VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

November 18, 2022

10 CFR 50.54(q)
10 CFR 50.90

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

Serial No.: 22-047
NRA/GDM: R0
Docket Nos.: 50-280/281
License Nos.: DPR-32/37

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2
PROPOSED EMERGENCY PLAN REVISION
RELOCATION OF THE TECHNICAL SUPPORT CENTER

Pursuant to 10 CFR 50.90, Virginia Electric and Power Company (Dominion Energy Virginia) is submitting a license amendment request (LAR) to revise the Surry Power Station (SPS) Units 1 and 2 Emergency Plan. Specifically, the proposed change would allow relocation of the Technical Support Center (TSC) from its current location adjacent to the Main Control Room (MCR) to the building previously used as the Local Emergency Operations Facility (LEOF). The new location is adjacent to the Training Building on the north side of the Owner Controlled Area (OCA), outside of the Protected Area (PA). In addition, the proposed change removes reference to the MCR as an alternate location for the TSC. This alternate TSC location is not the same as the Alternative Facility required by 10 CFR 50, Appendix E.IV.E.8.d, which remains unchanged by the proposed amendment.

Because the future TSC will be located outside the PA and is greater than a two-minute walk to the MCR, the proposed change is considered a reduction in Emergency Plan effectiveness as defined in 10 CFR 50.54(q)(1)(iv). In accordance with 10 CFR 50.54(q)(4), changes to the emergency plan that reduce effectiveness of the plan may not be implemented without prior Nuclear Regulatory Commission (NRC) approval. Therefore, the proposed change is being submitted as an LAR in accordance with 10 CFR 50.90. A description and assessment of the proposed change are provided in Attachment 1. The marked-up SPS Emergency Plan pages indicating the proposed change are provided in Attachment 2.

Dominion Energy Virginia has evaluated the proposed amendment and determined that it does not involve a significant hazards consideration as defined in 10 CFR 50.92. The basis for this determination is included in Attachment 1. Dominion Energy Virginia has also determined that operation with the proposed change will not result in any significant increase in the quantity of effluents that may be released offsite or any significant increase in individual or cumulative occupational radiation exposure. Therefore, the proposed amendment is eligible for categorical exclusion from an environmental assessment as set forth in 10 CFR 51.22(c)(9), and, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment is needed in connection with the approval of the proposed change.

In accordance with 10 CFR 50.91, Dominion Energy Virginia is notifying the Commonwealth of Virginia of this LAR by transmitting a copy of this letter to the designated state official.

Should you have any questions or require additional information, please contact Mr. Gary D. Miller at (804) 273-2771.

Respectfully,

James E. Holloway
Vice President – Nuclear Engineering and Fleet Support

COMMONWEALTH OF VIRGINIA)
)
COUNTY OF HENRICO)

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by James E. Holloway, who is Vice President – Nuclear Engineering & Fleet Support, of Virginia Electric and Power Company. He has affirmed before me that he is duly authorized to execute and file the foregoing document in behalf of that company, and that the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 18th day of November, 2022.

My Commission Expires: August 31, 2023.

Notary Public

GARY DON MILLER
Notary Public
Commonwealth of Virginia
Reg. # 7629412
My Commission Expires August 31, 2023

Commitments contained in this letter: None.

Attachments:

1. Description and Assessment of Proposed Changes
2. Marked-Up SPS Emergency Plan Pages

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ATTACHMENT 1

Description and Assessment of Proposed Changes

Surry Power Station Units 1 and 2
Virginia Electric and Power Company
(Dominion Energy Virginia)

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Description and Assessment of Proposed Changes

1.0 SUMMARY DESCRIPTION

Virginia Electric and Power Company (Dominion Energy Virginia) proposes revisions to the Surry Power Station (SPS), Units 1 and 2, Emergency Plan that would allow relocation of the Technical Support Center (TSC) from its current location adjacent to the Main Control Room (MCR) to the building that formerly housed the Local Emergency Operations Facility (LEOF) on the north side of the Owner Controlled Area (OCA) outside the Protected Area (PA) boundary. This change proposes alternative means of performing TSC functions than those identified in the NUREG-0696 [Reference 1] and NUREG-0737, Supplement 1 [Reference 2] guidance related to facility location, specifically:

- the TSC will be located near the MCR to facilitate face-to-face communications between the TSC and control room personnel,
- the walking time from the TSC to the MCR does not exceed two minutes,
- there will be no major security barriers between the two facilities,
- the TSC is located within the site protected area so as to facilitate necessary interaction with MCR, OSC, EOF, and other personnel involved with the emergency, and
- the TSC will be provided with protective clothing and respiratory protection equipment.

The change to TSC location is considered a reduction in Emergency Plan effectiveness as defined in 10 CFR 50.54(q)(1)(iv) [Reference 3]. In accordance with 10 CFR 50.54(q)(4) [Reference 3], changes to a licensee's emergency plan that reduce the effectiveness of the plan may not be implemented without prior Nuclear Regulatory Commission (NRC) approval and are being submitted as a license amendment request (LAR) in accordance with 10 CFR 50.90 [Reference 4].

2.0 DETAILED DESCRIPTION

2.1 Proposed Changes

Brief descriptions of the associated Emergency Plan proposed changes are provided below. The justification for each change is discussed in Section 3.2. The

specific wording changes are provided in Attachment 2 as marked-up copies of the Emergency Plan pages.

a. Section 1, "Definitions," is revised to reflect the proposed TSC location.

b. Section 7.1.3, "Technical Support Center," is revised to reflect the location description and construction details in accordance with the proposed change and removal of reference to the MCR as an alternate location for the TSC.

c. Emergency Plan Section 7.3.4, "Plant Process Parameter Monitoring," is revised to reflect means of accessing Plant Computer System (PCS) data in the proposed TSC location.

d. Emergency Plan Appendix 10.7, "Emergency Kit Contents," is revised to delete reference to two (2) sets of protective clothing and two (2) respirators from TSC emergency kit contents.

2.2 Reason for the Proposed Changes

Dominion Energy Virginia has obtained NRC approval for extended operation of SPS to 80 years under Subsequent License Renewal (SLR). In support of efforts to prepare the plants to efficiently operate throughout the extended license period, the station is installing a modernized MCR and new Non-Safety Related (NSR) Digital Controls Platform. The new NSR Controls Platform requires a centralized location within the PA to interface with the plant's various systems. The existing TSC has been selected as the centralized location for the new NSR Controls Platform due to its close proximity to the MCR and the existing PCS. To support this activity, SPS proposes relocation of the TSC to the location formerly used for the LEOF. The proposed TSC facility will be functionally equivalent to the existing TSC. The proposed TSC will be larger than the existing TSC; however, the existing TSC layout will be replicated for ease of transition to the new facility. The larger facility will support additional video display capabilities to enhance intra-facility data and information sharing. The proposed new TSC will also provide enhanced power capabilities with a dedicated diesel generator backup with auto transfer on loss of normal power which works in conjunction with an uninterruptible power supply (UPS) to ensure continuity of TSC operations.

Changes to the Emergency Preparedness Program since the implementation of the TSC in 1984 are better supported in a more spacious facility that allows for incorporation of new technologies. Relocation of the TSC to a larger building with

additional technological capabilities and additional power capabilities enhances the overall SPS emergency response.

2.3 SPS Emergency Plan Background

Emergency Plan, Revision 1 [Reference 5], dated August 2, 1982, described an interim TSC in the Control Room Annex with the permanent TSC in the process of planning and engineering. Revision 1 established an augmentation goal of 60 minutes for the TSC.

Emergency Plan, Revision 3 [Reference 6], dated September 17, 1982, established an augmentation goal of 45 minutes for the Radiological Assessment Coordinator (RAC) and Core/Thermal Hydraulic Engineer in the TSC.

Emergency Plan, Revision 15 [Reference 7], dated June 28, 1984, included a reference to the permanent TSC that was established adjacent to the MCR in accordance with NUREG-0696 [Reference 1] and established an augmentation goal of 60 minutes for the RAC in the TSC.

On June 12, 1987, the NRC issued a letter acknowledging completion of NUREG-0737 TMI Action items including establishment of the TSC. [Reference 8]

Emergency Plan, Revision 31 [Reference 9], dated February 18, 1988, implemented the Emergency Response Facility Computer System (ERFCS).

Emergency Plan, Revision 33 [Reference 10], dated February 2, 1991, established an augmentation goal of 60 minutes for the Core/Thermal Hydraulic Engineer per NRC letter dated May 24, 1990 [Reference 11]. This revision also incorporated reference to the alternate location for the TSC in the MCR and revised the description of the Microwave Communications System to clarify that it provided the Off-Premises Exchange (OPX)/Automatic Ringdown (ARD) phone links to State and local agencies, the Corporate Emergency Response Center (CERC), and TSC to LEOF.

Emergency Plan, Revision 40 [Reference 12], dated January 1, 1996, established augmentation goals of 45 and 60 minutes for mechanical maintenance in the OSC and was approved by NRC Safety Evaluation Report (SER) dated December 13, 1995 [Reference 13]. This SER also reaffirmed the existing TSC augmentation goal of 60 minutes.

Emergency Plan, Revision 49 [Reference 14], dated June 8, 2005, implemented the PCS replacing the ERFCS. Communications descriptions were revised to

replace the Microwave System with the Synchronous Optical Network (SONET) System, which performed the same function as the Microwave System.

Emergency Plan, Revision 66 [Reference 15], dated May 1, 2019, implemented a corporate EOF for SPS and was approved by NRC SER dated February 27, 2019 [Reference 32]. This revision provided the opportunity for repurposing the onsite LEOF.

