

The Detroit Edison Company  
One Energy Plaza, Detroit, MI 48226-1279



10 CFR 52.79

May 3, 2010  
NRC3-10-0017

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

References:

- 1) Fermi 3  
Docket No. 52-033
- 2) Letter from Jerry Hale (USNRC) to Jack M. Davis (Detroit Edison), "Request for Additional Information Letter No. 26 Related to the SRP Sections 12.2.2, 13.6.1, 14.3.2, 14.3.12 And 17.5 for the Fermi 3 Combined License Application," dated March 18, 2010
- 3) Letter from Richard Rasmussen (USNRC) to Jack M. Davis (Detroit Edison), "NRC Response to Detroit Edison Reply to a Notice of Violation 05200033/2009-201-01, 02, and 03 and Revised Notice of Violation to Detroit Edison Company," dated April 27, 2010

Subject: Detroit Edison Company Response to NRC Requests for Additional Information Related to Letter No. 26, SRP Sections 12.2.2, 13.6.1, 14.3.2, and 14.3.12

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In Reference 2, the NRC requested additional information to support the review of certain portions of the Fermi 3 Combined License Application (COLA). The responses to the Requests for Additional Information (RAIs) associated with Reference 2, SRP Sections 12.2.2, 13.6.1, 14.3.2, and 14.3.12 are provided as Attachments 1 through 7 of this letter. Information contained in these responses will be incorporated into a future COLA submission as described in the attachments.

The responses to the RAIs associated with Reference 2, SRP Section 17.5, will be transmitted under separate cover. In Reference 3, the NRC provided its response to three violations

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contested by Detroit Edison. Detroit Edison is reviewing the RAI responses associated with SRP Section 17.5, in light of the information provided in Reference 3, and will submit the responses by May 10, 2010.

If you have any questions, or need additional information, please contact me at (313) 235-3341.

I state under penalty of perjury that the foregoing is true and correct. Executed on the 3rd day of May 2010.

Sincerely,



Peter W. Smith, Director  
Nuclear Development – Licensing & Engineering  
Detroit Edison Company

Attachments: 1) Response to RAI Letter No. 26, RAI Question No. 14.03.02-2  
2) Response to RAI Letter No. 26, RAI Question No. 14.03.12-1  
3) Response to RAI Letter No. 26, RAI Question No. 14.03.12-2  
4) Response to RAI Letter No. 26, RAI Question No. 14.03.12-3  
5) Response to RAI Letter No. 26, RAI Question No. 13.06.01-1  
6) Response to RAI Letter No. 26, RAI Question No. 13.06.01-2  
7) Response to RAI Letter No. 26, RAI Question No. 12.02-6

cc: Chandu Patel, NRC Fermi 3 Project Manager  
Jerry Hale, NRC Fermi 3 Project Manager  
Ilka Berrois, NRC Fermi 3 Project Manager  
Bruce Olson, NRC Fermi 3 Environmental Project Manager (w/o attachments)  
Fermi 2 Resident Inspector (w/o attachments)  
NRC Region III Regional Administrator (w/o attachments)  
NRC Region II Regional Administrator (w/o attachments)  
Supervisor, Electric Operators, Michigan Public Service Commission (w/o attachments)  
Michigan Department of Environmental Quality, Radiological Protection and Medical  
Waste Section (w/o attachments)

**Attachment 1**  
**NRC3-10-0017**

**Response to RAI Letter No. 26**  
**(eRAI Tracking No. 4338)**

**RAI Question No. 14.03.02-2**

**NRC RAI 14.03.02-2**

*Section 2.4.1, "ITAAC FOR BACKFILL UNDER CATEGORY I STRUCTURES," of Part 10 states that: "Not applicable since no compactable backfill will be placed under Fermi 3 Category I structures." Confirm that the above statement also applies to the supporting foundation medium for the FWSC structures. If not, discuss key elements of ITAAC that will be applied to the compactable backfill fill medium.*

**Response**

As stated in the Detroit Edison response to RAI 14.03.02-1 in the letter from Peter W. Smith (Detroit Edison) to U.S. Nuclear Regulatory Commission, "Detroit Edison Company Response to NRC Request for Additional Information Letters No. 14 & 15," dated November 20, 2009 (ML093280179):

*"Per Fermi 3 FSAR, Rev. 1, Section 2.5.4.3 states the following:*

*"The FWSC foundation base is within fill material as shown on Figure 2.5. 4-202; however, the existing subsurface materials including fill, lacustrine and glacial till are to be removed and backfill consisting of lean concrete will reestablish the foundation grade of the FWSC."*

*FSAR Figure 2.5.4-202 shows the lean concrete backfill under the FWSC with the base of the backfill founded on the Bass Island Group bedrock. As described in FSAR, Section 2.5.4.5.4.2, the lean concrete used as fill under the FWSC will be proportioned, tested and the placement controlled in accordance with Regulatory Guide 1.142.*

*Due to the non-compactable characteristics of lean concrete, the statement in ITAAC Part 10, Section 2.4.1, is confirmed to be applicable to the FWSC structures."*

This response is applicable to the latest Fermi 3 FSAR revision submitted March, 2010.

**Proposed COLA Revision**

None required.

**Attachment 2**  
**NRC3-10-0017**

**Response to RAI Letter No. 26**  
**(eRAI Tracking No. 4486)**

**RAI Question No. 14.03.12-1**

**NRC RAI 14.03.12-1**

*ITAAC # 1*

*Fermi Unit 3, S-COL application revision 1, Part 10, Combine License Application (including Inspection, Testing, Analyses, and Acceptance Criteria (ITAAC)), addresses the GE Hitachi Design Control Document (DCD), Tier 1, Table 2.19-1, revision 6, as providing specifies design commitments and ITAAC for the physical security system to be used as Fermi 3's as alternative method to the SRP 14.3.12, Physical Security Hardware-ITAAC (PS-ITAAC). The GE Hitachi DCD is being revised (RAI 14.3-440 S01 response letter 4/11/09) to address the new Part 73.55 rule requirements. Review and confirm the below listed PS-ITAAC properly reflects the applicant's intentions based on the SRP and the most current revision of the DCD.*

*The below PS-ITAAC reference numbers from DCD, Tier 1 Table 2.19-1, have been cross-referenced with NUREG-800 Standard Review Plan (SRP) (Draft), 14.3.12 Appendix "A" for clarification. (ADAMS Accession Number: ML ML092600348)*

<i>DCD Table 2.1.9-1 # 1a</i>	<i>SRP Appendix "A" #1</i>
<i>DCD Table 2.1.9-1 # 13a</i>	<i>SRP Appendix "A" #13a</i>
<i>DCD Table 2.1.9-1 # 14a</i>	<i>SRP Appendix "A" #14a</i>

*Regulatory Basis: 10CFR 52.47(b)(1) The application must also contain: (1) The proposed inspections, tests, analyses, and acceptance criteria that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, a facility that incorporates the design certification has been constructed and will be operated in conformity with the design certification, the provisions of the Act, and the Commission's rules and regulations.*

**Response**

In Revision 6 of the ESBWR Design Control Document (DCD), General Electric-Hitachi (GEH) submitted the Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) related to the physical security design commitments within the scope of the ESBWR DCD as a result of the GEH response to DCD RAI 14.3-440. The physical security ITAAC (PS-ITAAC) were subsequently modified in Revision 7 of the ESBWR DCD as a result of a supplemental response to DCD RAI 14.3-440. The PS-ITAAC contained in Revision 7 of the DCD reflect the requirements of 10 CFR 73.55, as they pertain to the ESBWR design.

An assessment of the ESBWR DCD PS-ITAAC and the PS-ITAAC required for a Combined License Application (COLA) identified several site-specific plant supplements required to address the 10 CFR 73.55 criteria. A cross reference table is included in this response that reflects the PS-ITAAC contained in Standard Review Plan (SRP) 14.3-12,

Revision 1, “Physical Security Hardware – Inspections, Tests, Analyses and Acceptance Criteria,” dated January 2010 (ML093080140), ESBWR DCD, Revision 6, ESBWR DCD, Revision 7, and proposed PS-ITAAC to be contained in Part 10 of the Fermi 3 COLA. The cross reference table was developed as an aid to demonstrate conformance with the guidance provided in the SRP, and is provided in lieu of addressing each of the specific cross-referenced DCD/SRP ITAAC discussed in this RAI. The Fermi 3 PS-ITAAC complement the ESBWR DCD PS-ITAAC, thereby fully addressing the requirements of 10 CFR 73.55.

Following is a cross reference table that reflects the PS-ITAAC contained in Standard Review Plan (SRP) 14.3-12, Revision 1, “Physical Security Hardware – Inspections, Tests, Analyses and Acceptance Criteria,” dated January 2010 (ML093080140), ESBWR DCD, Revision 6, ESBWR DCD, Revision 7, and proposed PS-ITAAC to be contained in Part 10 of the Fermi 3 COLA.

