

10 CFR 50.54(q)

RS-06-080

June 30, 2006

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

Clinton Power Station, Unit 1
Facility Operating License No. NPF-62
NRC Docket No. 50-461

Subject: Request for NRC Approval of Changes to the Clinton Power Station Emergency Plan Annex

In accordance with 10 CFR 50.54, "Conditions of licenses," paragraph (q), AmerGen Energy Company, LLC (AmerGen) requests NRC approval of a proposed change to the Clinton Power Station (CPS) Emergency Plan (EP) Annex. AmerGen is proposing a change to the EP Annex that relocates the Technical Support Center (TSC) from its current location adjacent to the Main Control Room (MCR) to the Training Facility on the east side of the Owner Controlled Area (OCA). This change will strengthen the TSC command and control function by allowing the TSC Emergency Response Organization (ERO) a larger, better designed working area. With the larger work area, more equipment will be available to the TSC ERO to perform their functions. Station PBX phone lines will be increased from 16 to 30. The number of networked personal computers will be increased from 7 to 15, allowing the ERO to access plant data, drawings, procedures, and other computer applications. The new TSC will be equipped with a satellite phone for field team communications. With the increase in working space, as well as additional and improved communications, the change will provide an improvement over the existing TSC and will enhance compliance with program requirements. The specific proposed change for which AmerGen requests approval is described below. The Attachment to this letter provides AmerGen's 10 CFR 50.54(q) evaluation for this change.

AmerGen proposes to relocate the ERO functions provided in the current CPS TSC to a new TSC housed in the existing Nuclear Training Building located outside the protected area boundary. This change proposes exceptions from the guidance in NUREG-0696, "Functional Criteria for Emergency Response Facilities," that the TSC be located near the MCR to facilitate face-to-face communications between TSC and control room personnel, that the walking time from the TSC to the control room not exceed two minutes, and that there be no major security barriers between the two facilities. As described in the attached 10 CFR 50.54(q) evaluation, the proposed TSC relocation will not alter the functions of the TSC as described in NUREG-0696 and will enhance the

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coordination of support activities with the overall emergency response effort. The proposed CPS TSC will have capabilities comparable to the TSCs of the other plants within Exelon Generation Company, LLC (Exelon).

Since the proposed change represents a new location for the TSC, the adequacy of the facility was evaluated against the criteria in NUREG-0696, Section 2, "Technical Support Center." The criteria related to Staffing and Training are not impacted by the relocation of the TSC. The other areas were evaluated for impact and the results are provided in the attached 10 CFR 50.54(q) evaluation.

As stated previously, the new TSC will be located in the existing Nuclear Training Building, which is outside the Protected Area Boundary and within the OCA. The new TSC will be located in what was previously the CPS Emergency Operations Facility (EOF). This space became vacant when the CPS EOF was relocated to and combined with the Exelon EOF in Warrenville, Illinois. AmerGen requests exceptions from the guidance in NUREG-0696 that the TSC be located near the control room, that the walking time from the TSC to the MCR not exceed two minutes, and that there be no major security barriers between the two facilities. The new TSC will have dedicated and diverse communications with the MCR, Operations Support Center (OSC), and Exelon EOF. In addition, the new TSC will have access to plant process computer data via the Plant Parameter Display System (PPDS) and Safety Parameter Display System (SPDS) displays. There is no anticipated need to traverse from the new TSC to the MCR and consequently the Protected Area Boundary security barrier will not create an adverse impact on the function of the new TSC. If the need to travel to the MCR did arise, the transit time would be approximately 15 minutes which includes the time to process through the security barrier. As a result of the new TSC being located outside of the Protected Area, the ERO response in an off-hours event will be improved since ERO responders will not have to process through site security to enter the Protected Area and process through the Radiologically Controlled Area to access the MCR envelope (i.e., the current TSC location). In a security-related event, the new TSC will be more accessible to the ERO since potential security restrictions could affect access to the Protected Area.

While the proposed location of the TSC does not allow for direct face-to-face communications between the Shift Manager in the MCR and the Emergency Director in the TSC, adequate communications lines and designated Communicator positions will be identified to ensure continued and effective communications with the MCR. In addition to the adequate communications lines and Communicators, CPS drills in such a manner as to make face-to-face communications between the TSC and MCR impractical. During a drill at CPS, the operators participating in the drill are in the simulator that is located across site from the existing TSC. As a result, those individuals located in the TSC are not able to communicate face-to-face with the individuals in the simulator. Therefore, relocation of the TSC to the Training Building, which does not allow for face-to-face interaction between control room personnel and TSC personnel, will not prevent CPS from meeting the intent of the guidance in NUREG-0696.