Emergency Plan, Revision 67 [Reference 16], dated September 12, 2019, revised the communications description to change SONET to Enterprise Transport Network, which performed the same function as SONET.

Emergency Plan, Revision 71 [Reference 17], dated October 22, 2020, is the current revision of the SPS Emergency Plan.

3.0 TECHNICAL EVALUATION

3.1 Technical Analysis

3.1.1 Function

NUREG-0696 [Reference 1], Section 2.1, requires that the onsite TSC provide for the following functions:

1. *Provide plant management and technical support to the plant operations personnel during emergency conditions.*
2. *Relieve the reactor operators of peripheral duties and communications not directly related to reactor system manipulations.*
3. *Prevent congestion in the control room.*
4. *Perform EOF functions for the Alert Emergency class and for the Site Area Emergency class and General Emergency class until the EOF is functional.*

These criteria are also provided in NUREG-0737, Supplement 1 [Reference 2], Section 8.2.1.a.

a. Revision 15 of the Emergency Plan [Reference 7] described a TSC that functioned as the location conducting plant management and technical support for responding to emergency events. The TSC staff was responsible for relieving MCR personnel of communications and emergency response actions and performed these actions until the LEOF was activated.

b. Revision 71 of the Emergency Plan [Reference 17] maintained the TSC support functions specified in Revision 15 [Reference 7] in accordance with NUREG-0696 [Reference 1].

c. The proposed change relocates the TSC to the building previously used to house the LEOF. This building is within the OCA boundary and physically connected to the Surry Training Center Simulator Building. As described by NUREG-0696 [Reference 1] and NUREG-0737, Supplement 1 [Reference 2], relocation of the TSC would continue to provide for the following functions:

    1. Provide management and technical support to the plant operations personnel during emergencies;
    2. Relieve the Control Room of peripheral duties;
    3. Prevent congestion in the Control Room; and
    4. Performs EOF functions until such time as the CERC is staffed.

Therefore, the proposed change does not adversely impact the TSC function.

3.1.2 Location

NUREG-0696 [Reference 1], Section 2.2, states that the TSC be located as close as possible to the MCR with no major security barriers between the TSC and MCR, and within two minutes walking time between the TSC and MCR. The stated purpose for this location was to facilitate face-to-face communications between the TSC and MCR to ensure effective communications and access to MCR information not available on the TSC data system. NUREG-0737, Supplement 1 [Reference 2], Section 8.2.1.b, references the need to locate the facility within the PA to facilitate interaction with MCR, OSC, EOF and other personnel involved in responding to the emergency.

a. Revision 15 of the Emergency Plan [Reference 7] identified the location of the permanent TSC as being in an area adjacent to the MCR. Being adjacent to the MCR, the TSC was within the PA and within a two (2) minute walking time with no major security barriers between the facilities other than the card reader system outside the MCR entrance point. Subsequently, the description of the TSC location was revised in Revision 33 of the Emergency Plan [Reference 10] to identify the MCR as the alternate location for the TSC.

b. Revision 71 of the Emergency Plan [Reference 17] maintains the original location of the TSC, and the MCR as the alternate location for the TSC.

c. The proposed change relocates the TSC to the building previously used to house the LEOF. This building is physically connected to the Surry Training Center Simulator Building. This location is outside the PA boundary and greater than a two-minute walk from the MCR. While the proposed location of the new facility does not allow for direct face-to-face communications between the Shift Manager/Station Emergency Manager (SEM) in the MCR and the SEM in the TSC, adequate communications capability in the form of dedicated phone lines and use of inter-facility communicator positions ensures continued and effective communication is maintained. In addition, the plant data needed for emergency response provided to the MCR via the PCS is available on TSC workstations, which eliminates the need for TSC personnel to walk to the MCR to obtain data. The communications and plant data capabilities are discussed in Sections 3.1.7 and 3.1.9, respectively. The site currently demonstrates the effectiveness of this communication and data capability during emergency plan drills and exercises using the SPS Simulator, MCR, and the existing TSC which are currently separated by the same distance as the MCR and the proposed TSC. This process has been the subject of inspection and has not resulted in observation of a performance deficiency. As a result, the relocation of the TSC to the new location does not adversely impact the intent of the guidance in NUREG-0696 [Reference 1] or NUREG-0737, Supplement 1 [Reference 2].

The proposed change also removes reference to the MCR as an alternate location for the TSC. NUREG-0696 [Reference 1] does not require licensees to establish a backup or an alternate TSC. The alternate location for the TSC referenced in the current SPS Emergency Plan serves as a pre-planned compensatory measure for a loss of TSC functionality. This alternate TSC location is not the same as the Alternative Facility required by 10 CFR 50, Appendix E.IV.E.8.d [Reference 25] which remains unchanged by this proposed amendment. This pre-planned compensatory measure is currently described in Emergency Plan Implementing Procedure (EPIP)-3.02, "Activation of Technical Support Center," [Reference 22] and will be maintained in the EPIP. NUREG-0696 [Reference 1], Section 2.6, states, "If the TSC becomes uninhabitable, the TSC plant management function shall be transferred to the control room." This requirement will continue to be met by the transfer of the plant management function back to the Shift Manager/SEM in the MCR. Therefore, removing reference to the MCR as the alternate location

for the TSC complies with the guidance of NUREG-0696 [Reference 1] and NUREG-0737, Supplement 1 [Reference 2].

3.1.3 Staffing and Training

NUREG-0696 [Reference 1], Section 2.3, guidance states that, upon activation, designated personnel shall report directly to the TSC and achieve full functional operation within 30 minutes. The licensee designated TSC staff shall consist of sufficient technical, engineering, and senior designated licensee officials to provide the needed support to the MCR during emergency conditions. This guidance further directs that these personnel have the requisite training and proficiency to perform their assigned roles. NUREG-0737, Supplement 1 [Reference 2], Section 8.2.1.j, reiterates the TSC staffing guidance but changed the TSC staffing time requirement to 60 minutes.

a. Revision 1 of the Emergency Plan [Reference 5] established an augmentation goal of 60 minutes for the TSC and established a training program for ERO personnel, including the TSC staff.

   Revision 3 of the Emergency Plan [Reference 6] established an augmentation goal of 45 minutes for the RAC and Core/Thermal Hydraulic Engineer in the TSC.

   Revision 15 of the Emergency Plan [Reference 7] established an augmentation goal of 60 minutes for the RAC in the TSC.

   Revision 40 of the Plan [Reference 12] established an augmentation goal of 45 and 60 minutes for mechanical maintenance support in the OSC and was approved by NRC SE dated December 13, 1995 [Reference 13]. This SE also reaffirmed the existing TSC augmentation goal of 60 minutes. This revision identified TSC positions for senior management, engineering, and technical support required by the referenced regulatory requirement. These positions included a SEM as well as positions providing operational, engineering, radiation protection, and communications support.

b. Revision 71 of the Emergency Plan [Reference 17] maintains the TSC augmentation goal of 60 minutes established in Revision 40 of the Emergency Plan [Reference 12] and continues to provide staffing of senior management, engineering, and technical support positions, and a TSC staff training program.

c. The proposed change maintains the existing TSC staffing levels, TSC Emergency Response Organization (ERO) training, and the 60-minute

augmented response times for TSC responders. The proposed change relocates the TSC from its current location adjacent to the MCR to the building formerly used for the LEOF located adjacent to the Training Building outside the PA. The new location will be approximately eight (8) minutes walking distance from the MCR.

The Administration Building, located just outside the PA boundary, is the normal work location for many of the TSC ERO staff members. Responding from the Administration Building to the new TSC location does not require traversing through PA security access locations as is currently the case and the walking time from the Administration Building to the new TSC location is approximately five (5) minutes. As a result, response times for TSC responders during dayshift hours would improve over the response times currently demonstrated in drills/exercises. The new location also provides for improved off-hours staffing capability because responders will not have to pass through the PA security access locations to reach the new TSC location.

3.1.4 Size

NUREG-0696 [Reference 1] guidelines for the sizing of the TSC state that it be:

- Large enough to provide working space, without crowding, for the maximum level of occupancy with a working space of 75 square feet per person;
- Working space sized for a minimum of 25 persons, including 20 persons designated by the licensee and five NRC personnel;
- Space for the TSC data system equipment to include space to access the data and perform maintenance activities on the equipment when needed;
- Access to communications equipment by all TSC personnel who need communications capabilities to perform their functions;
- A separate room adequate for at least three persons to be used for private NRC consultations.

NUREG-0737, Supplement 1 [Reference 2], also states that the facility should be sufficient to accommodate NRC and licensee personnel, equipment and documentation, and designed considering good human factors engineering principles.

a. Revision 15 of the Emergency Plan [Reference 7] identified that the TSC contained 3,000 square feet of floor space and was able to accommodate 25 individuals for emergency response and included required access to plant records.

b. The current Emergency Plan, Revision 71 [Reference 17], maintains the Revision 15 size and occupancy requirements for the TSC.

c. The proposed change will increase the size of the TSC from 3,000 square feet to approximately 3,400 square feet, which assures a minimum of 75 square feet of working space per person for the 20 TSC ERO positions identified in the current revision of the SPS Emergency Plan and NRC personnel. The proposed TSC layout replicates the layout of the existing facility and will consist of a TSC Operations Floor and separate rooms for Operations Support, Technical Support, Dose Assessment, and NRC personnel. It will also include a breakroom and bathroom facilities to support long-term operation of the facility. A library space is also provided, with adequate space for the storage of plant records and historical data.