**SRP 14.3.12 (Revision 1 – 01/2010)/DCD (Revision 6 and 7)/COLA Cross Reference ITAAC for Plant Security**

<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
<p>SRP: 1(a). Vital equipment will be located only within a vital area.</p> <p>DCD (Revision 6): 1a. Vital equipment shall be located only within a vital area.</p> <p>DCD (Revision 7): 1a. Vital equipment is located only within a vital area.</p> <p>COLA: 1(a). Vital equipment will be located only within a vital area.</p>	<p>SRP: 1(a). All vital equipment locations will be inspected.</p> <p>DCD (Revision 6): Inspections will be performed to confirm that vital equipment is located within a vital area.</p> <p>DCD (Revision 7): Inspections will be performed of all vital equipment locations.</p> <p>COLA: 1(a). All vital equipment locations will be inspected.</p>	<p>SRP: 1(a). Vital equipment is located only within a vital area.</p> <p>DCD (Revision 6): Vital equipment is located only within a vital area.</p> <p>DCD (Revision 7): Vital equipment is located only within a vital area.</p> <p>COLA: 1(a). Vital equipment is located only within a vital area.</p>
<p>SRP: 1(b). Access to vital equipment will require passage through at least two physical barriers.</p> <p>DCD (Revision 6): 1b. Access to vital equipment requires passage through a vital area barrier with a capability to prevent unauthorized entry.</p> <p>DCD (Revision 7): 1b-1. Access to vital equipment requires passage through a vital area barrier.</p> <p>COLA: 1(b). Access to vital equipment will require passage through at least two physical barriers.</p>	<p>SRP: 1(b). All vital equipment physical barriers will be inspected.</p> <p>DCD (Revision 6): Inspections will be performed to confirm that access to vital equipment requires passage through a vital area barrier with a capability to prevent unauthorized entry.</p> <p>DCD (Revision 7): Inspections will be performed of all vital equipment locations.</p> <p>COLA: 1(b). All vital equipment physical barriers will be inspected.</p>	<p>SRP: 1(b). Vital equipment is located within a protected area such that access to the vital equipment requires passage through at least two physical barriers.</p> <p>DCD (Revision 6): Access to the vital equipment requires passage through a vital area barrier with a capability to prevent unauthorized entry.</p> <p>DCD (Revision 7): Vital equipment is located such that access to the vital equipment requires passage through a vital area barrier.</p> <p>COLA: 1(b). Vital equipment is located within a protected area such that access to the vital equipment requires passage through at least two physical barriers.</p>



**SRP 14.3.12 (Revision 1 – 01/2010)/DCD (Revision 6 and 7)/COLA Cross Reference ITAAC for Plant Security**

<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
<p>SRP: 2(a). Physical barriers for the protected area perimeter will not be part of vital area barriers.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 2(a). Physical barriers for the protected area perimeter will not be part of vital area barriers.</p>	<p>SRP: 2(a). The protected area perimeter barriers will be inspected.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 2(a). The protected area perimeter barriers will be inspected.</p>	<p>SRP: 2(a). Physical barriers at the perimeter of the protected area are separated from any other barrier designated as a vital area barrier.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 2(a). Physical barriers at the perimeter of the protected area are separated from any other barrier designated as a vital area barrier.</p>
<p>SRP: 2(b). Penetrations through the protected area barrier will be secured and monitored.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 2(b). Penetrations through the protected area barrier will be secured and monitored.</p>	<p>SRP: 2(b). All penetrations through the protected area barrier will be inspected.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 2(b). All penetrations through the protected area barrier will be inspected.</p>	<p>SRP: 2(b). All penetrations and openings through the protected area barrier are secured and monitored by intrusion detection equipment.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 2(b). All penetrations and openings through the protected area barrier are secured and monitored by intrusion detection equipment.</p>

**SRP 14.3.12 (Revision 1 – 01/2010)/DCD (Revision 6 and 7)/COLA Cross Reference ITAAC for Plant Security**

<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
<p>SRP: 2(c). Unattended openings that intersect a security boundary, such as underground pathways, will be protected by a physical barrier and monitored by intrusion detection equipment or provided surveillance at a frequency sufficient to detect exploitation.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 2(c). Unattended openings that intersect a security boundary, such as underground pathways, will be protected by a physical barrier and monitored by intrusion detection equipment or provided surveillance at a frequency sufficient to detect exploitation.</p>	<p>SRP: 2(c). All unattended openings within the protected area barriers will be inspected.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 2(c). All unattended openings within the protected area barriers will be inspected.</p>	<p>SRP: 2(c). All unattended openings (such as underground pathways) that intersect a security boundary (such as the protected area barrier), are protected by a physical barrier and monitored by intrusion detection equipment or provided surveillance at a frequency sufficient to detect exploitation.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 2(c). All unattended openings (such as underground pathways) that intersect a security boundary (such as the protected area barrier), are protected by a physical barrier and monitored by intrusion detection equipment or provided surveillance at a frequency sufficient to detect exploitation.</p>
<p>SRP: 3(a). Isolation zones will exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and will be designed of sufficient size to permit observation and assessment on either side of the barrier.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 3(a). Isolation zones will exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and will be designed of sufficient size to permit observation and assessment on either side of the barrier.</p>	<p>SRP: 3(a). The isolation zones in outdoor areas adjacent to the protected area perimeter barrier will be inspected.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 3(a). The isolation zones in outdoor areas adjacent to the protected area perimeter barrier will be inspected.</p>	<p>SRP: 3(a). The isolation zones exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and are of sufficient size to permit observation and assessment of activities on either side of the barrier in the event of its penetration or attempted penetration.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 3(a). The isolation zones exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and are of sufficient size to permit observation and assessment of activities on either side of the barrier in the event of its penetration or attempted penetration.</p>

**SRP 14.3.12 (Revision 1 – 01/2010)/DCD (Revision 6 and 7)/COLA Cross Reference ITAAC for Plant Security**

<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
<p>SRP: 3(b). Isolation zones will be monitored with intrusion detection and assessment equipment that is designed to provide detection and assessment of activities within the isolation zone.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 3(b). Isolation zones will be monitored with intrusion detection and assessment equipment that is designed to provide detection and assessment of activities within the isolation zone.</p>	<p>SRP: 3(b). The intrusion detection equipment within the isolation zones will be inspected.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 3(b). The intrusion detection equipment within the isolation zones will be inspected.</p>	<p>SRP: 3(b). Isolation zones are equipped with intrusion detection and assessment equipment capable of providing detection and assessment of activities within the isolation zone.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 3(b). Isolation zones are equipped with intrusion detection and assessment equipment capable of providing detection and assessment of activities within the isolation zone.</p>

**SRP 14.3.12 (Revision 1 – 01/2010)/DCD (Revision 6 and 7)/COLA Cross Reference ITAAC for Plant Security**

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<p>SRP: 3(c). Areas where permanent buildings do not allow sufficient observation distance between the intrusion detection system and the protected area barrier (e.g., the building walls are immediately adjacent to, or are an integral part of the protected area barrier) will be monitored with intrusion detection and assessment equipment that is designed to detect the attempted or actual penetration of the protected area perimeter barrier before completed penetration of the barrier and assessment of detected activities.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 3(c). Areas where permanent buildings do not allow sufficient observation distance between the intrusion detection system and the protected area barrier (e.g., the building walls are immediately adjacent to, or are an integral part of the protected area barrier) will be monitored with intrusion detection and assessment equipment that is designed to detect the attempted or actual penetration of the protected area perimeter barrier before completed penetration of the barrier and assessment of detected activities.</p>	<p>SRP: 3(c). Inspections of areas of the protected area perimeter barrier that do not have isolation zones will be performed.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 3(c). Inspections of areas of the protected area perimeter barrier that do not have isolation zones will be performed.</p>	<p>SRP: 3(c). Areas where permanent buildings do not allow sufficient observation distance between the intrusion detection system and the protected area barrier (e.g., the building walls are immediately adjacent to, or are an integral part of, the protected area barrier) are monitored with intrusion detection and assessment equipment that detects attempted or actual penetration of the protected area perimeter barrier before completed penetration of the barrier and assessment of detected activities.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 3(c). Areas where permanent buildings do not allow sufficient observation distance between the intrusion detection system and the protected area barrier (e.g., the building walls are immediately adjacent to, or are an integral part of, the protected area barrier) are monitored with intrusion detection and assessment equipment that detects attempted or actual penetration of the protected area perimeter barrier before completed penetration of the barrier and assessment of detected activities.</p>

**SRP 14.3.12 (Revision 1 – 01/2010)/DCD (Revision 6 and 7)/COLA Cross Reference ITAAC for Plant Security**

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<p>SRP: 4(a). The perimeter intrusion detection system will be designed to detect penetration or attempted penetration of the protected area perimeter barrier before completed penetration of the barrier, and for subsequent alarms to annunciate concurrently in at least two continuously manned onsite alarm stations (central and secondary alarm stations).</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 4(a). The perimeter intrusion detection system will be designed to detect penetration or attempted penetration of the protected area perimeter barrier before completed penetration of the barrier, and for subsequent alarms to annunciate concurrently in at least two continuously manned onsite alarm stations (central and secondary alarm stations).</p>	<p>SRP: 4(a). Tests, inspections, or a combination of tests and inspections of the intrusion detection system will be performed.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 4(a). Tests, inspections, or a combination of tests and inspections of the intrusion detection system will be performed.</p>	<p>SRP: 4(a). The intrusion detection system can detect penetration or attempted penetration of the protected area perimeter barrier before completed penetration of the barrier, and subsequent alarms annunciate concurrently in at least two continuously manned onsite alarms stations (central and secondary alarm stations).</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 4(a). The intrusion detection system can detect penetration or attempted penetration of the protected area perimeter barrier before completed penetration of the barrier, and subsequent alarms annunciate concurrently in at least two continuously manned onsite alarms stations (central and secondary alarm stations).</p>

**SRP 14.3.12 (Revision 1 – 01/2010)/DCD (Revision 6 and 7)/COLA Cross Reference ITAAC for Plant Security**

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<p>SRP: 4(b). The perimeter assessment equipment will be designed to provide video image recording with real-time and playback capability that can provide assessment of detected activities before and after each alarm annunciation at the protected area perimeter barrier.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 4(b). The perimeter assessment equipment will be designed to provide video image recording with real-time and playback capability that can provide assessment of detected activities before and after each alarm annunciation at the protected area perimeter barrier.</p>	<p>SRP: 4(b). Tests, inspections, or a combination of tests and inspections of the video assessment equipment will be performed.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 4(b). Tests, inspections, or a combination of tests and inspections of the video assessment equipment will be performed.</p>	<p>SRP: 4(b). The perimeter assessment equipment is capable of real-time and playback video image recording that provides assessment of detected activities before and after each alarm annunciation at the protected area perimeter barrier.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 4(b). The perimeter assessment equipment is capable of real-time and playback video image recording that provides assessment of detected activities before and after each alarm annunciation at the protected area perimeter barrier.</p>
<p>SRP: 4(c). The intrusion detection and assessment equipment at the protected area perimeter will be designed to remain operable from an uninterruptible power supply in the event of the loss of normal power.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 4(c). The intrusion detection and assessment equipment at the protected area perimeter will be designed to remain operable from an uninterruptible power supply in the event of the loss of normal power.</p>	<p>SRP: 4(c). Tests, inspections, or a combination of tests and inspections of the uninterruptible power supply will be performed.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 4(c). Tests, inspections, or a combination of tests and inspections of the uninterruptible power supply will be performed.</p>	<p>SRP: 4(c). All Intrusion detection and assessment equipment at the protected area perimeter remains operable from an uninterruptible power supply in the event of the loss of normal power.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 4(c). All Intrusion detection and assessment equipment at the protected area perimeter remains operable from an uninterruptible power supply in the event of the loss of normal power.</p>