The new TSC will continue to provide plant management and technical support to plant operations personnel during emergency conditions and will relieve the operators of peripheral duties and communications not directly related to system manipulations. As documented in the attached 10 CFR 50.54(q) evaluation, the function of the new TSC will provide for the same or improved support to plant operations personnel during emergency conditions as the existing TSC.

In addition to the above, the 10 CFR 50.54(q) evaluation also demonstrates that the new TSC will meet the remaining guidance specified in NUREG-0696 for an acceptable TSC. It has been demonstrated that the size of the new TSC provides substantial improvement in the workspace for the number of individuals reporting to the TSC. The new TSC will continue to meet the appropriate construction codes and standards and will be capable of withstanding the most adverse conditions reasonably expected during the design life of the plant including adequate capabilities for earthquakes, high winds, and flood conditions. Based on the design of the new TSC facility and ventilation system, the TSC personnel will be adequately protected from radiological hazards including direct radiation and airborne radioactivity from in-plant sources under accident conditions. The new TSC communications capability will provide for the same or improved communication capability when compared to the existing configuration. The 10 CFR 50.54(q) evaluation also demonstrates that the instrumentation, data system equipment, and power sources will provide a reliable and diverse capability. The new TSC also has improved data display capabilities that will support decision-making during event classification and assessment. In addition, the method for record storage will ensure current and complete records are available for use in the new TSC.

In summary, the new TSC will meet the guidance specified in NUREG-0696 for acceptable TSCs except for the three noted exceptions to the location criteria. Although the new TSC is not in close proximity to the control room, adequate means will exist to obtain operational data through the use of TSC displays from PPDS and SPDS and through communication via dedicated and diverse communications with the Main Control Room. With the improved communication capabilities and data collection and display, face-to-face communications will no longer be necessary. The proposed TSC relocation will not alter the functions of the TSC as described in NUREG-0696 and will enhance the coordination of support activities with the overall emergency response effort. The new TSC will continue to provide for enhanced command and control by locating the station senior management with all the appropriate technical advisors in one location. The Emergency Plan will continue to meet the requirements for accident monitoring, assessment, and mitigation in support of the control room while maintaining the existing ERO positions, responsibilities, and staffing levels.

AmerGen has concluded that the proposed change will not result in a reduction of the capability of the ERO to respond to an emergency, and will not reduce AmerGen's ability to protect the health and safety of the public. The relocation of the CPS TSC to the Nuclear Training Building is proposed as an alternative method as defined under NUREG-0737, "Clarification of TMI Action Plan Requirements," Supplement 1, "Requirements for Emergency Response Capability," and Regulatory Guide 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors." As a result, prior NRC approval for this alternative method is required under the requirements of 10 CFR 50.54(q) as clarified by SECY-01-0192, "Rulemaking Plan: Revision of Appendix E to 10 CFR Part 50," dated October 18, 2001.

There are no regulatory commitments contained in this letter.

The proposed relocation of the CPS TSC has been reviewed by the CPS Plant Operations Review Committee, and approved by the Nuclear Safety Review Board in accordance with the Quality Assurance Program.

AmerGen requests approval of the proposed change by December 31, 2006. The proposed relocation of the TSC will strengthen the TSC command and control function by allowing the TSC ERO a larger, better designed working area. With the larger work area, more equipment will be available to the TSC ERO to perform their functions. With the increase in working space, as well as additional and improved communications, the change will provide an improvement over the existing TSC and will enhance compliance with program requirements. Therefore, AmerGen is requesting an expedited review of this proposed change to ensure prompt implementation of the proposed relocation of the TSC.

Should you have any questions concerning this letter, please contact Mr. Timothy A. Byam at 630-657-2804.

Respectfully,



Patrick R. Simpson
Manager - Licensing

Attachment: AmerGen 50.54(q) Evaluation

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Clinton Power Station
Illinois Emergency Management Agency – Division of Nuclear Safety

Attachment

AmerGen 50.54(q) Evaluation

ATTACHMENT 1**§50.54(q) PROGRAM EVALUATION AND EFFECTIVENESS REVIEW**

(Sheet 1 of 3)

Document Title: Clinton Station Emergency Plan Annex Review No.: 06-36Document No.: EP-AA-1003 Revision: 9**PART 1 PRELIMINARY SCREEN**

Does the proposed change impact:

YES NO ITEM

1. [50.47(b)(1)] Primary responsibilities of Exelon, offsite agencies or support organizations.
OR
The ability to respond initially or on a continuous basis.
2. [50.47(b)(2)] The assignment of responsibilities of personnel.
OR
Minimum staffing or timely augmentation.
OR
The interface between onsite and offsite support response activities.
3. [50.47(b)(3)] Arrangements for requesting and effectively using assistance or resources from offsite authorities.
OR
The accommodations for federal, state, and/or local staff at the EOF.
4. [50.47(b)(4)] Emergency Action Levels.
5. [50.47(b)(5)] Notification procedures to either the ERO, local, state, or federal entities.
OR
The content of initial and follow-up messages.
6. [50.47(b)(6)] Communications capability among principal response organizations to emergency personnel or the public.
7. [50.47(b)(7)] Dissemination of coordinated information to the general or transient public including periodic information dissemination (brochures).
8. [50.47(b)(8)] Provisions for or maintenance of emergency facilities and equipment.
OR
The periodicity of communications and emergency equipment tests.
9. [50.47(b)(9)] Methods, systems and/or equipment for the assessment and monitoring of actual or potential offsite radiological consequences.
10. [50.47(b)(10)] Protective Actions developed for either the Plume or Ingestion Exposure Pathways including onsite protective actions.
11. [50.47(b)(11)] Means for controlling emergency worker radiation exposures consistent with the guidelines established by the EPA.
12. [50.47(b)(12)] Arrangements for medical services for contaminated injured individuals.
13. [50.47(b)(13)] Plans for plant reentry and/or recovery organization operations.
14. [50.47(b)(14)] Periodicity of drills and/or exercises as well as deficiency resolution.
15. [50.47(b)(15)] Training requirements for ERO or local site support personnel.
16. [50.47(b)(16)] Responsibilities for Emergency Plan development, maintenance, and review as well as training requirements for personnel maintaining the plan.
17. Implementation of other federal regulations and requirements or formal commitments related to the Exelon Emergency Preparedness Program.
18. The operation, maintenance, or testing requirements of the ERDS.

Complete Part 2.

ATTACHMENT 1

§50.54(q) PROGRAM EVALUATION AND EFFECTIVENESS REVIEW

(Sheet 2 of 3)

Document Title: Clinton Station Emergency Plan Annex Review No.: 06-36

Document No.: EP-AA-1003 Revision: 9

PART 2: ASSESSMENT OF IMPACT

All items in Part 1 **ARE NOT** impacted.

This change **DOES NOT** involve the standards of §50.47(b), the requirements of Part 50 Appendix E or additional commitments as described within the Emergency Plan.

- 1. No further review and evaluation is required.
- 2. Documentation of the summary of changes is attached as pages - to this evaluation.

OR

Item(s) listed in Part 1 **ARE** impacted.

This change **DOES** involve the standards of §50.47(b), the requirements of Part 50 Appendix E or additional commitments as described within the Emergency Plan.

- 1. An evaluation of the change against the specific elements of §50.47(b), 10 CFR 50 Appendix E and other applicable regulations, requirements, and commitments is required.
- 2. Documentation of the affect of the proposed changes impacting the Emergency Preparedness Program are attached as pages 4-13 to this evaluation.
 - A. If the proposed changes **DO NOT** require a revision to the Emergency Plan, no further review and evaluation is required.

OR

B. If the proposed changes **DO** require a revision to the Emergency Plan, complete Part 3 of this review.

EP Preparer: Michael J. Wood Date: 6/5/06

Reviewer: Mark Sherman Date: 6/5/06

CFAM: [Signature] Date: 6/5/06

ATTACHMENT 1

§50.54(q) PROGRAM EVALUATION AND EFFECTIVENESS REVIEW

(Sheet 3 of 3)

Document Title: Clinton Station Emergency Plan Annex Review No.: 06-36

Document No.: EP-AA-1003 Revision: 9

PART 3 EFFECTIVENESS REVIEW

Does the change maintain the equivalent or establish an improved capability:

YES	NO	N/A	ITEM
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	To respond to an emergency or meet actions or other requirements described in the Emergency Plan.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	In protecting the health and safety of plant personnel and the general public in the event of an emergency.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	In implementation of a federal regulation or requirement or formal commitment.

A decrease in effectiveness in the Emergency Plan is determined to have occurred if there has been a change or reduction in a commitment without a commensurate change or reduction in the bases for that commitment (a commitment is defined as a statement made in the Emergency Plan that affects the capability or resources for responding to an emergency).