   The design of the facility provides a standard commercial level of ergonomic and comfort features for workspace efficiency. The new facility arrangement provides adequate space to support maintenance of TSC data, communications systems, and equipment. The facility will also include an equipment room for housing the TSC support systems/equipment to include Local Area Network (LAN) and communications network switches. The communications systems and data system capabilities are described below in Sections 3.1.7 and 3.1.9, respectively.

   The size of the proposed facility is larger than the existing TSC, provides functionally equivalent working space and accommodations, and is consistent with the guidance provided in NUREG-0696 [Reference 1] and NUREG-0737, Supplement 1 [Reference 2].

3.1.5 Structure

NUREG-0696 [Reference 1] states that the TSC complex must be able to withstand the most adverse conditions reasonably expected during the design life of the plant including earthquakes, high winds (other than tornadoes), and floods. However, the TSC need not meet seismic Category I criteria or be qualified as an engineered safety feature (ESF). Normally, a well-engineered structure will provide

an adequate capability to withstand earthquakes. Winds and floods with a 100-year-recurrence frequency are acceptable as a design basis. NUREG-0737, Supplement 1 [Reference 2], identifies that the structure should be built in accordance with the Uniform Building Code (UBC).

a. The original TSC structure was implemented in Revision 15 of the Emergency Plan [Reference 7]. The structural design for the original TSC was consistent with the applicable codes, standards, and regulatory requirements, as well as existing station criteria for general structural design in accordance with the 1978 Building Officials Code Administrators International (BOCA) Code [Reference 18]. The original TSC was designed in accordance with NUREG-0696 [Reference 1] which did not include a requirement to use the UBC. The TSC construction was completed using the BOCA code based on the guidance provided in NUREG-0737, Supplement 1 [Reference 2], Section 3.7, which allowed for previous work done in good faith. Relative to flooding, the maximum postulated flood level for the west side of the plant is 24 feet mean sea level (MSL). The TSC was located adjacent to the MCR with the MCR located at 27 feet MSL, which is above the 24 feet MSL flood level specified in the SPS Updated Final Safety Analysis Report (UFSAR) [Reference 19].

b. The current TSC structure remains in the same location as the original TSC.

c. The proposed new location for the TSC is in the building that formerly housed the LEOF. The LEOF was previously determined to meet the Emergency Response Facility (ERF) requirements for an Emergency Operations Facility (EOF) as documented by NRC letter dated June 12, 1987 [Reference 8]. This building was engineered and designed in accordance with the BOCA Code [Reference 18] which was the uniform building code used by Virginia at the time the LEOF was designed. As referenced above, NUREG-0737, Supplement 1 [Reference 2], directs the use of the UBC. The former LEOF structure is made of 12-inch-thick reinforced concrete exterior walls, roof, and a 24-inch-thick mat/slab. A review of this design determined that due to the thickness and reinforcement of the walls and slab floor, the structure exceeds the requirements from the UBC during that timeframe and can withstand the applicable loading. The building, as designed, will withstand the 100-year wind speeds as described in the UFSAR [Reference 19]. The building has a finished floor elevation of 33 feet that is above the maximum UFSAR

[Reference 19] flood level discussed above. Based on the design of the building, the proposed relocation of the TSC is consistent with the TSC structural guidance provided in NUREG-0696 [Reference 1] and NUREG-0737, Supplement 1 [Reference 2].

3.1.6 Habitability

NUREG-0696 [Reference 1] states that the TSC is to provide direct management and technical support to the control room during an accident and shall have the same radiological habitability as the control room under accident conditions. At a minimum, the TSC ventilation system shall include high-efficiency particulate air (HEPA) and charcoal filters as needed. This ventilation system need not be seismic Category I qualified, redundant, instrumented in the control room, or automatically activated to fulfill its role. NUREG-0696 [Reference 1] states that sufficient potassium iodide (KI) shall be provided for use by TSC personnel. Radiation monitoring systems shall be provided in the TSC and detectors shall be able to distinguish the presence or absence of radioiodines at concentrations as low as 10E-7 microcuries/cc. Equipment that protects personnel shall be provided in the TSC for the staff who must travel between the TSC and the control room or the EOF under adverse radiological conditions. Protective equipment shall also be provided to allow TSC personnel to continue to function during the presence of low-level airborne radioactivity or radioactive surface contamination. Anti-contamination clothing and respiratory protective gear are examples of equipment that shall be provided. NUREG-0737 [Reference 20] states that the TSC is to be considered an area requiring continuous occupancy and is subject to the continuous occupancy dose requirements of less than 15 mrem/hr (averaged over 30 days). NUREG-0737, Supplement 1 [Reference 2], describes the need for the TSC to be environmentally controlled to provide temperature and humidity appropriate for personnel and equipment and for the provision of radiological protection and monitoring equipment necessary to assure that radiation exposure to any person working in the TSC would not exceed five (5) rem whole body for the duration of the emergency.

a. The original TSC as implemented in Revision 15 of the Emergency Plan [Reference 7] was designed and constructed consistent with NUREG-0696 [Reference 1] to include the following:

1) Shielding

The TSC structure was constructed on the existing concrete slab at ground level in the Service Building, and on new footings. The TSC was a one-story steel and concrete-framed structure. The concrete walls provided shielding for the TSC inhabitants during a post-accident condition and were a minimum of one (1) foot thick, except for the wall between the filter room and the TSC, which was two (2) feet thick. The radiation shield slab above the TSC was a one (1) foot thick concrete slab with a three (3)-inch metal deck form supported on structural steel for a total depth of 15 inches. The filter and HVAC rooms utilized the existing 4-1/2-inch concrete slab as a radiation shield.

2) Ventilation

The ventilation system for the TSC consisted of an HVAC system and filtration system meeting the design requirements provided in NUREG-0696 [Reference 1]. The TSC HVAC system consisted of an air-cooled condensing unit, air handling unit with a filter, cooling coil, heating coil, supply fan, supply and return air grilles and related ductwork. The HVAC system could maintain the TSC area between 68°F and 78°F and 20 to 80 percent relative humidity. The TSC filtration system consisted of a high efficiency prefilter, electric coil, upstream and downstream HEPA filters, and four (4) inch thick bed of charcoal filters. The filtration system could be started manually and would also start automatically on a safety injection (SI) signal. During an emergency, the TSC ventilation system was sized to maintain a positive pressure in the TSC of 0.125 inches of water.

3) Radiological Monitoring

The original TSC design provided a radiation monitoring system (RMS) meeting the requirements of NUREG-0696 [Reference 1] to provide continuous indication of the dose rate and airborne radioactivity in the TSC during an emergency as well as alerting personnel of adverse conditions. The RMS consisted of an Eberline PING-3B for monitoring airborne radioactivity, two Eberline EC4-X area radiation monitors, and an Eberline RIE-S remote alarm panel. The Eberline PING-3B had particulate, iodine, and noble gas

monitors with the capability to detect iodine at concentrations as low as 10E-7 microcuries/cc. The PING-3B provided both audible and visual alarm indication for airborne radioactivity. EC4-X area radiation monitors were mounted on the walls at either end of the TSC. These monitors had an analog display and provided audible and visual alarms.

4) Protective Equipment

The original TSC as described in Revision 15 of the Emergency Plan [Reference 7] did not include emergency kits containing protective equipment; these supplies were maintained in the Health Physics (HP) Office. Revision 35 of the Emergency Plan [Reference 33] added an emergency kit to the TSC to include two (2) sets of anti-contamination protective clothing and two (2) respirators. Thyroid blocking agents were maintained onsite for use as needed.

b. Revision 71 of the Emergency Plan [Reference 17] continues to use the original TSC structure and maintains the shielding, ventilation, RMS, thyroid blocking agents, and protective equipment capabilities described above.

c. The proposed TSC is designed to meet habitability requirements in accordance with NUREG-0696 [Reference 1], NUREG-0737 [Reference 20], and NUREG-0737, Supplement 1 [Reference 2]. Details on each element associated with facility habitability are outlined below.

1) Shielding

The design of the proposed TSC includes adequate shielding to provide radiological protection to the occupants of the facility consistent with the requirements of NUREG-0696 [Reference 1] and NUREG-0737, Supplement 1 [Reference 2]. As discussed above, the proposed location for the new TSC is in the building formerly used for the LEOF. The construction of this building consists of 12-inch-thick reinforced concrete exterior walls and roof, and a 24-inch-thick mat/slab. The TSC ventilation system filter bank will be located in the penthouse of the new facility in an unoccupied space that is separated from the ground level by a 12-inch-thick concrete slab. An existing hatch between the penthouse and the ground level of the new TSC (occupied space) will be

permanently sealed with a 12-inch concrete plug to prevent radiation exposure to the occupied TSC space below. A loss of coolant accident (LOCA) dose calculation was completed to verify the ability of the proposed TSC shielding and ventilation design to meet the specified occupancy dose requirements. Results of this calculation are described in Section 3.1.6.c.5, "LOCA Dose Calculation."