**SRP 14.3.12 (Revision 1 – 01/2010)/DCD (Revision 6 and 7)/COLA Cross Reference ITAAC for Plant Security**

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<p>SRP: 5. Isolation zones and exterior areas within the protected area will be provided with illumination to permit assessment in the isolation zones and observation of activities within exterior areas of the protected area.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 5. Isolation zones and exterior areas within the protected area will be provided with illumination to permit assessment in the isolation zones and observation of activities within exterior areas of the protected area.</p>	<p>SRP: 5. The illumination in isolation zones and exterior areas within the protected area will be inspected.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 5. The illumination in isolation zones and exterior areas within the protected area will be inspected.</p>	<p>SRP: 5. Illumination in isolation zones and exterior areas within the protected area is 0.2 foot candles measured horizontally at ground level or alternatively augmented, sufficient to permit assessment and observation.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 5. Illumination in isolation zones and exterior areas within the protected area is 0.2 foot candles measured horizontally at ground level or alternatively augmented, sufficient to permit assessment and observation.</p>

**SRP 14.3.12 (Revision 1 – 01/2010)/DCD (Revision 6 and 7)/COLA Cross Reference ITAAC for Plant Security**

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<p>SRP: 6. The external walls, doors, ceiling, and floors in the main control room, central alarm station, secondary alarm station, and the last access control function for access to the protected area will be bullet resistant, to at least Underwriters Laboratories Ballistic Standard 752, "The Standard of Safety for Bullet-Resisting Equipment," Level 4, or National Institute of Justice Standard 0108.01, "Ballistic Resistant Protective Materials," Type III.</p> <p>DCD (Revision 6): 6. The external walls, doors, ceiling and floors in the main control room and Central Alarm Station are resistant to at least a Underwriter's Laboratories (UL) 752 level 4 round.</p> <p>DCD (Revision 7): 6a. The external walls, doors, ceiling and floors in the Main Control Room and Central Alarm Station are bullet resistant to at least Underwriter's Laboratories (UL) 752 (2006) Level 4.</p> <p>COLA: 6. The external walls, doors, ceiling, and floors in the Secondary Alarm Station, and the last access control function for access to the protected area will be bullet resistant, to at least Underwriters Laboratories Ballistic Standard 752, "The Standard of Safety for Bullet-Resisting Equipment," Level 4, or National Institute of Justice Standard 0108.01, "Ballistic Resistant Protective Materials," Type III.</p>	<p>SRP: 6. Type test, analysis, or a combination of type test and analysis of the external walls, doors, ceiling, and floors in the main control room, central alarm station, secondary alarm station, and the last access control function for access to the protected area will be performed.</p> <p>DCD (Revision 6): Analyses will be performed for the external walls, doors, ceilings, floors, and any windows in the walls in the main control room Central Alarm Station to ensure they are resistant to at least a UL 752 level 4 round.</p> <p>DCD (Revision 7): Type test, analyses or a combination of type test and analysis of the external walls, doors, ceilings, and floors in the Main Control Room and Central Alarm Station will be performed.</p> <p>COLA: 6. Type test, analysis, or a combination of type test and analysis of the external walls, doors, ceiling, and floors in the Secondary Alarm Station, and the last access control function for access to the protected area will be performed.</p>	<p>SRP: 6. A report exists and concludes that the walls, doors, ceilings, and floors in the main control room, central alarm station, secondary alarm station, and the last access control function for access to the protected area are bullet resistant to at least Underwriters Laboratories Ballistic Standard 752, Level 4, or National Institute of Justice Standard 0108.01, Type III.</p> <p>DCD (Revision 6): The walls, doors, ceilings, floors in the main control room and the Central Alarm Station are bullet resistant to at least a UL 752 level 4 round.</p> <p>DCD (Revision 7): The external walls, doors, ceilings, and floors in the Main Control Room and the Central Alarm Station are bullet resistant to at least UL 752 Level 4.</p> <p>COLA: 6. A report exists and concludes that the walls, doors, ceilings, and floors in the Secondary Alarm Station, and the last access control function for access to the protected area are bullet resistant to at least Underwriters Laboratories Ballistic Standard 752, Level 4, or National Institute of Justice Standard 0108.01, Type III.</p>



**SRP 14.3.12 (Revision 1 – 01/2010)/DCD (Revision 6 and 7)/COLA Cross Reference ITAAC for Plant Security**

<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
<p>SRP: 7. The vehicle barrier system will be designed, installed, and located at the necessary standoff distance to protect against the design-basis threat vehicle bombs.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 7. The vehicle barrier system will be designed, installed, and located at the necessary standoff distance to protect against the design-basis threat vehicle bombs.</p>	<p>SRP: 7. Type test, inspections, analysis or a combination of type tests, inspections, and analysis will be performed for the vehicle barrier system.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 7. Type test, inspections, analysis or a combination of type tests, inspections, and analysis will be performed for the vehicle barrier system.</p>	<p>SRP: 7. A report exists and concludes that the vehicle barrier system will protect against the design-basis threat vehicle bombs based on the standoff distance for the system.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 7. A report exists and concludes that the vehicle barrier system will protect against the design-basis threat vehicle bombs based on the standoff distance for the system.</p>
<p>SRP: 8(a). Access control points will be established and designed to control personnel and vehicle access into the protected area.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 8(a). Access control points will be established and designed to control personnel and vehicle access into the protected area.</p>	<p>SRP: 8(a). Tests, inspections, or a combination of tests and inspections of installed systems and equipment will be performed.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 8(a). Tests, inspections, or a combination of tests and inspections of installed systems and equipment will be performed.</p>	<p>SRP: 8(a). Access control points exist for the protected area and are configured to control access.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 8(a). Access control points exist for the protected area and are configured to control access.</p>

**SRP 14.3.12 (Revision 1 – 01/2010)/DCD (Revision 6 and 7)/COLA Cross Reference ITAAC for Plant Security**

<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
<p>SRP: 8(b). Access control points will be established and designed with equipment for the detection of firearms, explosives, and incendiary devices at the protected area personnel access points.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 8(b). Access control points will be established and designed with equipment for the detection of firearms, explosives, and incendiary devices at the protected area personnel access points.</p>	<p>SRP: 8(b). Tests, inspections, or a combination of tests and inspections of installed systems and equipment will be performed.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 8(b). Tests, inspections, or a combination of tests and inspections of installed systems and equipment will be performed.</p>	<p>SRP: 8(b). Detection equipment exists and is capable of detecting firearms, explosives, and incendiary devices at the protected area personnel access control points.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 8(b). Detection equipment exists and is capable of detecting firearms, explosives, and incendiary devices at the protected area personnel access control points.</p>
<p>SRP: 9. An access control system with a numbered photo identification badge system will be installed and designed for use by individuals who are authorized access to protected areas and vital areas without escort.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 9. An access control system with a numbered photo identification badge system will be installed and designed for use by individuals who are authorized access to protected areas and vital areas without escort.</p>	<p>SRP: 9. The access control system and the numbered photo identification badge system will be tested.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 9. The access control system and the numbered photo identification badge system will be tested.</p>	<p>SRP: 9. The access authorization system with a numbered photo identification badge system is installed and provides authorized access to protected and vital areas only to those individuals with unescorted access authorization.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 9. The access authorization system with a numbered photo identification badge system is installed and provides authorized access to protected and vital areas only to those individuals with unescorted access authorization.</p>

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Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<p>SRP: 10. Unoccupied vital areas will be designed with locking devices and intrusion detection devices that annunciate in the central and secondary alarm stations.</p> <p>DCD (Revision 6): 10. Unoccupied vital areas are locked and alarmed with activated intrusion detection systems that annunciate in the Central Alarm Station upon intrusion into a vital area.</p> <p>DCD (Revision 7): 10a. Unoccupied vital areas are locked and alarmed with activated intrusion detection systems that annunciate in the Central Alarm Station.</p> <p>COLA: 10. Unoccupied vital areas will be designed with locking devices and intrusion detection devices that annunciate in the Secondary Alarm Station.</p>	<p>SRP: 10. Tests, inspections, or a combination of tests and inspections of unoccupied vital area intrusion detection equipment and locking devices will be performed.</p> <p>DCD (Revision 6): Tests and inspections will be performed to verify that unoccupied vital areas are locked and that intrusion will be detected and annunciated in the Central Alarm Station.</p> <p>DCD (Revision 7): Tests, inspections, or a combination of tests and inspections of unoccupied vital area intrusion detection equipment and locking devices will be performed.</p> <p>COLA: 10. Tests, inspections, or a combination of tests and inspections of unoccupied vital area intrusion detection equipment and locking devices will be performed.</p>	<p>SRP: 10. Unoccupied vital areas are locked, and intrusion is detected and annunciated in both the central and secondary alarm stations.</p> <p>DCD (Revision 6): Unoccupied vital areas are locked and that intrusion will be detected and annunciated in the Central Alarm Station.</p> <p>DCD (Revision 7): Unoccupied vital areas are locked and intrusion is detected and annunciated in the Central Alarm Station.</p> <p>COLA: 10. Unoccupied vital areas are locked, and intrusion is detected and annunciated in the Secondary Alarm Station.</p>

**SRP 14.3.12 (Revision 1 – 01/2010)/DCD (Revision 6 and 7)/COLA Cross Reference ITAAC for Plant Security**

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<p>SRP: 11(a). Intrusion detection equipment and video assessment equipment will annunciate and be displayed concurrently in at least two continuously manned onsite alarms stations (central and secondary alarm stations).</p> <p>DCD (Revision 6): 11. Security alarm annunciation occurs in the Central Alarm Station.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 11(a). Intrusion detection equipment and video assessment equipment will annunciate and be displayed concurrently in at least two continuously manned onsite alarm stations (Central and Secondary Alarm Stations).</p>	<p>SRP: 11(a). Tests, inspections, or a combination of tests and inspections of intrusion detection equipment and video assessment equipment will be performed.</p> <p>DCD (Revision 6): Tests of the installed systems will be performed to ensure that security alarms annunciate in the Central Alarm Station.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 11(a). Tests, inspections, or a combination of tests and inspections of intrusion detection equipment and video assessment equipment will be performed.</p>	<p>SRP: 11(a). Intrusion detection equipment and video assessment equipment annunciate and display concurrently in at least two continuously manned onsite alarm stations (central and secondary alarm stations).</p> <p>DCD (Revision 6): Plant security alarms annunciate in the Central Alarm Station.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 11(a). Intrusion detection equipment and video assessment equipment annunciate and display concurrently in at least two continuously manned onsite alarm stations (Central and Secondary Alarm Stations).</p>