NRC approval is required prior to procedure implementation if the proposed change decreases the effectiveness of the Emergency Plan.

The Emergency Plan **CONTINUES** **DOES NOT CONTINUE** to meet the standards of §50.47(b), the requirements 10 CFR 50 Appendix E, and all other applicable regulations, requirements, and commitments.

Based on this evaluation the proposed change **DOES** **DOES NOT** decrease the effectiveness of the Emergency Plan.

Based on this evaluation the proposed change **DOES** **DOES NOT** constitute an "Alternative Method" which requires prior NRC approval.

EP Preparer: *Michael J. [Signature]* Date: 6/5/06

Reviewer: *Mark [Signature]* Date: 6/5/06

CFAM: *[Signature]* Date: 6/5/06

BACKGROUND AND SCOPE

This §50.54(q) Program Evaluation and Effectiveness Review is applicable to Clinton Station Emergency Plan Annex, EP-AA-1003.

Exelon is proposing a change to the Clinton Station Emergency Plan Annex that moves the existing Clinton Station TSC from a room adjacent to the Main Control Room to the Training Facility on the East side of the Owner Controlled Area (OCA). This change allows Clinton Station to increase the size of and utilize current technologies in the TSC.

PROGRAM REQUIREMENTS

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

NUREG-0654 II.H

1. Each licensee shall establish a Technical Support Center and an onsite operations support center (assembly area) in accordance with NUREG-0696, Revision 1.
4. Each organization shall provide for timely activation and staffing of the facilities and centers described in the plan.
10. Each organization shall make provisions to inspect, inventory and operationally check emergency equipment/instruments at least once each calendar quarter and after each use. There shall be sufficient reserves of instruments/equipment to replace those which are removed from emergency kits for calibration or repair. Calibration of equipment shall be at intervals recommended by the supplier of the equipment.

NUREG-0696, Functional Criteria for Emergency Response Facilities, Section 2

CHANGE COMPARISON

Revision bars in the right-hand margin denote changes in the procedure body.

Appendix 1, "Additional Change Descriptions" may contain additional documentation/information pertinent to this evaluation.

System – Process – Hardware Changes (Miscellaneous)

Chg #	Issue Name	Change Type	Old	New
1.M.	Technological capabilities of Clinton TSC	<input type="checkbox"/> Added <input type="checkbox"/> Removed <input checked="" type="checkbox"/> Modified	<p>There are 7 Computers located in the TSC for ERO use to view plant data, drawings, procedures and other PC based applications such as perform Dose Assessment and Core Damage Assessment.</p> <p>Phone Lines available for use in the in the existing TSC include:</p> <ul style="list-style-type: none"> a. 16 Station PBX lines b. 3 outside lines independent of the Station PBX c. Directors Hotline d. Operations Status Line e. Damage Control Line f. Technical Conference Line g. Nuclear Accident Reporting System line h. Emergency Notification System Line i. Health Physics Network Line j. Protective Measures Counterpart Line k. Reactor Safety Counterpart Line l. 2 Station PBX lines for the Illinois Emergency Management Agency m. printer/copier n. 2 fax lines <p>The TSC has work area for the designated ERO members assigned to the TSC in Table B-1 of the Exelon Nuclear Emergency Plan and a small staff of NRC personnel. With the area designated as the NRC Consultation Room, the total area of the TSC is approximately 1500 ft².</p>	<p>The new TSC will have 15 computers for the ERO to view plant data, drawings, procedures and other computer applications such as Dose Assessment and Core Damage Assessment.</p> <p>Phone Lines available for use in the in the new TSC include:</p> <ul style="list-style-type: none"> a. 30 Station PBX lines b. 4 outside lines independent of the Station PBX c. Directors Hotline d. Operations Status Line e. Damage Control Line f. Technical Conference Line g. Satellite phone h. Nuclear Accident Reporting System line i. Emergency Notification System Line j. Health Physics Network Line k. Protective Measures Counterpart Line l. Reactor Safety Counterpart Line m. 2 Station PBX lines for the Illinois Emergency Management Agency n. printer/copier o. 2 fax lines <p>The TSC has work area for the designated ERO members assigned to the TSC in Table B-1 of the Exelon Nuclear Emergency Plan and a small staff of NRC personnel. A separate conference room, document room and 2 other separate workrooms are also available for the ERO. The work area of the new TSC is approximately 3700 ft².</p>

50.54(q) Evaluation Documentation

Chg #	Issue Name	Change Type	Old	New
2.M.	Physical Location and Logistical aspects of the Clinton TSC	<input type="checkbox"/> Added <input type="checkbox"/> Removed <input checked="" type="checkbox"/> Modified	The Clinton Technical Support Center is located on the 800' elevation of the Control Building next to, but separate from, the Main Control Room. Originally, this area had been designated the Unit 2 Control Room. This location is far less than the 2-minute walking time requirement from the TSC to the Control Room as required by NUREG 0696 Section 2.2.	The new Clinton Technical Support Center is located in the Nuclear Training Building located on the east side of the plant outside the Site Protected Area and in the Owner Controlled Area. This location is approximately a 15-minute walking time to the Main Control Room.