2) Ventilation

The ventilation system for the proposed TSC is designed to meet the requirements of NUREG-0696 [Reference 1] and NUREG-0737, Supplement 1 [Reference 2]. The ventilation system will be placed in emergency operating mode manually via a hand switch upon facility activation. When placed in emergency operating mode, bubble tight motor operated dampers will align makeup air through a filtration system and de-energize exhaust fan circuits. The filter bank consists of a HEPA filter in series with a high efficiency gas absorption (HEGA) filter with a nominal flow rate of 1000 cubic feet per minute (cfm). The HEPA filter removes particulate radioactive air contaminants and the HEGA removes remaining pollutants such as iodine compounds. The HEGA filter temperature is monitored by a heat detector. If a flame is detected, the CO2 (carbon dioxide) Suppression system floods CO2 into the duct mounted filter housing to extinguish the flame. The humidity of the makeup air stream is controlled via a sensor and electric duct heater. During emergency operation, the exhaust fans will be de-energized and isolated via dampers. Closing the isolation dampers enables the building's static pressure controller to modulate the filter fan speed to maintain the conditioned space at 0.125 inches water gauge (WG) relative to the outside air pressure and prevent infiltration of outside air. The ventilation system design has been suitably sized to provide heating and cooling capable of maintaining facility temperature at approximately 75°F dry bulb (+/-3°F) during the summer and 72°F dry bulb (+/-3°F) during the winter. An alarm function is provided which will alert the TSC staff of a component failure in the Emergency HVAC system. A LOCA dose calculation was completed to verify the ability of the proposed TSC shielding and ventilation design to meet the specified

occupancy dose requirements. Results of this calculation are described in Section 3.1.6.c.5, "LOCA Dose Calculation."

3) Radiological Monitoring

The proposed TSC will be provided with a radiation monitoring system (RMS) to provide continuous indication of the dose rate and airborne radioactivity in the TSC during an emergency and alert personnel of adverse radiological conditions as required per NUREG-0696 [Reference 1]. The RMS consists of one (1) Victoreen radiation monitor to detect airborne radioactivity and two (2) Mirion DRM-2 general area radiation monitors. The Victoreen radiation monitor will include particulate, iodine, and noble gas detectors, and will be able to distinguish the presence or absence of radioiodines at concentrations as low as 10E-7 microcuries/cc. The monitor will be located in the Dose Assessment Room. The monitor will continuously sample the atmosphere from locations throughout the TSC and provide an audible alarm to alert TSC personnel of adverse conditions. The two (2) Mirion DRM-2 general area radiation monitors will be wall mounted at separate locations around the TSC Operation Floor and will provide an audible alarm to alert TSC personnel of adverse conditions.

4) Protective Equipment

As discussed above, the proposed location for the TSC is outside the PA and greater than two minutes walking distance from the MCR. Improvements in voice and data communications capabilities eliminates the need for direct face-to-face communications. Therefore, protective clothing to support personnel travel between the TSC and MCR is not necessary. As described above, the TSC ventilation system will provide the facility protection from postulated releases, and continuous airborne and area radiation monitoring will provide the facility with early warning of changing radiological conditions in the facility. In addition, EPIPs direct monitoring of ERFs within 60 minutes following declaration of an emergency classified as an Alert or higher, when Radiation Protection responders are available. EPIPs establish access control and personnel monitoring for entering the ERFs to prevent contamination of the ERFs. EPIPs also provide guidance for issuance of respiratory protection and protective clothing in the

ERFs in the event survey results indicate the need for such protective equipment. Should radiological conditions necessitate the use of protective clothing or respiratory protection, these items can be dispatched to the TSC as appropriate. By eliminating the need for TSC staff to travel to the MCR, crediting the design of the TSC ventilation system and the installed monitoring capability, in conjunction with the performance of local surveys and access control within the facilities, sufficient protection from and early indication of changing radiological conditions in the TSC is provided such that protective equipment can be dispatched to the TSC on an as needed basis rather than maintaining these items in the TSC. As provided in the current Emergency Plan, thyroid blocking agents will continue to be maintained onsite for use as needed. This approach ensures the protection of the TSC staff consistent with the intent of NUREG-0696 [Reference 1] and NUREG-0737, Supplement 1 [Reference 2].

5) LOCA Dose Calculation

A dose calculation was completed to determine the projected dose to personnel in the proposed TSC from a design basis LOCA with a release to the environment to ensure that the dose to the TSC occupants would be less than the dose limit of five (5) rem TEDE. The calculation was performed using the RADTRAD-NAI, MicroShield, MicroSkyshine, and MCNP5 computer codes. Calculation inputs include:

- the atmospheric dispersion factor (X/Q) for the proposed TSC location;
- site-specific source terms; and
- LOCA dose components to include: containment leakage, emergency core cooling system (ECCS) leakage, refueling water storage tank (RWST) leakage, containment direct shine, containment sky shine, cloud shine, and TSC ventilation system filter shine.

The ventilation and shielding designs discussed above were used to determine the protection factors for the occupants of the facility. Personnel are assumed to occupy the TSC 100 percent of the time for the duration of the event. This is conservative as personnel

would not be expected to arrive at the TSC until after the initiation of the accident and would work in rotating shifts over the thirty-day scenario duration rather than any one individual remaining inside the TSC for the entire 30-day duration. Using this conservative assumption of continuous occupancy by an individual for the duration of the event, the LOCA dose calculation for the proposed TSC indicate the projected dose to TSC occupants is less than the five (5) rem requirement specified in NUREG-0696 [Reference 1] and NUREG-0737, Supplement 1 [Reference 2].

The habitability capabilities of the proposed TSC as described above provide for the radiological protection of TSC personnel consistent with the guidance provided in NUREG-0696 [Reference 1] and NUREG-0737, Supplement 1 [Reference 2].

3.1.7 Communications

NUREG-0696 [Reference 1] guidance states that the TSC should have reliable voice communications to the MCR, OSC, EOF, State and local agencies, and the NRC. Communications facilities shall include means for reliable primary and backup communications. The TSC voice communications may include private telephones, commercial telephones, radio networks, and intercommunication systems as appropriate to accomplish the TSC functions during emergency operating conditions. The TSC communications system shall include:

- Designated telephones for use by NRC personnel;
- Dedicated telephones for management communications with direct access to the MCR, OSC, and EOF;
- Telephones that provide access to onsite and offsite locations;
- Intercommunications systems between work areas of the TSC;
- Communications to mobile monitoring teams; and
- Communications to State and local agencies.

NUREG-0737, Supplement 1 [Reference 2], requires reliable voice and data communications with the MCR and EOF and reliable voice communications with the OSC, NRC and State and local agencies.

a. Revision 15 of the Emergency Plan [Reference 7] identified several communications systems available to TSC personnel for communications with the MCR, OSC, EOF and NRC. These included commercial

telephones, County and State notification loop (Instaphone), NRC ringdown (ENS), inter-facility ring down lines, private branch exchange (PBX), General Office off-premises exchange (OPX), public address intercom system, and ultra-high frequency (UHF) radio.

b. Revision 71 of the Emergency Plan [Reference 17] continues to maintain the location and the communications systems available to TSC personnel except for replacing the Instaphone system for notifying County and State agencies with the new Dominion Energy Emergency Notification System (DEENS). The communications capabilities available in the TSC include dedicated voice communications to the MCR, OSC, CERC, Virginia Emergency Operations Center (VEOC), Primary Remote Assembly Area, Security Shift Supervisor and Radiation Protection Supervisor; DEENS; Station PBX; OPX lines; commercial lines; public address intercom; radio system; and NRC lines (ENS, HPN, RSCL, PMCL, MCL, LAN).

c. The proposed TSC will replicate the communications capabilities provided in the existing TSC as discussed above. The proposed TSC will continue to provide reliable communications with the MCR, OSC, onsite personnel, mobile monitoring teams, CERC, Offsite Response Organizations (OROs), and the NRC. The communications capabilities of the new TSC will continue to include those communications capabilities currently in use to support engineering assessment activities, including damage control team planning and preparation as required by NUREG-0696 [Reference 1] and NUREG-0737, Supplement 1 [Reference 2] guidance.

3.1.8 TSC Power Supplies

NUREG-0696 [Reference 1] requires that TSC electrical equipment load shall not degrade the capability or reliability of any safety-related power source. Circuit transients or power-supply failures and fluctuations shall not cause a loss of any stored data vital to the TSC functions. Sufficient alternate or backup power sources shall be provided to maintain continuity of TSC functions and to immediately resume data acquisition, storage, and display of TSC data if loss of the primary TSC power sources occurs. TSC power supplies need not meet safety-grade or Class 1E requirements.

a. The original TSC location was implemented in Revision 15 of the Emergency Plan [Reference 7]. The TSC power supply design included a 480 VAC motor control center (MCC), MCC-2C2-3, which fed the UPS, distribution panelboards, and all 480 VAC loads required for the TSC. The

UPS powers the emergency lighting and the essential computer and monitoring loads. This arrangement provided a power source to the TSC MCC from either 480 VAC Bus 2A1 or 480 VAC Bus 2C2.

In 2005, SPS implemented the PCS. This design provided normal power to the PCS from station service MCCs, a two-hour battery backup from the 125 VDC battery via the AMSAC (ATWS Mitigating System Actuation Circuit) inverter, as well as backup from an emergency diesel generator (EDG). The PCS serves as the Emergency Response Facility System, fulfilling the requirements of NUREG-0737 [Reference 20] and NUREG-0696 [Reference 1].