**SRP 14.3.12 (Revision 1 – 01/2010)/DCD (Revision 6 and 7)/COLA Cross Reference ITAAC for Plant Security**

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<p>SRP: 11(b). Central and secondary alarm stations will be located inside the protected area and will be designed so that the interiors of both alarm stations are not visible from the perimeter of the protected area.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): 11b-1. The Central Alarm Station is located inside a protected area and the interior is not visible from the perimeter of the protected area.</p> <p>COLA: 11(b). The Secondary Alarm Station will be located inside the protected area and will be designed so that the interior of the alarm station is not visible from the perimeter of the protected area.</p>	<p>SRP: 11(b). The central and secondary alarm station locations will be inspected.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): Inspections of the Central Alarm Station location will be performed.</p> <p>COLA: 11(b). The Secondary Alarm Station location will be inspected.</p>	<p>SRP: 11(b). Central and secondary alarm stations are located inside the protected area, and the interiors of both alarm stations are not visible from the perimeter of the protected area.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): The Central Alarm Station is located inside a protected area and the interior is not visible from the perimeter of the protected area.</p> <p>COLA: 11(b). The Secondary Alarm Station is located inside the protected area, and the interior of the alarm station is not visible from the perimeter of the protected area.</p>

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Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<p>SRP: 11(c). Central and secondary alarm stations will be designed, equipped and constructed such that no single act, in accordance with the design-basis threat of radiological sabotage, can simultaneously remove the ability of both the central and secondary alarm stations to (1) detect and assess alarms, (2) initiate and coordinate an adequate response to alarms, (3) summon offsite assistance, and (4) provide effective command and control.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 11(c). Central and Secondary Alarm Stations will be designed, equipped and constructed such that no single act, in accordance with the design-basis threat of radiological sabotage, can simultaneously remove the ability of both the central and secondary alarm stations to (1) detect and assess alarms, (2) initiate and coordinate an adequate response to alarms, (3) summon offsite assistance, and (4) provide effective command and control.</p>	<p>SRP: 11(c). Tests, inspections, or a combination of tests and inspections of the central and secondary alarm stations will be performed.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 11(c). Tests, inspections, or a combination of tests and inspections of the Central and Secondary Alarm Stations will be performed.</p>	<p>SRP: 11(c). Central and secondary alarm stations are designed, equipped, and constructed such that no single act, in accordance with the design-basis threat of radiological sabotage, can simultaneously remove the ability of both the central and secondary alarm stations to (1) detect and assess alarms, (2) initiate and coordinate an adequate response to alarms, (3) summon offsite assistance, and (4) provide effective command and control.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 11(c). Central and Secondary Alarm Stations are designed, equipped, and constructed such that no single act, in accordance with the design-basis threat of radiological sabotage, can simultaneously remove the ability of both the central and secondary alarm stations to (1) detect and assess alarms, (2) initiate and coordinate an adequate response to alarms, (3) summon offsite assistance, and (4) provide effective command and control.</p>

**SRP 14.3.12 (Revision 1 – 01/2010)/DCD (Revision 6 and 7)/COLA Cross Reference ITAAC for Plant Security**

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<p>SRP: 11(d). Both the central and secondary alarm stations will be constructed, located, protected, and equipped to the standards for the central alarm station (alarm stations need not be identical in design but shall be equal and redundant, capable of performing all functions required of alarm stations).</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 11(d). Both the Central and Secondary Alarm Stations will be constructed, located, protected, and equipped to the standards for the Central Alarm Station (alarm stations need not be identical in design but shall be equal and redundant, capable of performing all functions required of alarm stations).</p>	<p>SRP: 11(d). Tests, inspections, or a combination of tests and inspections of the central and secondary alarm stations will be performed.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 11(d). Tests, inspections, or a combination of tests and inspections of the Central and Secondary Alarm Stations will be performed.</p>	<p>SRP: 11(d). The central and secondary alarm stations are located, constructed, protected, and equipped to the standards of the central alarm station and are functionally redundant. (Stations need not be identical in design).</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): No ITAAC specified.</p> <p>COLA: 11(d). The Central and Secondary Alarm Stations are located, constructed, protected, and equipped to the standards of the Central Alarm Station and are functionally redundant (stations need not be identical in design).</p>

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Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<p>SRP: 12. The secondary security power supply system for alarm annunciator equipment and nonportable communications equipment will be located within a vital area.</p> <p>DCD (Revision 6): 12. Security power supply system for alarm annunciator equipment and non-portable communications equipment contained in the Central Alarm Station is located within a vital area.</p> <p>DCD (Revision 7): 12a. The secondary security power supply system for alarm annunciator equipment contained in the Central Alarm Station and non-portable communications equipment contained in the Central Alarm Station is located within a vital area.</p> <p>COLA: 12. The secondary security power supply system for alarm annunciator equipment contained in the Secondary Alarm Station and non-portable communications equipment contained in the Secondary Alarm Station is located within a vital area.</p>	<p>SRP: 12. The secondary security power supply system will be inspected.</p> <p>DCD (Revision 6): Inspection(s) will be performed to verify that the secondary security power supply for alarm annunciator equipment and nonportable communications equipment contained in the Central Alarm Station is located within a vital area.</p> <p>DCD (Revision 7): Inspections of the secondary security power supply will be performed.</p> <p>COLA: 12. The secondary security power supply system will be inspected.</p>	<p>SRP: 12. The secondary security power system for alarm annunciator equipment and nonportable communications equipment is located within a vital area.</p> <p>DCD (Revision 6): The security power supply for alarm annunciator equipment and non-portable communications equipment contained in the Central Alarm Station is located within a vital area.</p> <p>DCD (Revision 7): The secondary security power supply system for alarm annunciator equipment contained in the Central Alarm Station and non-portable communications equipment contained in the Central Alarm Station is located within a vital area.</p> <p>COLA: 12. The secondary security power supply system for alarm annunciator equipment contained in the Secondary Alarm Station and non-portable communications equipment contained in the Secondary Alarm Station is located within a vital area.</p>



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<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
<p>SRP: 13(a). Security alarm devices, including transmission lines to annunciators, will be tamper-indicating and self-checking (e.g., an automatic indication is provided when failure of the alarm system or a component occurs or when on standby power), and alarm annunciation indicates the type of alarm (e.g., intrusion alarms, emergency exit alarm) and location.</p> <p>DCD (Revision 6): 13. Security alarm devices including transmission lines to annunciators are tamper indicating and self-checking, (e.g. an automatic indication is provided when failure of the alarm system or a component occurs, or when on standby power.) Alarm annunciation shall indicate the type of alarm, (e.g., intrusion alarms, emergency exit alarm) and location.</p> <p>DCD (Revision 7): 13a. Security alarm devices including transmission lines to annunciators are tamper indicating and self-checking (e.g., an automatic indication is provided when failure of the alarm system or a component occurs, or when on standby power) and alarm annunciation indicates the type of alarm (e.g., intrusion alarms, emergency exit alarms) and location.</p> <p>COLA: 13(a). Security alarm devices, including transmission lines to annunciators, will be tamper-indicating and self-checking (e.g., an automatic indication is provided when failure of the alarm system or a component occurs or when on standby power), and alarm annunciation indicates the type of alarm (e.g., intrusion alarms, emergency exit alarm) and location.</p>	<p>SRP: 13(a). All security alarm devices and transmission lines will be tested.</p> <p>DCD (Revision 6): Tests will be performed to verify that security alarms including transmission lines to annunciators are tamper indicating and self-checking, (e.g. an automatic indication is provided when failure of the alarm system or a component occurs, or when on standby power) and that alarm annunciation shall indicate the type of alarm, (e.g., intrusion alarms, emergency exit alarm) and location.</p> <p>DCD (Revision 7): Tests will be performed on all security alarm devices and transmission lines.</p> <p>COLA: 13(a). All security alarm devices and transmission lines will be tested.</p>	<p>SRP: 13(a). Security alarm devices including transmission lines to annunciators are tamper-indicating and self-checking (e.g., an automatic indication is provided when failure of the alarm system or a component occurs, or when the system is on standby power), and the alarm annunciation indicates the type of alarm (e.g., intrusion alarm, emergency exit alarm) and location.</p> <p>DCD (Revision 6): Security alarm devices including transmission lines to annunciators are tamper indicating and self-checking (e.g., an automatic indication is provided when failure of the alarm system or a component occurs, or when the system is on standby power) and that alarm annunciation shall indicate the type of alarm, (e.g., intrusion alarms, emergency exit alarm) and location.</p> <p>DCD (Revision 7): Security alarm devices including transmission lines to annunciators are tamper indicating and self-checking (e.g., an automatic indication is provided when failure of the alarm system or a component occurs, or when the system is on standby power) and that alarm annunciation indicates the type of alarm, (e.g., intrusion alarms, emergency exit alarms) and location.</p> <p>COLA: 13(a). Security alarm devices including transmission lines to annunciators are tamper-indicating and self-checking (e.g., an automatic indication is provided when failure of the alarm system or a component occurs, or when the system is on standby power), and the alarm annunciation indicates the type of alarm (e.g., intrusion alarm, emergency exit alarm) and location.</p>

**SRP 14.3.12 (Revision 1 – 01/2010)/DCD (Revision 6 and 7)/COLA Cross Reference ITAAC for Plant Security**

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<p>SRP: 13(b). Intrusion detection and assessment systems will be designed to provide visual display and audible annunciation of alarms in both the central and secondary alarm stations.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): 13b-1. Intrusion detection and assessment systems provide visual display and audible annunciation of the alarm in the Central Alarm Station.</p> <p>COLA: 13(b). Intrusion detection and assessment systems will be designed to provide visual display and audible annunciation of alarms in the Secondary Alarm Station.</p>	<p>SRP: 13(b). Intrusion detection and assessment systems will be tested.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): Tests will be performed on intrusion detection and assessment systems.</p> <p>COLA: 13(b). Intrusion detection and assessment systems will be tested.</p>	<p>SRP: 13(b). The intrusion detection systems provide a visual display and audible annunciation of all alarms concurrently in at least two continuously manned onsite alarms stations (central and secondary alarm stations).</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): The intrusion detection and assessment systems provide a visual display and audible annunciation of alarms in the Central Alarm Station.</p> <p>COLA: 13(b). The intrusion detection and assessment systems provide a visual display and audible annunciation of alarms in the Secondary Alarm Station (concurrently with the display and annunciation in the Central Alarm Station).</p>