Procedure Changes

Chg #	Section	Step #	Change Type	Old Wording	New Wording
1.P.	5	5.1.2	<input type="checkbox"/> Added <input type="checkbox"/> Removed <input checked="" type="checkbox"/> Modified	<p>5.1.2 Technical Support Center (TSC) The TSC is located on the 800' elevation of the Control Building next to, but separate from, the Main Control Room. The TSC meets the requirements of Section H.1.b of the Exelon Nuclear Radiological Emergency Plan. Originally, this area had been designed to serve as the proposed Unit 2 Control Room. As such, the TSC has been designed to Main Control Room environmental standards.</p> <p>In the event that the TSC has to be abandoned, TSC personnel and functions will be relocated to the former EOF, located in the Nuclear Training Building on the east side of the site.</p>	<p>5.1.2 Technical Support Center (TSC) Clinton Station has a designated TSC on the first floor of the Nuclear Training Building on the east side of the site. Standard air sampling equipment is used to monitor air-borne radioactivity levels in the TSC. The TSC fully meets the requirements of Section H.1.b of the Emergency Plan.</p>

CHANGE ASSESSMENT

- Changes impacting the areas listed in Part 1 are evaluated to determine whether they constitute a “decrease in effectiveness” as defined under 10 CFR 50.54(q).
- Changes other than those evaluated below were evaluated as minor and not impacting the above criteria. As such, further assessment of change against the planning standards of 10 CFR 50.47(b), the requirements of Appendix E to 10 CFR 50 or other commitments is not warranted.
- Additionally, minor clarifications, position title changes and typographical corrections that do not change the intent of the existing Emergency Plan wording are not included in this change assessment.
- Groups of changes all affected by the same Program Requirements may be summarized in a single listing below.

System – Process – Hardware Changes (Miscellaneous)

Applicable Program Requirements:

Refer to Program Requirements section of this evaluation to review the applicable requirements of the following regulations

10CFR50.47(b)(8)

NUREG-0654 II.H

NUREG-0696 Section 2

Chg #	Impact	Change impacts on the Program Requirements
1.M	<input type="checkbox"/> No affect <input checked="" type="checkbox"/> Enhancement <input type="checkbox"/> AM <input type="checkbox"/> Degradation	This change will strengthen the TSC Command and Control function by allowing the TSC Emergency Response Organization (ERO) a larger better-designed working area. With the larger work area, more equipment will be available to the TSC ERO to perform their functions. Station PBX phone lines will be increased from 16 to 30. The number of networked PC's will be increased from 7 to 15, allowing the ERO to access plant data, drawings, procedures and other computer applications. The new TSC will be equipped with a satellite phone for field team communications. With the increase in working space and additional and improved communications, the change is an enhancement over the existing TSC and will enhance compliance with program requirements.

50.54(q) Evaluation Documentation

Chg #	Impact	Change impacts on the Program Requirements
2.M	<input type="checkbox"/> No affect <input type="checkbox"/> Enhancement <input checked="" type="checkbox"/> AM <input type="checkbox"/> Degradation	<p>The new TSC will meet all requirements outlined in NUREG 0696 except the walking time to the control room. The walking time from the new TSC to the Clinton Control Room would be approximately 15 minutes. This increase in distance will be more than compensated by the fact that the increase in work area and better and more available equipment will increase the efficiency of the TSC ERO to perform their designated functions.</p> <p>This change is considered an "alternative method" as defined under NUREG-0737 Section 3.8 and Regulatory Guide 1.101. Prior NRC approval for alternative methods is required under the requirements of 10 CFR 50.54(q) as clarified by SECY 01-0192.</p>

Procedure Changes

Applicable Program Requirements:

Refer to Program Requirements section of this evaluation to review the applicable requirements of the following regulations:

10CFR50.47(b)(2)	NUREG-0654 II.B
10CFR50.47(b)(8)	NUREG-0654 II.H
NUREG-0696 Section 2	