In 2008, a design change was implemented to provide an additional power supply to the TSC MCC and TSC UPS from the Alternate AC (AAC) Diesel. This design change allowed the TSC MCC and the TSC UPS to be powered from the AAC Diesel Generator via either transfer bus D or E following manual breaker alignments in the event the normal or alternate power supplies are unavailable.

b. The current TSC maintains the power arrangement described above.

c. The proposed TSC power distribution system consists of normal power from utility power, backup power from a dedicated 200 kW/250 KVA diesel generator, and a 50 KVA UPS with a 15-minute battery. During normal operation, TSC electrical loads are powered from utility power through an automatic transfer switch (ATS). Power is then distributed to a 480-277 VAC main distribution panel, two 480-277 VAC subpanels fed from the main distribution panel, and a 30 KVA 408-208/120 VAC transformer and downstream 208/120 VAC subpanel. The main distribution panel also feeds a 50 kVA UPS with an internal 480 VAC – 208/120 VAC transformer to supply power to a 208/120 VAC critical devices panel. If normal utility power is lost the ATS will automatically start the backup diesel generator and repower the TSC electrical distribution system. During the time that the diesel generator is starting and has yet to reach full speed and frequency, the UPS continues to power critical loads through its batteries. The 50 KVA UPS provides 15 minutes of power to critical TSC loads during the time the TSC power distribution system is transitioning to the backup diesel generator. The 50 KVA UPS module has an internal 480 VAC – 208/120 VAC transformer and supplies power to 208/120 VAC critical devices and does not backfeed any 480 VAC systems or panels. If offsite power is lost and the diesel generator is inoperable, a secondary diesel

generator can be connected to the 480 VAC main distribution panel through a generator quick connect switchboard located outside of the building. Emergency lighting for the TSC Operations Floor and the NRC Communications Room are powered by the 50 KVA UPS. Additional emergency lights and exit signs throughout the TSC are powered by stand-alone emergency lighting battery units.

3.1.9 Technical Data, Data Systems, and Data System Equipment SC Power Supplies

NUREG-0696 [Reference 1], Sections 2.8 and 2.9, require that the TSC technical data system and equipment shall receive, store, process and display information acquired from different areas of the plant as needed to analyze plant conditions and perform the TSC function. The instrumentation data system equipment and power supplies need not be safety-grade or Class 1E qualified. As a minimum the set of Type A, B, C, D, and E variables specified in Regulatory Guide (RG) 1.97 Revision 2, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident," [Reference 21] shall be available for display and printout in the TSC. At least two (2) hours of pre-event and 12 hours of post-event data shall be recorded. Capacity to record at least two (2) weeks of additional post-event data with reduced time resolution shall be provided. Archival data storage and the capability to transfer data between active memory and archival data storage without interrupting TSC data acquisition and displays shall be provided for all TSC data. A sufficient number of data display and printout devices shall be provided in the TSC to allow all TSC personnel to perform their assigned tasks with unhindered access to data to include plant systems variables, in-plant radiological variables, meteorological information, and offsite radiological information. Sufficient alternate or backup power sources shall be provided to maintain continuity of TSC functions and to immediately resume data acquisition, storage, and display of TSC data if loss of the primary TSC power sources occurs. The total TSC data system reliability shall be designed to achieve an operational unavailability goal of 0.01 during all plant operating conditions above cold shutdown. The design of the TSC data system equipment shall incorporate human factors engineering with consideration for both operating and maintenance personnel. NUREG-0737, Supplement 1 [Reference 2], Section 8.2.1.h, requires that the TSC be capable of reliable data collection, storage, analysis, display and communication sufficient to determine site and regional status, determining changes in status, forecasting status and taking appropriate actions. The following variables shall be available in the TSC: The

variables in RG 1.97 [Reference 21], Table 1 or 2, as appropriate, that are essential for performance of TSC functions; and the meteorological variables in RG 1.97 [Reference 21] for site vicinity and National Weather Service data available by voice communication for the region in which the plant is located. Principally those data must be available that would enable evaluating incident sequence, determining mitigating actions, evaluating damages, and determining plant status during recovery operations.

a. The original SPS ERFCS was implemented in Revision 31 of the Emergency Plan [Reference 9]. ERFCS provided plant monitoring, data acquisition, and critical plant data in the form of real-time status displays. ERFCS monitors were located in the MCR, TSC, LEOF, and CERC. Signal inputs for most components monitored by the ERFCS were taken from instrument terminals in the MCR. The ERFCS includes the Safety Parameter Display System (SPDS), Emergency Response Guidelines (ERGS), process and instrument displays (P&IDs), pressure-temperature plant (P-T) displays, and radiation and meteorological (RAD/MET) displays. Monitor displays were continuously updated by the computer systems as they collected and processed parametric data from the various plant sensors.

   Revision 49 of the Emergency Plan [Reference 14] reflected implementation of a design change which replaced ERFCS with the PCS. As described in Revision 49 of the Emergency Plan [Reference 14], the PCS provides plant monitoring, data acquisition, and critical plant data in the form of real-time status displays for the purpose of making a rapid evaluation of the reactor plant's safety status. PCS monitors are strategically located in areas including the MCR, TSC, and CERC. The PCS includes the SPDS, ERGs, process and instrument displays (P&IDs), and pressure-temperature (P-T) plant displays. Monitor displays are continuously updated by the computer system as they collect and process parametric data from the various plant sensors. The PCS processes inputs from plant sensors and distribute information to the MCR and TSC. Secure links on the station LAN and corporate Wide Area Network (WAN) provide data to designated LAN/WAN-connected PCs, which have the appropriate software and security level for access, including the CERC. The PCS design provides system reliability to achieve an operational unavailability goal of 0.01 during all plant operating conditions above cold shutdown. As part of this design change the PCS was provided with normal power from

station service MCCs, a two (2) hour battery backup from a 125 VDC battery via the AMSAC inverter, as well as backup from an EDG.

b. Revision 71 of the Emergency Plan [Reference 17] maintains the PCS described in Revision 49 [Reference 14].

c. The current PCS design and data capabilities remains unchanged by the proposed TSC relocation. As stated above, the current TSC receives PCS data via dedicated PCS terminals and via secure LAN connections. The proposed TSC will not contain the dedicated PCS hardware but will continue to use PCS data in the same way as the existing TSC via workstations connected to the Station LAN via secure connections. The Level 2 connection is achieved through LAN switches inside the new TSC which are powered from the TSC normal and backup power system described above. The TSC LAN switches have two (2) fiber uplink ports connected to the Administrative Building Computer Room network which is powered from utility power and backed up by a UPS and a dedicated diesel generator. This arrangement is functionally equivalent to the existing TSC with respect to the data provided, means of access, method of presentation, and system reliability. Therefore, the TSC will continue to be provided with the required data inputs, data storage, data retrieval, and data trending capabilities to evaluate incident sequence, determine mitigating actions, evaluate damage, determine plant status during recovery operations, and perform the TSC function in accordance with the requirements of NUREG-0696 [Reference 1] and NUREG-0737, Supplement 1 [Reference 2].

3.1.10 Records Availability and Management

NUREG-0696 [Reference 1], Section 2.10, states the TSC shall have a complete and up-to-date repository of plant records and procedures at the disposal of TSC personnel to aid in their technical analysis and evaluation of emergency conditions to include plant technical specifications, plant operating procedures, emergency operating procedures, Final Safety Analysis Report, plant operating records, plant operations reactor safety committee records and reports, records needed to perform the functions of the EOF when it is not operational, and up-to-date, as-built drawings, schematics, and diagrams. NUREG-0737, Supplement 1 [Reference 2], Section 8.2.1.i, states the TSC shall be provided with accurate,

complete, and current plant records (drawings, schematic diagrams, etc.) essential for evaluation of the plant under accident conditions.

a. Revision 15 of the Emergency Plan [Reference 7] identified records availability which included a complete set of controlled drawings, technical manuals, and other records.

b. Revision 71 of the Emergency Plan [Reference 17] maintains this wording with an additional specification that controlled copies of selected manuals, procedures, drawings, and other documents as designated by Nuclear Records Department Management directives be available.

c. The proposed TSC location will maintain the records availability described in Revision 71 of the Emergency Plan [Reference 17].

3.2 Conclusions

The proposed changes provide for a TSC that is consistent with NUREG-0696 [Reference 1] and NUREG-0737, Supplement 1 [Reference 2], guidance and maintains the existing emergency response capabilities of the SPS Emergency Plan. Therefore, the proposed changes continue to ensure the SPS Emergency Plan will meet 10 CFR 50.54(q)(2) [Reference 3], the requirements of 10 CFR 50 Appendix E [Reference 25], and the planning standards of 10 CFR 50.47(b) [Reference 23].

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

1) 10 CFR 50.47(b)(8)

(b) The onsite and, except as provided in paragraph (d) of this section, Off-site emergency response plans for nuclear power reactors must meet the following standards:

(8) Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

The existing SPS Emergency Plan includes onsite and offsite emergency response plans that meet the requirements listed above. This LAR proposes to relocate the existing TSC to the building outside of the plant PA and within the plant OCA previously used as the LEOF. The SPS Emergency Plan will continue to meet 10 CFR 50.47(b) [Reference 23].

2) 10 CFR 50.54(q), "Emergency Plans"

Relevant portions as follows:

(1)(iv) Reduction in effectiveness means a change in an emergency plan that results in reducing the licensee's capability to perform an emergency planning function in the event of a radiological emergency.

(2) A holder of a license under this part, or a combined license under part 52 of this chapter after the Commission makes the finding under §52.103(g) of this chapter, shall follow and maintain the effectiveness of an emergency plan that meets the requirements in appendix E to this part and, for nuclear power reactor licensees, the planning standards of § 50.47(b).