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Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<p>SRP: 14. Intrusion detection systems recording equipment will record onsite security alarm annunciation including the location of the alarm, false alarm, alarm check, and tamper indication and the type of alarm, location, alarm circuit, date, and time.</p> <p>DCD (Revision 6): 14. Equipment exists to record onsite security alarm annunciation including the location of the alarm, false alarm, alarm check, and tamper indication and the type of alarm, location, alarm circuit, date, and time.</p> <p>DCD (Revision 7): 14a. Intrusion detection systems recording equipment exists to record onsite security alarm annunciation including the location of the alarm, false alarm, alarm check, and tamper indication and the type of alarm, location, alarm circuit, date, and time.</p> <p>COLA: No ITAAC specified.</p>	<p>SRP: 14. The intrusion detection systems recording equipment will be tested.</p> <p>DCD (Revision 6): Tests will be performed to ensure that equipment is capable of recording each onsite security alarm annunciation including the location of the alarm, false alarm, alarm check, and tamper indication and the type of alarm, location, alarm circuit, date, and time.</p> <p>DCD (Revision 7): Tests will be performed on the intrusion detection systems recording equipment.</p> <p>COLA: No ITAAC specified.</p>	<p>SRP: 14. Intrusion detection systems recording equipment is capable of recording each onsite security alarm annunciation including the location of the alarm, false alarm, alarm check, and tamper indication and the type of alarm, location, alarm circuit, date, and time.</p> <p>DCD (Revision 6): Equipment is capable of recording each onsite security alarm annunciation including the location of the alarm, false alarm, alarm check, and tamper indication and the type of alarm, location, alarm circuit, date, and time.</p> <p>DCD (Revision 7): Intrusion detection systems recording equipment is capable of recording each onsite security alarm annunciation including the location of the alarm, false alarm, alarm check, and tamper indication and the type of alarm, location, alarm circuit, date, and time.</p> <p>COLA: No ITAAC specified.</p>

**SRP 14.3.12 (Revision 1 – 01/2010)/DCD (Revision 6 and 7)/COLA Cross Reference ITAAC for Plant Security**

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<p>SRP: 15. Emergency exits through the protected area perimeter and vital area boundaries will be alarmed with intrusion detection devices and secured by locking devices that allow prompt egress during an emergency.</p> <p>DCD (Revision 6): 15. Emergency exits through vital area boundaries are alarmed.</p> <p>DCD (Revision 7): 15a. Emergency exits through vital area boundaries are alarmed and secured by locking devices that allow prompt egress during an emergency.</p> <p>COLA: 15. Emergency exits through the protected area perimeter and vital area boundaries will be alarmed with intrusion detection devices and secured by locking devices that allow prompt egress during an emergency.</p>	<p>SRP: 15. Tests, inspections, or a combination of tests and inspections of emergency exits through the protected area perimeter and vital area boundaries will be performed.</p> <p>DCD (Revision 6): Tests and inspections will be performed to verify that emergency exits through vital area boundaries are alarmed.</p> <p>DCD (Revision 7): Tests, inspections, or a combination of tests and inspections of emergency exits through vital area boundaries will be performed.</p> <p>COLA: 15. Tests, inspections, or a combination of tests and inspections of emergency exits through the protected area perimeter and vital area boundaries will be performed.</p>	<p>SRP: 15. Emergency exits through the protected area perimeter and vital area boundaries are alarmed with intrusion detection devices and secured by locking devices that allow prompt egress during an emergency.</p> <p>DCD (Revision 6): Emergency exits through vital area boundaries are alarmed.</p> <p>DCD (Revision 7): Emergency exits through vital area boundaries are alarmed and secured by locking devices that allow prompt egress during an emergency.</p> <p>COLA: 15. Emergency exits through the protected area perimeter and vital area boundaries are alarmed with intrusion detection devices and secured by locking devices that allow prompt egress during an emergency.</p>

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Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<p>SRP: 16(a). The central and secondary alarm stations will have conventional (land line) telephone service with the control room and local law enforcement authorities.</p> <p>DCD (Revision 6): 16a. Central Alarm Station has conventional (land line) telephone service and other communication capabilities with local law enforcement authorities.</p> <p>DCD (Revision 7): 16a-1. The Central Alarm Station has conventional (land line) telephone service with the control room and local law enforcement authorities.</p> <p>COLA: 16(a). The Secondary Alarm Station will have conventional (land line) telephone service with the Main Control Room and local law enforcement authorities.</p>	<p>SRP: 16(a). Tests, inspections, or a combination of tests and inspections of the central and secondary alarm stations' conventional (land line) telephone service will be performed.</p> <p>DCD (Revision 6): Tests and inspections will be performed to verify the alarm station is equipped with the conventional (land line) telephone service and other capability to communicate with local law enforcement authorities.</p> <p>DCD (Revision 7): Tests, inspections, or a combination of tests and inspections of the Central Alarm Station conventional (land line) telephone service will be performed.</p> <p>COLA: 16(a). Tests, inspections, or a combination of tests and inspections of the Secondary Alarm Stations' conventional (land line) telephone service will be performed.</p>	<p>SRP: 16(a). The central and secondary alarm stations are equipped with conventional (land line) telephone service with the control room and local law enforcement authorities.</p> <p>DCD (Revision 6): The alarm station is equipped with conventional (land line) telephone service and other capability to communicate with local law enforcement authorities.</p> <p>DCD (Revision 7): The Central Alarm Station is equipped with conventional (land line) telephone service with the control room and local law enforcement authorities.</p> <p>COLA: 16(a). The Secondary Alarm Station is equipped with conventional (land line) telephone service with the Main Control Room and local law enforcement authorities.</p>

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Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<p>SRP: 16(b). The central and secondary alarm stations will be capable of continuous communication with on-duty security force personnel.</p> <p>DCD (Revision 6): 16b. Central Alarm Station is capable of continuous communication with security personnel.</p> <p>DCD (Revision 7): 16b-1. The Central Alarm Station is capable of continuous communication with security personnel.</p> <p>COLA: 16(b). The Secondary Alarm Station will be capable of continuous communication with on-duty security force personnel.</p>	<p>SRP: 16(b). Tests, inspections, or a combination of tests and inspections of the central and secondary alarm stations' continuous communication capabilities will be performed.</p> <p>DCD (Revision 6): Tests will be performed to verify the capability to continuously communicate with each security officer, watchman or armed response individual, or any security personnel that have responsibilities during a contingency event.</p> <p>DCD (Revision 7): Tests, inspections, or a combination of tests and inspections of the Central Alarm Station continuous communication capability will be performed.</p> <p>COLA: 16(b). Tests, inspections, or a combination of tests and inspections of the Secondary Alarm Stations' continuous communication capabilities will be performed.</p>	<p>SRP: 16(b). The central and secondary alarm stations are capable of continuous communication with on-duty watchmen, armed security officers, armed responders, or other security personnel who have responsibilities within the physical protection program and during contingency response events.</p> <p>DCD (Revision 6): The alarm station is equipped with the capability to continuously communicate with each security officer, watchman or armed response individual, or any security personnel that have responsibilities during a contingency event.</p> <p>DCD (Revision 7): The Central Alarm Station is capable of continuous communication with security officers, watchmen or armed response individuals, or other security personnel that have responsibilities during a contingency event.</p> <p>COLA: 16(b). The Secondary Alarm Station is capable of continuous communication with on-duty watchmen, armed security officers, armed responders, or other security personnel who have responsibilities within the physical protection program and during contingency response events.</p>

**SRP 14.3.12 (Revision 1 – 01/2010)/DCD (Revision 6 and 7)/COLA Cross Reference ITAAC for Plant Security**

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<p>SRP: 16(c). Nonportable communications equipment in the central and secondary alarm stations will remain operable from an independent power source in the event of loss of normal power.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): 16c-1. Non-portable communications equipment in the Central Alarm Station must remain operable from an independent power source in the event of the loss of normal power.</p> <p>COLA: 16(c). Nonportable communications equipment in the Secondary Alarm Station will remain operable from an independent power source in the event of loss of normal power.</p>	<p>SRP: 16(c). Tests, inspections, or a combination of tests and inspections of the nonportable communications equipment will be performed.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): Tests, inspections or a combination of tests and inspections of the non-portable communications equipment will be performed.</p> <p>COLA: 16(c). Tests, inspections, or a combination of tests and inspections of the nonportable communications equipment will be performed.</p>	<p>SRP: 16(c). All nonportable communication devices (including conventional telephone systems) in the central and secondary alarm stations are wired to an independent power supply that enables those systems to remain operable (without disruption) during the loss of normal power.</p> <p>DCD (Revision 6): No ITAAC specified.</p> <p>DCD (Revision 7): Non-portable communication devices (including conventional telephone systems) in the Central Alarm Station are wired to an independent power supply that enables those systems to remain operable (without disruption) during the loss of normal power.</p> <p>COLA: 16(c). All nonportable communication devices (including conventional telephone systems) in the Secondary Alarm Station are wired to an independent power supply that enables those systems to remain operable (without disruption) during the loss of normal power.</p>

**Proposed COLA Revision**

The attached markup contains the COLA PS-ITAAC that will be included in Part 10, Section 2.2, as well as markups for FSAR Chapters 1 and 13 to address DCD Revision 7 COL applicant item 13.6-20-A. These markups will be incorporated into the Fermi 3 COLA in a future revision of the COLA.



**Markup of Detroit Edison COLA**  
(following 20 pages)

The following markup represents how Detroit Edison intends to reflect this RAI response in the next submittal of the Fermi 3 COLA. However, the same COLA content may be impacted by revisions to the ESBWR DCD, responses to other COLA RAIs, other COLA changes, plant design changes, editorial or typographical corrections, etc. As a result, the final COLA content that appears in a future submittal may be different than presented here.