Chg #	Impact	Change impacts on the Program Requirements
1.P	<input type="checkbox"/> No affect <input type="checkbox"/> Enhancement <input checked="" type="checkbox"/> AM <input type="checkbox"/> Degradation	<p>The new TSC will be relocated from a location adjacent to the Clinton Control Room to the first floor of the Nuclear Training Building. The new TSC will have all of the capabilities for performing TSC ERO functions as well as required radioactivity monitoring and ventilation requirements. The walking time from the new TSC to the Clinton Control Room would be approximately 15 minutes. This increase in distance will be more than compensated by the fact that the increase in work area and better and more available equipment will increase the efficiency of the TSC ERO to perform their designated functions.</p> <p>This change is considered an "alternative method" as defined under NUREG-0737 Section 3.8 and Regulatory Guide 1.101. Prior NRC approval for alternative methods is required under the requirements of 10 CFR 50.54(q) as clarified by SECY 01-0192.</p>

JUSTIFICATION

Each change that is classified as a degradation in the Change Assessment section requires a justification that includes the basis and reasons the change is appropriate and necessary. Sufficient level of detail must be provided to support the basis for complex and significant changes and conclusion regarding effectiveness.

Chg #	Basis and reasons the change causing the degradation is appropriate and necessary
<p>2.M 1.P</p>	<p>Exelon proposes to relocate the Emergency Response Organization (ERO) functions provided in the current Clinton TSC to a new TSC housed in the Nuclear Training Building outside the Protected Area Boundary (PAB). This change proposes exceptions from the guidance in NUREG-0696 that the TSC be located near the Control Room to facilitate face-to-face communications between TSC and Control Room personnel, that the walking time from the TSC to the Control Room not exceed 2 minutes, and that there be no major security barriers between the two facilities. The new TSC relocation does not alter the functions of the TSC as described in NUREG-0696 and enhances the coordination of engineering activities with the overall emergency response effort. The proposed Clinton TSC has capabilities comparable to the TSCs of the other plants within Exelon Nuclear.</p> <p>Since the proposed change represents a new location for the TSC, the adequacy of the facility was evaluated against the criteria in NUREG-0696, "Functional Criteria for Emergency Response Facilities," Section 2 entitled "Technical Support Center". The criteria related to Staffing and Training are not provided in this review since the relocation of the TSC does not impact these criteria.</p> <p><u>FUNCTION</u></p> <p>The new onsite TSC will continue to provide plant management and technical support to plant operations personnel during emergency conditions and will relieve the reactor operators of peripheral duties and communications not directly related to reactor system manipulations. Once the new TSC is activated, the emergency response command and control will be transferred from the Control Room to the TSC until transfer of command and control functions to the Emergency Operations Facility (EOF).</p> <p>The new TSC will be the emergency operating work area for designated technical, engineering and senior management personnel and other designated personnel required to provide technical support, and for a staff of NRC personnel. This facility will be the primary onsite communications center for the plant during an emergency.</p> <p>The proposed new TSC will have environmental and radiological information available from the Plant Process Computer (PPC) to perform the necessary functions of the EOF prior to EOF activation.</p> <p>Therefore, the function of the new new TSC provides for the same or improved support to plant operations personnel and communication capability during emergency conditions as the existing TSC and meets the guidance of NUREG-0696.</p> <p><u>LOCATION</u></p> <p>The new TSC will be located on the first floor of the Nuclear Training Building, which is outside of the Protected Area Boundary (PAB) and within the Owner Controlled Area. Exelon requests exceptions from the guidance in NUREG-0696 that the TSC be located near the Control Room to facilitate face-to-face communications between TSC and Control Room personnel, that the walking time from the TSC to the Control Room not exceed 2 minutes, and that there be no major security barriers between the two facilities.</p>