(4) The changes to a licensee's emergency plan that reduce the effectiveness of the plan as defined in paragraph (q)(1)(iv) of this section may not be implemented without prior approval by the NRC. A licensee desiring to make such a change after February 21, 2012, shall submit an application for an amendment to its license. In addition to the filing requirements of §§ 50.90 and 50.91, the request must include all emergency plan pages affected by that change and must be accompanied by a forwarding letter identifying the change, the reason for the change, and the basis for concluding that the licensee's emergency plan, as revised, will continue to meet the requirements in Appendix E to this part and, for nuclear power reactor licensees, the planning standards of § 50.47(b).

The existing SPS Emergency Plan meets the planning standards of 10 CFR 50.47(b) [Reference 23] and 10 CFR 50, Appendix E [Reference 25], as required by 10 CFR 50.54(q)(2) [Reference 3]. This LAR proposes to relocate the existing TSC to the building outside of the plant PA and within the plant OCA previously used as the LEOF. These proposed changes are considered a reduction in effectiveness as defined in 10 CFR 50.54(q)(1)(iv) [Reference 3] and require NRC approval prior to implementation based on 10 CFR 50.54(q)(4) [Reference 3]. Therefore, Dominion Energy Virginia is submitting this LAR pursuant to 10 CFR 50.90 [Reference 4].

The SPS Emergency Plan will continue to meet the requirements of 10 CFR 50.54(q)(2) [Reference 3] by maintaining the effectiveness of the Emergency Plan such that it meets the requirements of 10 CFR 50, Appendix E [Reference 25], and the planning standards of 10 CFR 50.47(b) [Reference 23].

3) 10 CFR Part 50, Appendix A, "General Design Criteria (GDC) for Nuclear Power Plants"

Criterion 19 – Control room. A control room shall be provided from which actions can be taken to operate the nuclear power unit safely under normal conditions and to maintain it in a safe condition under accident conditions, including loss-of-coolant accidents. Adequate radiation protection shall be provided to permit access and occupancy of the control room under accident conditions without personnel receiving radiation exposures in excess of 5 rem whole body, or its equivalent to any part of the body, for the duration of the accident.

10 CFR Part 50, Appendix A [Reference 24], Criterion 19, applies specifically to control room requirements and does not address TSC design parameters. The SPS control room design meets GDC-19 as outlined in the site's UFSAR. The habitability requirements applicable to TSC design are contained in NUREG-0737 [Reference 20] and NUREG-0696 [Reference 1] and are addressed in Section 3.1.6 of this attachment.

4) 10 CFR 50, Appendix E, Section IV, "Content of Emergency Plans"

E. Emergency Facilities and Equipment.

Adequate provisions shall be made and described for emergency facilities and equipment including:

8.a.(i) Licensed onsite technical support center and emergency operations facility from which effective direction can be given and effective controls can be exercised during an emergency.

The existing SPS Emergency Plan includes a description of the organization, including definition of authorities, responsibilities, and duties of individuals. The current Emergency Plan [Reference 17] complies with 10 CFR 50, Appendix E.IV.E.8 [Reference 25] requirements. This LAR proposes to relocate the existing TSC to the building outside of the plant PA and within the plant OCA previously used as the LEOF. The proposed changes to the SPS

Emergency Plan will continue to describe the onsite emergency facilities. Therefore, the requirements of 10 CFR 50, Appendix E [Reference 25] continue to be met.

5) NUREG-0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants"

Section II contains the Planning Standards and Evaluation Criteria for the development of radiological emergency response plans. Relevant portions are as follows:

H. Emergency Facility and Equipment

Planning Standard

Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

Evaluation Criteria

1. *Each licensee shall establish a Technical Support Center and an onsite operations support center (assembly area) in accordance with NUREG-0696, Revision 1.*

NUREG-0654/FEMA-REP-1, Revision 1 [Reference 26] directs the licensee to establish a TSC in accordance with NUREG-0696 [Reference 1], which in turn provides general guidance concerning the functional criteria for the ERFs on the integrated support these facilities provide to the control room. Section 7 of the current SPS Emergency Plan [Reference 17] identifies the ERFs in use at SPS and meets the intent of NUREG-0696 [Reference 1].

This LAR proposes an alternative approach to NUREG-0696 [Reference 1], Section 2.2 with the relocation of the TSC to the building outside of the plant PA and within the plant OCA previously used as the LEOF. A detailed review of the proposed changes against NUREG-0696 [Reference 1] functional criteria provided in the above Technical Evaluation demonstrates that the proposed changes to the SPS Emergency Plan continue to meet the intent of NUREG-0696 [Reference 1] and therefore meet the intent of NUREG-0654/FEMA-REP-1 [Reference 26].

6) NUREG-0696, "Functional Criteria for Emergency Response Facilities – Final Report"

Section 1.3.1, *Technical Support Center*, describes the TSC:

> *The technical support center (TSC) is an onsite facility located close to the control room that shall provide plant management and technical support to the reactor operating personnel located in the control room during emergency conditions. It shall have technical data displays and plant records available to assist in the detailed analysis and diagnosis of abnormal plant conditions and any significant release of radioactivity to the environment. The TSC shall be the primary communications center for the plant during an emergency. A senior official, designated by the licensee, shall use the resources of the TSC to assist the control room operators by handling the administrative items, technical evaluations, and contact with offsite activities, relieving them of these functions.*

NUREG-0696 [Reference 1] provides a detailed description of the TSC design elements and capabilities to include:

- Section 2.1, Function
- Section 2.2, Location
- Section 2.3, Staffing and Training
- Section 2.4, Size
- Section 2.5, Structure
- Section 2.6, Habitability
- Section 2.7, Communications
- Section 2.8, Instrumentation, Data System Equipment, and Power Supplies
- Section 2.9, Technical Data and Data System
- Section 2.10, Records Availability and Management

NUREG-0696 [Reference 1] provides general guidance concerning the functional criteria for the ERFs and the integrated support these facilities provide to the control room. Section 7 of the current SPS Emergency Plan [Reference 17] identifies the ERF's used at SPS and meets the intent of NUREG-0696 [Reference 1].

This LAR proposes an alternative approach to NUREG-0696 [Reference 1], Section 2.2, with the relocation of the TSC to the building outside of the plant PA and within the plant OCA previously used as the LEOF. A detailed review of the proposed changes against NUREG-0696 [Reference 1] functional criteria provided in the above Technical Evaluation demonstrates that the

proposed changes to the SPS Emergency Plan continue to meet the intent of NUREG-0696 [Reference 1].

7) NUREG-0737, November 1980, "Clarification of TMI Action Plan Requirements"

NUREG-0737 [Reference 20], Section II.B.2, states in part:

> *This requirement was originally issued by letters to all operating nuclear power plants, dated September 13 and October 30, 1979, and was incorporated into NUREG-0660. Significant changes in requirements or guidance are: Allows averaging over 30 days of the dose rate criteria for areas requiring continuous occupancy and that the control room and technical support center should be considered areas requiring continuous occupancy. This ensures that the dose rate criteria is applied correctly to these areas.*
>
> *Areas Requiring Continuous Occupancy: <15 mrem/hr (averaged over 30 days). These areas will require full-time occupancy during the course of the accident. The control room and onsite technical support center are areas where continuous occupancy will be required. The dose rate for these areas is based on the control room occupancy factors contained in SRP 6.4.*

NUREG-0737 [Reference 20] provides guidance concerning the occupancy dose criteria for the ERFs. This LAR proposes to relocate the existing TSC to the building outside of the plant PA and within the plant OCA previously used as the LEOF. A detailed review of the proposed changes against NUREG-0737 [Reference 20] occupancy dose criteria was completed and demonstrated that the proposed changes to the SPS Emergency Plan continue to meet the intent of NUREG-0737 [Reference 20].

8) NUREG-0737, Supplement 1, "Clarification of TMI Action Plan Requirements: Requirements for Emergency Response Capabilities"

Section 8.2.1, "Requirements," states in part:

a. *The TSC is the onsite technical support center for emergency response. When activated, the TSC is staffed by predesignated technical, engineering, senior management, and other licensee personnel, and five pre-designated NRC personnel. During periods of activation, the TSC will operate uninterrupted to provide plant*

management and technical support to plant operations personnel, and to relieve the reactor operators of peripheral duties and communications not directly related to reactor system manipulations. The TSC will perform EOF functions for the Alert Emergency class and for the Site Area Emergency class and General Emergency class until the EOF is functional.

The TSC will be:

b. *Located within the site protected area so as to facilitate necessary interaction with control room, OSC, EOF and other personnel involved with the emergency.*

c. *Sufficient to accommodate and support NRC and licensee predesignated personnel, equipment and documentation in the center.*

d. *Structurally built-in accordance with the Uniform Building Code.*

e. *Environmentally controlled to provide room air temperature, humidity and cleanliness appropriate for personnel and equipment.*

f. *Provided with radiological protection and monitoring equipment necessary to assure that radiation exposure to any person working in the TSC would not exceed 5 rem whole body, or its equivalent to any part of the body, for the duration of the accident.*

g. *Provided with reliable voice and data communications with the control room and EOF and reliable voice communications with the OSC, NRC Operations Centers and state and local operations centers.*

h. *Capable of reliable data collection, storage, analysis, display and communication sufficient to determine site and regional status, determine changes in status, forecast status and take appropriate actions. The following variables shall be available in the TSC: …*

   (ii) Principally those data must be available that would enable evaluating incident sequence, determining mitigating actions, evaluating damages and determining plant status during recovery operations.

i. *Provided with accurate, complete and current plant records (drawings, schematic diagrams, etc.) essential for evaluation of the plant under accident conditions.*

j. Staffed by sufficient technical, engineering, and senior designated licensee officials to provide needed support, and be fully operational within-approximately 1 hour after activation.

k. Designed considering good human factors engineering principles.