**Table 1.10-201 Summary of FSAR Sections Where DCD COL Items Are Addressed**  
(Sheet 6 of 7) [EF3 SUP 1.10-1]

Item No.	Subject/Description of Item	FSAR Section
13.5-4-A	Implementation of the Plant Procedures Plan	13.5, 13.5.2
13.5-5-A	Procedures Included in Scope of Plan	13.5.2
13.5-6-A	Procedures for Calibration, Inspection and Testing	13.5.2
13.6-6-A	Key Control	13.6.1.1.5
13.6-7-A	Redundancy and Equivalency of the CAS and Secondary Alarm Station	Physical Security Plan
13.6-8-A	No Single Act Requirement for CAS and Secondary Alarm Station	13.6.2
13.6-9-A	Operational Alarm Response Procedures	13.6.1.1.3
13.6-10-A	Operational Surveillance Test Procedures	13.6.1.1.8
13.6-11-A	Maintenance Test Procedures	13.6.1.1.8
13.6-12-A	Operational Response Procedures to Security Events	13.6.2
13.6-13-A	Operational Alarm Response Procedures	13.6.1.1.3
13.6-14-A	Administrative Controls to Sensitive Cabinets	13.6.1.1.5
13.6-15-A	Administrative Controls to Sensitive Equipment	13.6.1.1.5
13.6-16-A	External Bullet Resisting Enclosures	13.6.2
13.6-17-A	Site-Specific Locations of Security Barriers	13.6.2
13.6-18-A	Ammunition for Armed Responders	13.6.2
13.6-19-A	Site-Specific Update of the ESBWR Safeguards Assessment Report	13.6.2
14.2-1-A	Description - Initial Test Program Administration	14.2.2.1, Appendix 14AA
14.2-2-A	Startup Administrative Manual	14.2.2.1
14.2-3-A	Test Procedures	14.2.2.2
14.2-4-A	Test Program Schedule and Sequence	14.2.7
14.2-5-A	Site Specific Tests	14.2.9
14.2-6-A	Site Specific Test Procedures	14.2.9
14.3-1-A	Emergency Planning ITAAC	14.3.8
14.3-2-A	Site-Specific ITAAC	14.3.9
14.3A-1-1	Establish a Schedule for Design Acceptance Criteria ITAAC Closure	14.3A.1
16.0-1-A	COL Applicant Bracketed Items	5.3.1.5, COLA Part 4
17.2-1-A	QA Program for the Construction and Operations Phases	17.2
17.2-2-A	QA Program for Design Activities	17.2
17.3-1-A	Quality Assurance Program Document	17.3
17.4-1-A	Identification of Site-Specific SSCs Within the Scope of the RAP	17.4.1

Insert 1

Insert 1

<hr/>		
13.6-20-A	Physical Security ITAAC	13.6.2
<hr/>		

### **13.6 Physical Security**

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

#### **13.6.1.1.3 Detection Aids**

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Replace the last sentence in the third paragraph with the following.

---

<b>STD COL 13.6-9-A</b>	Operating alarm response procedures will be developed and implemented in accordance with milestone defined in Subsection 13.5.2.1.
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Replace the last sentence in the fourth paragraph with the following.

---

<b>STD COL 13.6-13-A</b>	This action will be completed prior to the milestone for Physical Security Plan implementation (Table 13.4-201).
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#### **13.6.1.1.5 Access Controls**

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Replace the first sentence in the third paragraph with the following.

---

<b>STD COL 13.6-6A</b>	A key control program will be developed and implemented prior to the milestone for Physical Security Plan implementation (Table 13.4-201).
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Replace the fifth paragraph with the following.

---

<b>STD COL 13.6-14-A</b>	Administrative procedures will be developed prior to the milestone for Physical Security Plan implementation (Table 13.4-201) to control work being performed in cabinets containing the control circuitry (contact elements) for the systems listed in Table 4-1 of NEDE-33391.
--------------------------	--

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Replace the last sentence in the sixth paragraph with the following.

---

<b>STD COL 13.6-15-A</b>	Administrative procedures will be developed prior to the milestone for Physical Security Plan implementation (Table 13.4-201) that will require two persons, each of whom are qualified to perform the intended work, to be present during the performance of any work on systems listed in Table 4-1 of NEDE-33391.
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13.6.1.1.8     **Testing**

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Replace the last sentence in the first paragraph with the following.

**STD COL 13.6-10-A**

The establishment of these surveillance test procedures and frequencies will be completed in accordance with the milestone for Physical Security Plan implementation (Table 13.4-201).

Replace the last sentence in the second paragraph with the following.

**STD COL 13.6-11-A**

The establishment of these testing and maintenance milestones will be completed in accordance with the milestone for Physical Security Plan implementation (Table 13.4-201).

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13.6.2     **Security Plan**

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:Replace this section with the following:

**STD SUP 13.6-1**

The Security Plans consist of the Physical Security Plan, Training and Qualification Plan, Safeguards Contingency Plan, and Cyber Security Plan. The Security Plans are submitted to the Nuclear Regulatory Commission as separate licensing documents in order to fulfill the requirements of 10 CFR 52.79(a)(35) and (36). The Security Plans meet the requirements contained in 10 CFR 26 and 10 CFR 73 and will be maintained in accordance with the requirements of 10 CFR 52.98. The Security Plans, except for the Cyber Security Plan, are categorized as Security Safeguards Information and are withheld from public disclosure pursuant to 10 CFR 73.21. The Cyber Security Plan is categorized as Security-Related Information and is withheld from public disclosure pursuant to 10 CFR 2.390.

The Mitigative Strategies Description and Plans are submitted to the Nuclear Regulatory Commission as a separate licensing document in order to fulfill the requirements of 10 CFR 52.80(d). The Mitigative Strategies Description and Plans meet the requirements contained in 10 CFR 50.54(hh)(2) and will be maintained in accordance with the requirements of 10 CFR 52.98. The Mitigative Strategies Description and

Plans are categorized as Security-Related Information and ~~is~~ withheld from public disclosure pursuant to 10 CFR 2.390.

are

**STD COL 13.6-12-A**

As part of the Security Plan, the licensee will develop an integrated response strategy to a confirmed security event that provides for manual actuation of plant systems by the operators to an evolving scenario necessitating escalating operator response. This action will be completed prior to the milestone for Physical Security Plan implementation (Table 13.4-201).

**EF3 COL 13.6-8-A**

The design of the security system precludes any single postulated security event resulting in an unacceptable degradation of the site security staff's ability to monitor and direct the response to a security event from either the CAS or Secondary Alarm Station. This will include the power supplies to both alarm stations. Details of the security system design include;

- Location of the secondary alarm station
- Design of the following aspects of the physical configuration of the security system:
  - Onsite and offsite communications equipment,
  - Alarm central processing units,
  - Data gathering panels,
  - Secondary power and remote power (main uninterruptible emergency generator [typical] and local uninterruptible power sources), and
  - Alarm and personnel communication type of transmission and the technology used for the subject transmission (e.g., electronic data/fiber optic for alarms and telephonic/radio/site intercom applied to personnel communication) and locations of pathways (both horizontal and vertical planes) thereof, as appropriate.
- Analysis of single act security events such that at least one alarm station remains functional to:
  - Detect and assess alarms,
  - Initiate and coordinate an adequate response to an alarm,

	<ul style="list-style-type: none"><li>• Summon offsite assistance, and</li><li>• Provide command and control, such that the high assurance objective can be maintained.</li></ul>
<b>EF3 COL 13.6-16-A</b>	<ul style="list-style-type: none"><li>• A site arrangement drawing that shows the location of the external Bullet Resisting Enclosures and indicates the fields of fire from these locations.</li><li>• Description of the level of protection provided to security personnel stationed in the Bullet Resisting Enclosures from the effects of the equipment available to the adversaries utilizing the Design Basis Threat (DBT) toolkit (defined in DCD Reference 13.6-8).</li></ul>
<b>EF3 COL 13.6-17-A</b>	<ul style="list-style-type: none"><li>• A site arrangement drawing that shows the location of the Protected Area (PA) fence, the isolation zone on either side of the PA fence, the Vehicle Barrier System (VBS), any Red Zone or Delay Fences, and any buildings or structures inside the PA that are not part of the Certified Design.</li><li>• Demonstration that the security strategy described in the ESBWR Safeguards Assessment Report (DCD Reference 13.6-6) remains valid.</li></ul>
<b>EF3 COL 13.6-8-A</b> <b>EF3 COL 13.6-16-A</b> <b>EF3 COL 13.6-17-A</b>	<p>The security system information to address ESBWR DCD Chapter 13 COL Applicant items 13.6-8-A, 13.6-16-A, and 13.6-17-A is currently under development. Detroit Edison intends to incorporate this information into the COLA at a mutually agreeable time. That COLA revision would reflect this information, as modified if necessary, during the course of the NRC review.</p>
<b>STD COL 13.6-18-A</b>	<p>Prior to the milestone for Physical Security Plan implementation (Table 13.4-201), the security plan will be updated with an analysis to determine if armed responders require ammunition greater than the amount normally carried to provide reasonable assurance of successful engagement of adversaries from various engagement positions, including the development of necessary procedures to assure adequate ammunition is available.</p>
<b>STD COL 13.6-19-A</b>	<p>Prior to the milestone for Physical Security Plan implementation (Table 13.4-201), the security plan will be updated with an analysis of the ESBWR Safeguards Assessment Report (DCD Reference 13.6-6)</p>

reflecting site-specific locations of engagement positions including fields of fire. This applies for the external Bullet Resisting Enclosures as well as any internal positions that have external engagement responsibilities. This will include an implementation analysis of the Security Strategy described in the report, focusing on the effectiveness of neutralization of adversaries before significant radiological sabotage can occur.