Chg #	Basis and reasons the change causing the degradation is appropriate and necessary
	<p>The original intent of this close proximity requirement is to ensure timely and accurate communication between the Control Room and the senior licensee manager. The new TSC will have dedicated and diverse communications with the Control Room, the Operations Support Center (OSC) and the EOF. The Clinton Station Operations Status Hotline is a dedicated phone ring down circuit that connects the Control Room, TSC and the EOF. The Clinton Damage Control Hotline is a dedicated phone ring down circuit that connects the Control Room, the TSC and the OSC. ERO communicators man these hotlines during emergency situations. Additionally, the new TSC will have access to the PPC data via the Plant Parameter Display System (PPDS) displays. There is no anticipated need to traverse from the new TSC to the Control Room and consequently the PAB security barrier does not create an adverse impact on the function of the new TSC.</p> <p>However, if the need were to arise requiring transit to the Control Room, the transit time would be approximately 15 minutes. This includes the time to pass through the PAB security access.</p> <p>Although the location does not meet the timely face-to-face communication criterion, the ability to monitor plant conditions via the PPDS and direct communication capabilities provide adequate exchange between the new TSC and Control Room.</p> <p><u>SIZE</u></p> <p>The guidance provided in NUREG-0696 calls for providing a working space to accommodate 25 individuals with enough space for 75 ft² per person.</p> <p>The new TSC in the OSF provides a working space of approximately 3700 ft², thereby exceeding 75 ft² per person for 25 individuals. The new TSC also provides a separate conference room, a document room as well as 2 additional separate workrooms for ERO, State and Federal personnel.</p> <p>Therefore, the size of the new TSC provides substantial improvement in the workspace for the number of individuals reporting to the TSC, meets the guidance of NUREG-0696</p> <p><u>STRUCTURE</u></p> <p>The new TSC is located in the 1st Floor of the Nuclear Training Building that was originally the Clinton EOF. The Clinton EOF has since been combined with Exelon Midwest EOF in Warrenville, IL. The Nuclear Training Building is located inside a prefabricated metal building. Within this structure is the new TSC. The TSC perimeter walls and ceiling are eight inch thick concrete. The structure is built in accordance with the Uniform Building Code and has been designed in accordance with:</p> <ul style="list-style-type: none"> • Metal Building Manufacturers Association (MBMA) Recommended Guide Specifications for Pre-Engineered Metal Buildings. • MBMA Recommended Design Practice Manual • MBMA Code of Standard Practice • American Institute of Steel Construction (AISC) Manual of Steel Construction • American Iron and Steel Institute (AISI) Light Gauge Cold-Formed Steel Design Manual <p>Therefore, based on the compliance with the appropriate construction codes and standards, the TSC within the Nuclear Training Building is capable of withstanding the most adverse conditions reasonably expected during the design life of the plant including adequate capabilities for earthquakes, high winds and flood conditions and meets the guidance of NUREG-0696.</p>

Chg #	Basis and reasons the change causing the degradation is appropriate and necessary
	<p><u>HABITABILITY</u></p> <p>The existing TSC is within the Control Room habitability envelope and provides some additional Heating, Ventilation and Air Conditioning (HVAC) design features not required for the TSC HVAC. These include seismic qualification, redundancy and electrical power from the safety-related power source. The ventilation system for the new TSC consists of a recirculating fan, cooling coil serviced by an air conditioning unit, and a makeup air treatment system. The makeup air treatment system consists of prefilters, a HEPA filter and an activated charcoal adsorbent type filter.</p> <p>Dedicated radiation equipment will be provided in the new TSC to measure radiation levels and airborne radiological conditions.</p> <p>Sufficient equipment and measures have been designated to monitor and alarm changing radiological conditions impacting new TSC habitability and requiring the manual realignment of the HVAC to its emergency "recirculation" mode. A dose calculation was performed and verified that the new TSC meets the criteria outlined in NUREG-0696 including ensuring the dose to the TSC occupants is limited to less than 5 Rem TEDE for the thirty (30) days accident mitigation period.</p> <p>Therefore, personnel are adequately protected from radiological hazards including direct radiation and airborne radioactivity from in-plant sources under accident conditions. The design of the TSC HVAC system meets the guidance of NUREG-0696. Adequate radiation monitoring capability complete with alarm functions exists to provide continuous indication of radiation dose and airborne radioactivity concentrations inside the TSC while it is in use during emergencies.</p> <p><u>COMMUNICATIONS</u></p> <p>The existing TSC telephone and public address (PA) communication capability will be provided in the new TSC. Onsite and offsite communication capability is improved as a result of the relocation of the TSC. This communication capability includes the following:</p> <ul style="list-style-type: none"> • 30 Station PBX phone lines • 4 outside phone lines independent of the Station PBX • Director's Hotline between Control Room, TSC and EOF • Operation's Hotline between Control Room, TSC and EOF • Damage Control Hotline between Control Room, TSC and OSC • Technical Hotline between TSC and EOF • Nuclear Accident Reporting System (NARS) phone • Emergency Notification System (ENS) phone • Health Physics Network (HPN) phone • Protective Measures Counterpart phone • Reactor Safety Counterpart phone • 2 Station PBX lines dedicated to the Illinois Emergency Management Agency • Satellite Phone for communications with the Exelon Environs Field Teams <p>These communication systems are provided with reliable station electrical power. In the case of a power failure, the phone systems at Clinton also</p>