NUREG-0737, Supplement 1 [Reference 2], provides general guidance concerning the functional criteria for the ERFs and the integrated support these facilities provide to the control room. This LAR proposes an alternative approach to NUREG-0737, Supplement 1 [Reference 2], Section 8.2.1.b, with the relocation of the TSC to the building outside of the plant PA and within the plant OCA previously used as the LEOF. A detailed review of the proposed changes against NUREG-0737, Supplement 1 [Reference 2] functional criteria was completed and demonstrates that the proposed changes to the SPS Emergency Plan continue to meet the intent of NUREG-0737, Supplement 1 [Reference 2].

4.2 Precedent

The proposed SPS Emergency Plan changes are similar to changes approved for other licensees including:

- Three Mile Island, Unit 1 (ML023460148) [Reference 27],
- Clinton, Unit 1 (ML070540270) [Reference 28], and
- D. C. Cook, Units 1 and 2 (ML18249A019) [Reference 29].

Furthermore, the proposed SPS Emergency Plan changes and evaluation documented in this submittal continue to meet the standards of 10 CFR 50.47(b) [Reference 23] and the requirements of 10 CFR 50, Appendix E [Reference 25].

4.3 No Significant Hazards Considerations Determination

In accordance with the requirements of 10 CFR 50.90 [Reference 4], Dominion Energy Virginia requests an amendment to facility Renewed Facility Operating Licenses DPR-32 and DPR-37 for SPS to revise the Emergency Plan. Dominion Energy Virginia proposes to relocate the TSC described in the SPS Emergency Plan to the building formerly used for the LEOF located outside of the PA and within the OCA.

Dominion Energy Virginia has evaluated the proposed amendment against the standards in 10 CFR 50.92 [Reference 30] and has determined that the operation of SPS in accordance with the proposed amendment presents no significant hazards. The Dominion Energy Virginia evaluation against each of the criteria in 10 CFR 50.92 [Reference 30] follows.

1. *Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?*

   Response: No.

   The proposed TSC location has no effect on normal plant operation or on any accident initiator or precursors and does not impact the function of plant structures, systems, or components (SSCs). The proposed change does not alter or prevent the ability of the ERO to perform their intended functions to mitigate the consequences of an accident or event.

   Therefore, the proposed Emergency Plan changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. *Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?*

   Response: No.

   The change does not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed), a change in the method of plant operation, or new operator actions. The proposed change does not introduce failure modes that could result in a new accident and does not alter assumptions made in the safety analysis. The proposed change does not alter or prevent the ability of the ERO to perform their intended functions to mitigate the consequences of an accident or event.

   Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. *Does the proposed change involve a significant reduction in a margin of safety?*

   Response: No.

   Margin of safety is associated with confidence in the ability of the fission product barriers (i.e., fuel cladding, reactor coolant system pressure boundary, and containment structure) to limit the level of radiation dose to the public. The proposed change is associated with the TSC location and does not impact operation of the plant or its response to transients or accidents. The change does not affect the Technical Specifications. The proposed change does not involve a change in the method of plant operation, and no accident analyses will be affected by the proposed change. Safety analysis acceptance criteria are not affected by this proposed change. The Emergency Plan as revised by the proposed change will continue to provide the necessary response facilities. Therefore, the proposed change is determined to not adversely affect the ability to meet 10 CFR 50.54(q)(2) [Reference 3], the requirements of 10 CFR 50, Appendix E [Reference 25], and the emergency planning standards as described in 10 CFR 50.47(b) [Reference 23].

   Therefore, the proposed change does not involve a significant reduction in a margin of safety.

4.4 Conclusion

Dominion Energy Virginia has evaluated the proposed change against the applicable regulatory requirements and acceptance criteria. The proposed SPS Emergency Plan changes continue to assure that regulatory requirements and emergency planning standards associated with emergency response are met.

Based on the above evaluation, Dominion Energy Virginia has determined that operation of the facility in accordance with the proposed change does not involve a significant hazards consideration as defined in 10 CFR 50.92(c) [Reference 30] in that it does not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

5.0 ENVIRONMENTAL CONSIDERATION

Dominion Energy Virginia has determined that the proposed change would not revise a requirement with respect to installation or use of a facility or component located within the restricted area as defined in 10 CFR 20 [Reference 34], nor would it change an inspection or surveillance requirement. The proposed amendment does not involve:

(i) a significant hazards consideration, or

(ii) authorize a significant change in the types or a significant increase in the amounts of any effluent that may be released Off-site, or

(iii) result in a significant increase in individual or cumulative occupational radiation exposure.

Accordingly, the proposed amendment meets the eligibility criterion for a categorical exclusion set forth in 10 CFR 51.22(c)(9) [Reference 31]. Therefore, Dominion Energy Virginia concludes that pursuant to 10 CFR 51.22(b) [Reference 31] no environmental impact statement or environmental assessment needs to be prepared in connection with the proposed amendment.

6.0 REFERENCES

1. U. S. Nuclear Regulatory Commission, NUREG-0696, "Functional Criteria for Emergency Response Facilities – Final Report," dated February 1981. (ADAMS Accession No.: ML051390358)
2. U. S. Nuclear Regulatory Commission, NUREG-0737, Supplement 1, "Clarification of TMI Action Plan Requirements: Requirements for Emergency Response Capabilities," dated January 1983. (ADAMS Accession No.: ML102560009)
3. Title 10 Code of Federal Regulations Part 50.54(q), *Emergency Plans.*
4. Title 10 Code of Federal Regulations Part 50.90, *Application for Amendment of License, Construction Permit, or Early Site Permit.*
5. Surry Power Station Emergency Plan, Revision 1, dated August 2,1982.
6. Surry Power Station Emergency Plan, Revision 3, dated September 17, 1982.
7. Surry Power Station Emergency Plan, Revision 15, dated June 28, 1984.
8. NRC letter to W. Stewart (Virginia Electric and Power Company), Subject: NUREG-0737, TMI Action Item III.A.1.2, "Emergency Response Facilities," and Item III.A.2.2, "Meteorological Data Upgrade," Surry Power Station Units 1 and 2, dated June 12, 1987. (ADAMS Accession No.: ML18150A172)

9. Surry Power Station Emergency Plan, Revision 31, dated February 18, 1988.
10. Surry Power Station Emergency Plan, Revision 33, dated February 2, 1991.
11. NRC letter, Subject: Surry and North Anna Proposed Emergency Plan Change, dated May 24, 1990.
12. Surry Power Station Emergency Plan, Revision 40, dated January 1, 1996.
13. NRC Letter to J. O'Hanlon (Virginia Electric and Power Company), Subject: Safety Evaluation for a Change to Emergency Plan Augmentation Goals of Selected Responders from 30 Minutes to 45 Minutes for the Surry Power Station, dated December 13, 1995.
14. Surry Power Station Emergency Plan, Revision 49, dated June 8, 2005.
15. Surry Power Station Emergency Plan, Revision 66, dated May 1, 2019.
16. Surry Power Station Emergency Plan, Revision 67, dated September 12, 2019.
17. Surry Power Station Emergency Plan, Revision 71, dated October 22, 2020.
18. Building Officials Code Administrators International Code, dated 1978.
19. Surry Power Station Updated Final Safety Analysis Report, Revision 52.06, dated July 29, 2021.
20. NUREG-0737, Final Report, "Clarification of TMI Action Plan Requirements," November 1980. (ADAMS Accession No.: ML051400209)
21. Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident," Revision 2, December 1980. (ADAMS Accession No.: ML060750525)
22. EPIP-3.02, *Activation of Technical Support Center*, Revision 39.
23. Title 10 Code of Federal Regulations Part 50.47, *Emergency Plans.*
24. Title 10 Code of Federal Regulations, Part 50 Appendix A, "General Design Criteria for Nuclear Power Plants."
25. Title 10 Code of Federal Regulations Part 50 Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities."
26. NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1, November 1980. (ADAMS Accession No.: ML040420012)

27. NRC Letter to J. Skolds (AmerGen Energy Company, LLC), Subject: Three Mile Island Nuclear Station, Unit 1 (TMI-1), Relocation of the Technical Support Center (TSC) (TAC NO. MB5210), dated December 10, 2002. (ADAMS Accession No.: ML023460148)

28. NRC Letter to C. Crane (Amergen Energy Company, LLC), Subject: Clinton Power Station, Unit No. 1 - Relocation of the Technical Support Center (TAC NO. MD2468), dated March 12, 2007. (ADAMS Accession No.: ML070540270)

29. NRC Letter to J. Gebbie (Indiana Michigan Power Company), Subject: Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2 - Issuance of Amendment Nos. 341 and 323 RE: Technical Support Center Relocation (EPID L-2017-LLA-0375), dated November 13, 2018. (ADAMS Accession No.: ML18249A019)

30. Title 10 Code of Federal Regulations, Part 50.92, *Issuance of Amendment.*

31. Title 10 Code of Federal Regulations, Part 51.22, *Criterion for Categorical Exclusion; Identification of Licensing and Regulatory Actions Eligible for Categorical Exclusion or Otherwise Not Requiring Environmental Review.*

32. NRC Letter to D. Stoddard (Virginia Electric and Power Company), Subject: North Anna Power Station, Unit Nos. 1 and 2, and Surry Power Station, Unit Nos. 1 and 2 - Issuance of Amendment Nos. 281, 264, 294, and 294 to Consolidate Emergency Operations Facilities and Associated Emergency Plan Changes (EPID L-2018-LLA-0014), dated February 27, 2019. (ADAMS Accession No.: ML19031B227)

33. Surry Power Station Emergency Plan, Revision 35, dated September 11, 1992.

34. Title 10 Code of Federal Regulations, Part 20, *Standards for Protection Against Radiation.*

ATTACHMENT 2

Marked-Up SPS Emergency Plan Pages

Surry Power Station Units 1 and 2
Virginia Electric and Power Company
(Dominion Energy Virginia)

- Technical Support Center (TSC) - A facility located adjacent to the ~~Unit 1 Control Room~~ Training Building which will be the central control center for the onsite emergency response organization after shift augmentation.
- Thyroid Committed Dose Equivalent (CDE) - Radiation exposure to the thyroid through inhalation or ingestion of radioactive material assuming a 50-year exposure period from uptake.
- Total Effective Dose Equivalent (TEDE) - The sum of external and internal dose.