Insert 2

	<b>13.6.3 COL Information</b>
	<b>13.6-6-A Key Control</b>
<b>STD COL 13.6-6-A</b>	This COL item is addressed in Subsection 13.6.1.1.5.
	<b>13.6-7-A Redundancy and Equivalency of the CAS and Secondary Alarm Station</b>
<b>STD COL 13.6-7-A</b>	This COL item is addressed in the Physical Security Plan.
	<b>13.6-8-A No Single Act Requirement for CAS and Secondary Alarm Station</b>
<b>EF3 COL 13.6-8-A</b>	This COL item is addressed in Subsection 13.6.2
	<b>13.6-9-A Operational Alarm Response Procedures</b>
<b>STD COL 13.6-9-A</b>	This COL item is addressed in Subsection 13.6.1.1.3
	<b>13.6-10-A Operational Surveillance Test Procedures</b>
<b>STD COL 13.6-10-A</b>	This COL item is addressed in Subsection 13.6.1.1.8
	<b>13.6-11-A Maintenance Test Procedures</b>
<b>STD COL 13.6-11-A</b>	This COL item is addressed in Subsection 13.6.1.1.8
	<b>13.6-12-A Operational Response Procedures to Security Events</b>
<b>STD COL 13.6-12-A</b>	This COL item is addressed in Subsection 13.6.2.
	<b>13.6-13-A Operational Alarm Response Procedures</b>
<b>STD COL 13.6-13-A</b>	This COL item is addressed in Subsection 13.6.1.1.3
	<b>13.6-14-A Administrative Controls to Sensitive Cabinets</b>
<b>STD COL 13.6-14-A</b>	This COL item is addressed in Subsection 13.6.1.1.5
	<b>13.6-15-A Administrative Controls to Sensitive Equipment</b>
<b>STD COL 13.6-15-A</b>	This COL item is addressed in Subsection 13.6.1.1.5



**13.6-16-A External Bullet Resisting Enclosures**

**EF3 COL 13.6-16-A** This COL item is addressed in Subsection 13.6.2

**13.6-17-A Site-Specific Locations of Security Barriers**

**EF3 COL 13.6-17-A** This COL item is addressed in Subsection 13.6.2

**13.6-18-A Ammunition for Armed Responders**

**STD COL 13.6-18-A** This COL item is addressed in Subsection 13.6.2

**13.6-19-A Site-Specific Update of the ESBWR Safeguards Assessment Report**

**STD COL 13.6-19-A** This COL item is addressed in Subsection 13.6.2

Insert 3

**13.7 Fitness for Duty**

**STD SUP 13.7-1**

The Fitness for Duty (FFD) Program is implemented and maintained in two phases: the construction phase program and the operating phase program. The construction phase program is consistent with NEI 06-06 (Reference 13.7-201), which is currently under NRC review. The construction phase program is implemented, as identified in Table 13.4-201, prior to on-site construction of safety- or security-related SSCs. The operations phase program is consistent with NEI 03-01 (Reference 13.7-201), which is currently under NRC review. The operations phase program is implemented prior to fuel receipt, as identified in Table 13.4-201.

**References**

13.7-201 Nuclear Energy Institute (NEI) "Fitness for Duty Program Guidance for New Nuclear Power Plant Construction Sites," NEI 06-06.

13.7-202 Nuclear Energy Institute (NEI) "Nuclear Power Plant Access Authorization Program," NEI 03-01.

**EF3 COL 13.1-1-A Appendix 13AA Design and Construction Responsibilities**

**13AA.1 Design and Construction Activities**

Detroit Edison has substantial experience in the design, construction, and operation of nuclear power plants and substantial experience in activities of similar scope and complexity. Detroit Edison was responsible for the design and construction activities associated with Fermi 2. Detroit Edison oversaw the activities of a number of engineering, design and construction companies, including General Electric Company, Sargent &

Insert 2

**STD COL 13.6-20-A**

Features of the physical security system are covered, in part, by the standard ESBWR design, while other features are plant and site specific. Accordingly, the ESBWR standard ITAAC cover the physical plant security system and address those features that are part of the standard design. NRC guidance provides suggested ITAAC that cover both the standard design and the plant and site-specific features. The plant and site-specific Physical Security ITAAC not covered by the ESBWR Tier 1, Section 2.19, are contained in Part 10, "ITAAC", Section 2.2.1 "Site-Specific Physical Security ITAAC."

Insert 3

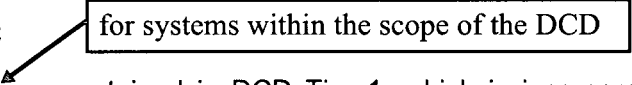
13.6-20-A *Physical Security ITAAC*

**STD COL 13.6-20-A**

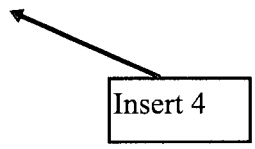
This COL item is addressed in Subsection 13.6.2

## 2.2 PHYSICAL SECURITY ITAAC

for systems within the scope of the DCD



The Physical Security ITAAC are contained in DCD Tier 1, which is incorporated in by reference in Section 1.



Insert 4

### 2.2.1 Site Specific Physical Security ITAAC

#### Design Description

The physical security system provides physical features to detect, delay, assist response to, and defend against the design basis threat (DBT) for radiological sabotage. The physical security system consists of physical barriers and an intrusion detection system. The details of the physical security system are categorized as Safeguards Information. The physical security system provides protection for vital equipment and plant personnel.

1. Vital Area and Vital Area Barrier:
  - a. Vital equipment will be located only within a vital area.
  - b. Access to vital equipment will require passage through at least two physical barriers.
2. Protected Area Barrier:
  - a. Physical barriers for the protected area perimeter will not be part of vital area barriers.
  - b. Penetrations through the protected area barrier will be secured and monitored.
  - c. Unattended openings that intersect a security boundary, such as underground pathways, will be protected by a physical barrier and monitored by intrusion detection equipment or provided surveillance at a frequency sufficient to detect exploitation.
3. Isolation Zone:
  - a. Isolation zones will exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and will be designed of sufficient size to permit observation and assessment on either side of the barrier.
  - b. Isolation zones will be monitored with intrusion detection and assessment equipment that is designed to provide detection and assessment of activities within the isolation zone.
  - c. Areas where permanent buildings do not allow sufficient observation distance between the intrusion detection system and the protected area barrier (e.g., the building walls are immediately adjacent to, or are an integral part of the protected area barrier) will be monitored with intrusion detection and assessment equipment that is designed to detect the attempted or actual penetration of the protected area perimeter barrier before completed penetration of the barrier and assessment of detected activities.
4. Protected Area Perimeter Intrusion Detection and Assessment Systems:
  - a. The perimeter intrusion detection system will be designed to detect penetration or attempted penetration of the protected area perimeter barrier before completed penetration of the barrier, and for subsequent alarms to annunciate concurrently in at least two continuously manned onsite alarm stations (central and secondary alarm stations).
  - b. The perimeter assessment equipment will be designed to provide video image recording with real-time and playback capability that can provide assessment of detected activities before and after each alarm annunciation at the protected area perimeter barrier.
  - c. The intrusion detection and assessment equipment at the protected area perimeter will be designed to remain operable from an uninterruptible power supply in the event of the loss of normal power.
5. Isolation zones and exterior areas within the protected area will be provided with illumination to permit assessment in the isolation zones and observation of activities within exterior areas of the protected area.

**Insert 4 (Page 2 of 10)**

6. The external walls, doors, ceiling, and floors in the Secondary Alarm Station, and the last access control function for access to the protected area will be bullet resistant, to at least Underwriters Laboratories Ballistic Standard 752, "The Standard of Safety for Bullet-Resisting Equipment," Level 4, or National Institute of Justice Standard 0108.01, "Ballistic Resistant Protective Materials," Type III.
7. The vehicle barrier system will be designed, installed, and located at the necessary standoff distance to protect against the design-basis threat vehicle bombs.
8. Personnel, Vehicle, and Material Access Control Portals and Search Equipment:
  - a. Access control points will be established and designed to control personnel and vehicle access into the protected area.
  - b. Access control points will be established and designed with equipment for the detection of firearms, explosives, and incendiary devices at the protected area personnel access points.
9. An access control system with a numbered photo identification badge system will be installed and designed for use by individuals who are authorized access to protected areas and vital areas without escort.
10. Unoccupied vital areas will be designed with locking devices and intrusion detection devices that annunciate in the Secondary Alarm Station.
11. Alarm Station:
  - a. Intrusion detection equipment and video assessment equipment will annunciate and be displayed concurrently in at least two continuously manned onsite alarm stations (Central and Secondary Alarm Stations).
  - b. The Secondary Alarm Station will be located inside the protected area and will be designed so that the interior of the alarm station is not visible from the perimeter of the protected area.
  - c. Central and Secondary Alarm Stations will be designed, equipped and constructed such that no single act, in accordance with the design-basis threat of radiological sabotage, can simultaneously remove the ability of both the central and secondary alarm stations to (1) detect and assess alarms, (2) initiate and coordinate an adequate response to alarms, (3) summon offsite assistance, and (4) provide effective command and control.
  - d. Both the Central and Secondary Alarm Stations will be constructed, located, protected, and equipped to the standards for the Central Alarm Station (alarm stations need not be identical in design but shall be equal and redundant, capable of performing all functions required of alarm stations).
12. The secondary security power supply system for alarm annunciator equipment contained in the Secondary Alarm Station and non-portable communications equipment contained in the Secondary Alarm Station is located within a vital area.
13. Intrusion Detection Systems Console Display:
  - a. Security alarm devices, including transmission lines to annunciators, will be tamper-indicating and self-checking (e.g., an automatic indication is provided when failure of the alarm system or a component occurs or when on standby power), and alarm annunciation indicates the type of alarm (e.g., intrusion alarms, emergency exit alarm) and location.
  - b. Intrusion detection and assessment systems will be designed to provide visual display and audible annunciation of alarms in the Secondary Alarm Station.

**Insert 4 (Page 3 of 10)**

14. Intrusion detection systems recording equipment will record onsite security alarm annunciation including the location of the alarm, false alarm, alarm check, and tamper indication and the type of alarm, location, alarm circuit, date, and time.
15. Emergency exits through the protected area perimeter and vital area boundaries will be alarmed with intrusion detection devices and secured by locking devices that allow prompt egress during an emergency.
16. Communication:
  - a. The Secondary Alarm Station will have conventional (land line) telephone service with the Main Control Room and local law enforcement authorities.
  - b. The Secondary Alarm Station will be capable of continuous communication with on-duty security force personnel.
  - c. Non-portable communications equipment in the Secondary Alarm Station will remain operable from an independent power source in the event of loss of normal power.

**Inspections, Tests, Analyses, and Acceptance Criteria**

Table 2.2.1-1 provides a definition of the inspections, tests and analysis, together with associated acceptance criteria for the site-specific portions of the physical security system.