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	<p>have battery back-up power so they remain operable until an emergency diesel generator can power the systems.</p> <p>While direct face-to-face communications will not occur between the Shift Manager in the Control Room and the Emergency Director in the TSC, adequate communications lines and designated Communicator positions are identified to ensure continued and effective communications with the Control Room. Additionally, PPDS data display in the new TSC serves to reduce the reliance on verbal and face-to-face communications between the Control Room and the TSC.</p> <p>Therefore, the new TSC communications capability provides for the same or improved communication capability when compared to the existing configuration and meets the guidance of NUREG-0696.</p> <p><u>INSTRUMENTATION, DATA SYSTEM AND POWER SUPPLIES</u></p> <p>The current PPDS will continue to serve as the primary source of data for the TSC. The display is designed for monitoring key plant parameters to perform classification of an emergency based on established emergency action levels. Meteorological data is available on the PPDS for use in dose assessment models.</p> <p>The primary power source is from a local 138 KV offsite distribution source to Clinton Power Station. Backup power is provided by a 500 KW diesel generator. The diesel generator is rated for continuous standby duty and is equipped with an automatic transfer switch for when the primary power source is lost.</p> <p>Therefore, the instrumentation, data system equipment and power sources provide a highly reliable and diverse capability and meet the guidance of NUREG-0696.</p> <p><u>TECHNICAL DATA AND DATA SYSTEM</u></p> <p>The current Plant Parameter Display System (PPDS) displays will continue to serve as the primary source of data. The PPDS is designed for monitoring key plant parameters to perform classification of an emergency based on established emergency action levels. Meteorological data is available on the PPC for use in dose assessment models. The use of the plant computer in the TSC will not interfere with any required plant instrumentation.</p> <p>The following displays in PPDS are available to the TSC staff and can be displayed electronically for live-time monitoring:</p> <ul style="list-style-type: none"> • Parameter Trending • Plant Overview • Plant Status • EAL Parameters • Radiological Status • Effluent Release Parameters • Core Damage Assessment Model (CDAM) Data • ERDS Data

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	<p>Therefore, the new TSC has improved data display capabilities that will support decision-making during event classification and assessment in the TSC and meets the guidance of NUREG-0696.</p> <p><u>RECORDS AVAILABILITY AND MANAGEMENT</u></p> <p>The new TSC will have an up-to-date repository of plant of selected records and procedures at the disposal of TSC personnel to aid in their technical analysis and evaluation of emergency conditions. The records will be controlled to ensure they are current and complete. Hardcopies of key reference materials will be maintained throughout the TSC.</p> <p>In addition, station design documentation, plant drawings, UFSAR, procedures, etc. are available via Local Area Network connections from the Electronic Document Management System (EDMS).</p> <p>Therefore, the records availability meets the storage, availability, current and completeness requirements and meets the guidance of NUREG-0696.</p> <p>CONCLUSION</p> <p>The new TSC meets the guidance specified in NUREG-0696 for acceptable TSCs except for the noted exception to the location criteria. Although the new TSC is not in close proximity to the Control Room, adequate means will exist to obtain operational data, through use of the TSC displays from the PPDS and to communicate via dedicated and diverse communications with the Control Room. With the advent of improved communications and data collection and display, face-to-face communications are no longer a significant benefit to the facility. The new TSC relocation does not alter the functions of the TSC as described in NUREG-0696 and enhances the coordination of engineering activities with the overall emergency response effort. The new TSC also continues to provide for enhanced command and control by locating the station senior management (Station Emergency Director) with all the appropriate technical advisors in one location. The Emergency Plan continues to meet the requirements for accident monitoring, assessment and mitigation in support of the Control Room while maintaining the existing ERO positions, responsibilities and staffing levels.</p> <p>The proposed Clinton TSC has capabilities comparable to the TSCs of the other plants within Exelon Nuclear.</p> <p>Exelon has concluded that the proposed change will not result in a reduction of the capability of the Emergency Response Organization (ERO) to respond to an emergency, and will not reduce Exelon's ability to protect the health and safety of the public. The relocation of the Clinton TSC to the Nuclear Training building is proposed as an alternate method.</p> <p>This change is considered an "alternative method" as defined under NUREG-0737 Section 3.8 and Regulatory Guide 1.101. Prior NRC approval for alternative methods is required under the requirements of 10 CFR 50.54(q) as clarified by SECY 01-0192.</p>