7.0 Emergency Facilities and Equipment

The facilities required in the implementation of the Emergency Plan consist of the Control Room (shared for both Unit 1 and 2), the Operational Support Center (OSC), the Technical Support Center (TSC), and the Corporate Emergency Response Center (CERC). These facilities were designed to meet the intent of the guidance in NUREG-0696 and the clarification in NUREG-0737 Supplement 1. In addition, a Joint Information Center (JIC) and a Local Media Center (LMC) are required for the implementation of the Emergency Plan. A description of each is givenbelow.

7.1 Emergency Response Facilities

7.1.1 Control Room

The Control Room of the affected unit(s) shall be the initial location for command and control of the emergency response effort. Controls and instrumentation needed to diagnose plant conditions and to take immediate actions to place the affected unit(s) in a safe condition are available in the Control Room. Within the Control Room, the Station Emergency Manager has access to the information needed to classify the emergency. Redundant communications systems are also available in the Control Room to make the required onsite and offsite notifications. The Control Room has the required shielding and ventilation system to remain habitable during the emergency. Access to the Control Room shall be limited to these individuals responsible for carrying out assigned emergency response tasks plus other technical advisors, as necessary.

7.1.2 Operational Support Center

The Operational Support Center (OSC), located in the Work Control Center, is the designated reporting location for the pool of workers who compose Damage Control Teams, the Fire Brigade, the First Aid Team, and the Search and Rescue Team. Station Operations personnel not required for Control Room operation may also assemble at the OSC unless already performing an emergency function outside the Control Room (or otherwise instructed by the Shift Manager/SEM). In the event that the primary facility is unavailable; an Alternate OSC has been designated in the Maintenance Building.

7.1.3 Technical Support Center

The TSC is located adjacent to the Training Building ~~Unit 1 Control Room, and its alternate location is the Control Room~~. Emergency response personnel will assemble at the primary TSC unless otherwise instructed by the SEM. The primary location contains controlled copies of selected manuals, procedures, drawings, and other documents as designated by Nuclear Records Department directives. Information about plant conditions is available via real time data displays from the Plant Computer System (PCS). Refer to Section 7.3.4, Plant Process Parameter Monitoring, for a description of the PCS. Dedicated phone line communications have also been established with the Control Room to keep TSC personnel knowledgeable on current operating evolutions and to provide consultation and recommendations to the Control Room staff.

The construction of the facility walls and design of the ventilation system are such that the whole body and thyroid doses received by occupants of the TSC are below General Design Criteria limits. Radiation monitoring equipment for making airborne particulate and direct radiation measurements is installed in the TSC. Reliable power is provided to the TSC from utility power and backed up by a UPS and a dedicated diesel generator with auto transfer capability ~~The TSC houses the Plant Computer System Data Communications Processors. Inputs from plant sensors are processed by these units and~~

~~the information is transmitted to facilities including the Control Room and CERC for display on video terminals. Refer to Section 7.3.4, Plant Process Parameter Monitoring, for a description of the PCS.~~

7.1.4 Corporate Emergency Response Center

The CERC is the consolidated emergency operations facility (EOF) for Surry Power Station and North Anna Power Station. The CERC is located at the Innsbrook Technical Center in Glen Allen, Virginia. The facility provides workstations for Corporate, Federal and State officials who may be assembled at this location. This facility is the designated central collection point for the receipt and analysis of all field monitoring data and the coordination of sample media. Plant data is available from the PCS. The Meteorological Information and Dose Assessment System (MIDAS) is used to estimate offsite doses.

7.1.5 Joint Information Center and Local Media Center

Official company statements to the media will be made from Joint Information Center (JIC) by the Chief Technical Spokesperson. The JIC is located at the Virginia State Police Administrative Headquarters in Chesterfield, Virginia. These company statements are prepared at the CERC.

A Local Media Center (LMC) may be activated as an adjunct to the JIC. The LMC for Surry Power Station is located on Route 650 on company property. The facility is designated as the Surry Nuclear Information Center in normal operation. There are dedicated rooms for Dominion, NRC, FEMA, State, and media representatives as well as an auditorium that will accommodate 200 people.

Provisions have been made to accommodate TV cameras, copying machines, typewriters, and other equipment needed for press conferences. Should the LMC become uninhabitable, small groups of the media, no more than 20, can be accommodated in the CERC with the approval of the Corporate Response Manager.

7.1.6 Alternate Facility When Under Threat or Experiencing Hostile Action

The Surry County Administration Building functions as a staging area for augmentation of emergency response staff if the site is under threat of or experiencing hostile action. This location has the capability to communicate with the CERC, control room, and plant security. The CERC has the capability to perform offsite notifications. The staff at the staging area, working with CERC organization, provides capability for engineering assessment activities, including damage control team planning and preparation.

7.1.7 Near-Site Location For Offsite Agency Coordination

The Surry Nuclear Information Center is the location for the NRC and other offsite agency staff to interact face-to-face with emergency response personnel entering and leaving the nuclear power reactor site. This area provides a conference area with whiteboards, separate areas suitable for briefing and debriefing response personnel, telephones, site contact lists, computers with internet access, access to a copier and office supplies, and access to plant data and radiological information. These provisions exist because the CERC is located more than 25 miles from the TSC.

7.2 Communications Systems

The station communications system is designed to provide redundant means to communicate with all essential areas of the station associated with Surry Units 1 and 2 and to essential locations remote from the station during normal operation and under accident conditions. Communication systems vital to Units 1

7.3.4 Plant Process Parameter Monitoring

Installed in the Control Room are the necessary instrumentation readouts to assess station status under all conditions. Information is available from meter displays, chart recorders, annunciators, and the plant process computers to assist the operator in contending with accident conditions.

The Plant Computer System (PCS) was installed in order to support the data acquisitions need of the emergency response facilities. The PCS will provide plant monitoring, data acquisition, and critical plant data in the form of real-time status displays for the purpose of making a rapid evaluation of the reactor plant's safety status. PCS monitors are strategically located in areas including the Control Room, TSC, and CERC. The PCS includes the Safety Parameter Display System (SPDS), Emergency Response Guidelines (ERGs), process and instrument displays, and pressure-temperature plant displays. Monitor displays are continuously updated by the computer system as they collect and process parametric data from the various plant sensors. The PCS will process inputs from plant sensors and distribute information to the Control Room ~~and TSC~~. Secure links on the station LAN and corporate Wide Area Network (WAN) will provide data to designated LAN/WAN-connected PCs, which have the appropriate software and security level for access, including the TSC and CERC. A detailed description of the PCS is provided in UFSAR section 7.8.

7.3.5 Fire Detection

The Station's Fire Protection System is designed to furnish water and other extinguishing agents with the capability of extinguishing any single or probable combination of simultaneous fires that might occur. Smoke and heat detectors are utilized for fire detection resulting in automatic fire suppression initiation and/or alarming. These systems are designed in accordance with the standards of the National Fire Protection Association.

7.3.6 Post-Accident Sampling

A contingency plan, controlled by normal Chemistry procedures, has been developed for obtaining and analyzing highly radioactive samples of reactor coolant, containment sump, and containment atmosphere. (Reference NRC Letter, Subject: Surry Units 1 and 2 - Issuance of Amendments Re: Elimination of Post-Accident Sampling System Requirements, dated December 18, 2001, Serial No. 01-761)

EMERGENCY KITS
HP AREA, CONTROL ROOM, OSC, TSC

QUANTITY			DESCRIPTION
HP AREA	CR/OSC (1 ea.)	TSC	
1	1	--	First Aid Kit
2	2	--	Flashlight
10	10	--	D cell Batteries
24	--	--	C cell Batteries
1	1	--	Adjustable Wrench
1	1	--	Flat Head Screwdriver
1	1	--	Phillips Head Screwdriver
1	1	--	Channel locks
1	1	--	Pliers
1	1	--	Pocket knife
2	2	--	Mechanical pencils
2	2	--	China markers
1	1	--	Notebook
10	10	--	12 x20 Bag
--	10	--	36 x48 Bag
20	20	--	Ziplock bag (small)
1	1	--	Hemostats
1	1	--	10 Mile EPZ/Site Boundary Map
1	--	--	Safeguards roof ladder key
2pr	2pr	-- ~~2pr~~	Coveralls
6pr	6pr	-- ~~6pr~~	Gloves
6pr	6pr	-- ~~6pr~~	Inserts
2pr	2pr	-- ~~2pr~~	Boots
2	2	--~~2~~	Hoods
4pr	4pr	-- ~~4pr~~	Booties
2	2	--~~2~~	Full-face respirators
2	2	--~~2~~	Iodine canister
1btl	1btl	1btl	Anti-fog
50ft	50ft	50ft	Barricade rope