and FSAR Sections 2.5.2 and 3.7.1 methodology for Seismic Category I buildings.	Perform site-specific SSI analysis, following the methodology specified for Seismic Category I structures in FSAR Section 3.7.2, to address ground motion exceedances and site-specific effects of subgrade properties. If the Radwaste Building structure seismic load demands exceed the standard design seismic loads, perform a structural design evaluation of the Radwaste Building in the same manner as for a Seismic Category I structure, including the load combinations and the acceptance criteria, for the associated loads.	The Radwaste Building structure seismic load demands obtained from the site-specific SSI analysis for the Radwaste Building structure are acceptable if at least one of the following two criteria are satisfied: (1) the site-specific seismic loads are bounded by the standard design seismic loads used for the Radwaste Building; or, (2) the results from the site-specific structural evaluation demonstrate that the Radwaste Building total stresses are bounded by Code allowable stress limits that are the same as for a Seismic Category I structure, for the associated loads. Site-specific foundation input response spectra (FIRS) developed using site-specific soil properties and FSAR Sections 2.5.2 and 3.7.1 methodology are used in the SSI analysis.
2. The Radwaste Building has an exterior wall static pressure capacity of at least 3 psi.	Perform an analysis to determine the static wall pressure capacity of the exterior walls of the as-built Radwaste Building.	Results of the Radwaste Building analysis demonstrate that the exterior wall static pressure capacity is at least 3 psi.
3. Seismic SSSI of the non-Seismic Category I Radwaste Building will not impair the ability of the adjacent Seismic Category I Reactor Building to perform its safety functions.	Perform site-specific SSSI analyses to evaluate seismic interaction between the Radwaste Building and adjacent Seismic Category I Reactor Building, using methodology consistent with that used for the Seismic Category I structures.	Site-specific analyses conclude that there is no seismic SSSI of the non-Seismic Category I Radwaste Building that impairs the ability of the adjacent Seismic Category I Reactor Building to perform its safety functions.

4.7 Service Building ITAAC

Table 4-7 provides the site-specific service building (SB) ITAAC. The licensee shall perform and satisfy the ITAAC defined in Table 4-7 (from North Anna 3 COL Application Part 10, Table 2.4.17-1).

Table 4-7
ITAAC for the Service Building

Design Commitment	Inspections, Tests, and	Acceptance Criteria
1. The site-specific seismic load demands for the Service Building structure are within acceptable limits to ensure that the structure is seismically adequate, using the same analysis methodology as a Seismic Category I structure, considering associated loads as described in DCD Tier 1 ITAAC Table 2.16.10-1, Item 1.	Perform site-specific SSI analysis, following the methodology specified for Seismic Category I structures in FSAR Section 3.7.2, to address ground motion exceedances and site-specific effects of subgrade properties. If the Service Building structure seismic load demands exceed the standard design seismic loads, perform a structural design evaluation of the Service Building in the same manner as for a Seismic Category I structure, including the load combinations and the acceptance criteria, for the associated loads.	The Service Building structure seismic load demands obtained from the site-specific SSI analysis are acceptable if at least one of the following two criteria are satisfied: (1) the site-specific seismic loads are bounded by the standard design seismic loads used for the Service Building; or, (2) the results from the site-specific structural design evaluation demonstrate that the Service Building total stresses are bounded by Code allowable stress limits that are the same as for a Seismic Category I structure, for the associated loads.
The SSI analysis uses site-specific foundation input response spectra (FIRS) developed using site-specific soil properties and FSAR Sections 2.5.2 and 3.7.1 methodology for Seismic Category I buildings.		Site-specific foundation input response spectra (FIRS) developed using site-specific soil properties and FSAR Sections 2.5.2 and 3.7.1 methodology are used in the SSI analysis.
2. Seismic SSSI of the non-Seismic Category I Service Building will not impair the ability of the adjacent Seismic Category I Reactor Building, Control Building, Fuel Building, or FWSC to perform the safety functions	Perform site-specific SSSI analyses to evaluate seismic interaction between the Service Building and adjacent Seismic Category I Reactor Building, Control Building, Fuel Building, or FWSC, using methodology consistent with that used for the Seismic Category I structures.	Site-specific analyses conclude that there is no seismic SSSI of the non-Seismic Category I Service Building that impairs the ability of the adjacent Seismic Category I Reactor Building, Control Building, Fuel Building, or FWSC to perform the safety functions.

4.8 Ancillary Diesel Building ITAAC

Table 4-8 provides the site-specific ancillary diesel building (ADB) ITAAC. The licensee shall perform and satisfy the ITAAC defined in Table 4-8 (from North Anna 3 COL Application Part 10, Table 2.4.18-1).

Table 4-8
ITAAC for the Ancillary Diesel Building

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1 The site-specific seismic load demands for the Ancillary Diesel Building structure are within acceptable limits to ensure that the structure is seismically adequate, using the same analysis methodology as a Seismic Category I structure, considering associated loads as described in DCD Tier 1 ITAAC Table 2.16.11-1, Item 1. The SSI analysis uses site-specific foundation input response spectra (FIRS) developed using site-specific soil properties and FSAR Sections 2.5.2 and 3.7.1 methodology for Seismic Category I buildings.	Perform site-specific SSI analysis, following the methodology specified for Seismic Category I structures in FSAR Section 3.7.2, to address ground motion exceedances and site-specific effects of subgrade properties. If the Ancillary Diesel Building structure seismic load demands exceed the standard design seismic loads, perform a structural design evaluation of the Ancillary Diesel Building in the same manner as for a Seismic Category I structure, including the load combinations and the acceptance criteria, for the associated loads.	The Ancillary Diesel Building structure seismic load demands obtained from the site-specific SSI analysis are acceptable if at least one of the following two criteria are satisfied: (1) the site-specific seismic loads are bounded by the standard design seismic loads used for the Ancillary Diesel Building; or, (2) the results from the site-specific structural design evaluation demonstrate that the total stresses are bounded by Code allowable stress limits that are the same as for a Seismic Category I structure, for the associated loads. Site-specific foundation input response spectra (FIRS) developed using site-specific soil properties and FSAR Sections 2.5.2 and 3.7.1 methodology are used in the SSI analysis.
2. Seismic SSSI of the non-Seismic Category I Ancillary Diesel Building will not impair the ability of the adjacent Seismic Category I Fuel Building to perform its safety functions.	Perform site-specific SSSI analyses to evaluate seismic interaction between the Ancillary Diesel Building and adjacent Seismic Category I Fuel Building, using methodology consistent with that used for the Seismic Category I structures.	I Site-specific analyses conclude that there is no seismic SSSI of the non-Seismic Category I Ancillary Diesel Building that impairs the ability of the adjacent Seismic Category I Fuel Building to perform its safety functions.