**Table 2.2.1-1 ITAAC for the Site- Specific Security System**

<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
1(a). Vital equipment will be located only within a vital area.	1(a). All vital equipment locations will be inspected.	1(a). Vital equipment is located only within a vital area.
1(b). Access to vital equipment will require passage through at least two physical barriers.	1(b). All vital equipment physical barriers will be inspected.	1(b). Vital equipment is located within a protected area such that access to the vital equipment requires passage through at least two physical barriers.
2(a). Physical barriers for the protected area perimeter will not be part of vital area barriers.	2(a). The protected area perimeter barriers will be inspected.	2(a). Physical barriers at the perimeter of the protected area are separated from any other barrier designated as a vital area barrier.
2(b). Penetrations through the protected area barrier will be secured and monitored.	2(b). All penetrations through the protected area barrier will be inspected.	2(b). All penetrations and openings through the protected area barrier are secured and monitored by intrusion detection equipment.
2(c). Unattended openings that intersect a security boundary, such as underground pathways, will be protected by a physical barrier and monitored by intrusion detection equipment or provided surveillance at a frequency sufficient to detect exploitation.	2(c). All unattended openings within the protected area barriers will be inspected.	2(c). All unattended openings (such as underground pathways) that intersect a security boundary (such as the protected area barrier), are protected by a physical barrier and monitored by intrusion detection equipment or provided surveillance at a frequency sufficient to detect exploitation.
3(a). Isolation zones will exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and will be designed of sufficient size to permit observation and assessment on either side of the barrier.	3(a). The isolation zones in outdoor areas adjacent to the protected area perimeter barrier will be inspected.	3(a). The isolation zones exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and are of sufficient size to permit observation and assessment of activities on either side of the barrier in the event of its penetration or attempted penetration.
3(b). Isolation zones will be monitored with intrusion detection and assessment equipment that is designed to provide detection and assessment of activities within the isolation zone.	3(b). The intrusion detection equipment within the isolation zones will be inspected.	3(b). Isolation zones are equipped with intrusion detection and assessment equipment capable of providing detection and assessment of activities within the isolation zone.

**Table 2.2.1-1 ITAAC for the Site- Specific Security System**

<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
3(c). Areas where permanent buildings do not allow sufficient observation distance between the intrusion detection system and the protected area barrier (e.g., the building walls are immediately adjacent to, or are an integral part of the protected area barrier) will be monitored with intrusion detection and assessment equipment that is designed to detect the attempted or actual penetration of the protected area perimeter barrier before completed penetration of the barrier and assessment of detected activities.	3(c). Inspections of areas of the protected area perimeter barrier that do not have isolation zones will be performed.	3(c). Areas where permanent buildings do not allow sufficient observation distance between the intrusion detection system and the protected area barrier (e.g., the building walls are immediately adjacent to, or an integral part of, the protected area barrier) are monitored with intrusion detection and assessment equipment that detects attempted or actual penetration of the protected area perimeter barrier before completed penetration of the barrier and assessment of detected activities.
4(a). The perimeter intrusion detection system will be designed to detect penetration or attempted penetration of the protected area perimeter barrier before completed penetration of the barrier, and for subsequent alarms to annunciate concurrently in at least two continuously manned onsite alarm stations (central and secondary alarm stations).	4(a). Tests, inspections, or a combination of tests and inspections of the intrusion detection system will be performed.	4(a). The intrusion detection system can detect penetration or attempted penetration of the protected area perimeter barrier before completed penetration of the barrier, and subsequent alarms annunciate concurrently in at least two continuously manned onsite alarms stations (central and secondary alarm stations).
4(b). The perimeter assessment equipment will be designed to provide video image recording with real-time and playback capability that can provide assessment of detected activities before and after each alarm annunciation at the protected area perimeter barrier.	4(b). Tests, inspections, or a combination of tests and inspections of the video assessment equipment will be performed.	4(b). The perimeter assessment equipment is capable of real-time and playback video image recording that provides assessment of detected activities before and after each alarm annunciation at the protected area perimeter barrier.



**Table 2.2.1-1 ITAAC for the Site- Specific Security System**

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

**Table 2.2.1-1 ITAAC for the Site- Specific Security System**

<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
8(b). Access control points will be established and designed with equipment for the detection of firearms, explosives, and incendiary devices at the protected area personnel access points.	8(b). Tests, inspections, or a combination of tests and inspections of installed systems and equipment will be performed.	8(b). Detection equipment exists and is capable of detecting firearms, explosives, and incendiary devices at the protected area personnel access control points.
9. An access control system with a numbered photo identification badge system will be installed and designed for use by individuals who are authorized access to protected areas and vital areas without escort.	9. The access control system and the numbered photo identification badge system will be tested.	9. The access authorization system with a numbered photo identification badge system is installed and provides authorized access to protected and vital areas only to those individuals with unescorted access authorization.
10. Unoccupied vital areas will be designed with locking devices and intrusion detection devices that annunciate in the Secondary Alarm Station.	10. Tests, inspections, or a combination of tests and inspections of unoccupied vital area intrusion detection equipment and locking devices will be performed.	10. Unoccupied vital areas are locked, and intrusion is detected and annunciated in the Secondary Alarm Station.
11(a). Intrusion detection equipment and video assessment equipment will annunciate and be displayed concurrently in at least two continuously manned onsite alarm stations (Central and Secondary Alarm Stations).	11(a). Tests, inspections, or a combination of tests and inspections of intrusion detection equipment and video assessment equipment will be performed.	11(a). Intrusion detection equipment and video assessment equipment annunciate and display concurrently in at least two continuously manned onsite alarm stations (Central and Secondary Alarm Stations).
11(b). The Secondary Alarm Station will be located inside the protected area and will be designed so that the interior of the alarm station is not visible from the perimeter of the protected area.	11(b). The Secondary Alarm Station location will be inspected.	11(b). The Secondary Alarm Station is located inside the protected area, and the interior of the alarm station is not visible from the perimeter of the protected area.

**Table 2.2.1-1 ITAAC for the Site- Specific Security System**

<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
11(c). Central and Secondary Alarm Stations will be designed, equipped and constructed such that no single act, in accordance with the design-basis threat of radiological sabotage, can simultaneously remove the ability of both the central and secondary alarm stations to (1) detect and assess alarms, (2) initiate and coordinate an adequate response to alarms, (3) summon offsite assistance, and (4) provide effective command and control.	11(c). Tests, inspections, or a combination of tests and inspections of the Central and Secondary Alarm Stations will be performed.	11(c). Central and Secondary Alarm Stations are designed, equipped, and constructed such that no single act, in accordance with the design-basis threat of radiological sabotage, can simultaneously remove the ability of both the central and secondary alarm stations to (1) detect and assess alarms, (2) initiate and coordinate an adequate response to alarms, (3) summon offsite assistance, and (4) provide effective command and control.
11(d). Both the Central and Secondary Alarm Stations will be constructed, located, protected, and equipped to the standards for the Central Alarm Station (alarm stations need not be identical in design but shall be equal and redundant, capable of performing all functions required of alarm stations).	11(d). Tests, inspections, or a combination of tests and inspections of the Central and Secondary Alarm Stations will be performed.	11(d). The Central and Secondary Alarm Stations are located, constructed, protected, and equipped to the standards of the Central Alarm Station and are functionally redundant (stations need not be identical in design).
12. The secondary security power supply system for alarm annunciator equipment contained in the Secondary Alarm Station and non-portable communications equipment contained in the Secondary Alarm Station is located within a vital area.	12. The secondary security power supply system will be inspected.	12. The secondary security power supply system for alarm annunciator equipment contained in the Secondary Alarm Station and non-portable communications equipment contained in the Secondary Alarm Station is located within a vital area.

**Table 2.2.1-1 ITAAC for the Site- Specific Security System**

<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
13(a). Security alarm devices, including transmission lines to annunciators, will be tamper-indicating and self-checking (e.g., an automatic indication is provided when failure of the alarm system or a component occurs or when on standby power), and alarm annunciation indicates the type of alarm (e.g., intrusion alarms, emergency exit alarm) and location.	13(a). All security alarm devices and transmission lines will be tested.	13(a). Security alarm devices including transmission lines to annunciators are tamper-indicating and self-checking (e.g., an automatic indication is provided when failure of the alarm system or a component occurs, or when the system is on standby power), and the alarm annunciation indicates the type of alarm (e.g., intrusion alarm, emergency exit alarm) and location.
13(b). Intrusion detection and assessment systems will be designed to provide visual display and audible annunciation of alarms in the Secondary Alarm Station.	13(b). Intrusion detection and assessment systems will be tested.	13(b). The intrusion detection and assessment systems provide a visual display and audible annunciation of alarms in the Secondary Alarm Station (concurrently with the display and annunciation in the Central Alarm Station).
14. No Site-Specific ITAAC specified.	14. No Site-Specific ITAAC specified.	14. No Site-Specific ITAAC specified.
15. Emergency exits through the protected area perimeter and vital area boundaries will be alarmed with intrusion detection devices and secured by locking devices that allow prompt egress during an emergency.	15. Tests, inspections, or a combination of tests and inspections of emergency exits through the protected area perimeter and vital area boundaries will be performed.	15. Emergency exits through the protected area perimeter and vital area boundaries are alarmed with intrusion detection devices and secured by locking devices that allow prompt egress during an emergency.
16(a). The Secondary Alarm Station will have conventional (land line) telephone service with the Main Control Room and local law enforcement authorities.	16(a). Tests, inspections, or a combination of tests and inspections of the Secondary Alarm Stations' conventional (land line) telephone service will be performed.	16(a). The Secondary Alarm Station is equipped with conventional (land line) telephone service with the Main Control Room and local law enforcement authorities.

**Table 2.2.1-1 ITAAC for the Site- Specific Security System**

<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
16(b). The Secondary Alarm Station will be capable of continuous communication with on-duty security force personnel.	16(b). Tests, inspections, or a combination of tests and inspections of the Secondary Alarm Stations' continuous communication capabilities will be performed.	16(b). The Secondary Alarm Station is capable of continuous communication with on-duty watchmen, armed security officers, armed responders, or other security personnel who have responsibilities within the physical protection program and during contingency response events.
16(c). Non-portable communications equipment in the Secondary Alarm Station will remain operable from an independent power source in the event of loss of normal power.	16(c). Tests, inspections, or a combination of tests and inspections of the non-portable communications equipment will be performed.	16(c). All non-portable communication devices (including conventional telephone systems) in the Secondary Alarm Station are wired to an independent power supply that enables those systems to remain operable (without disruption) during the loss of normal power.

**Attachment 3  
NRC3-10-0017**

**Response to RAI Letter No. 26  
(eRAI Tracking No. 4486)**

**RAI Question No. 14.03.12-2**

**NRC RAI 14.03.12-2**

*ITAAC # 2*

*Fermi, S-COL application revision 1, Part 10, Combine License Application (including Inspection, Testing, Analyses, and Acceptance Criteria (ITAAC), section 2.2 states that Physical Security ITAAC (PS-ITAAC) are contained in the DCD Tier 1. The GE Hitachi DCD is being revised (RAI 14.3-440 S01 response letter 4/11/09) to address the new Part 73.55 rule requirements. The current revision of the DCD deleted several PS-ITAAC that were outside of the scope of the DCD. Review and confirm each PS-ITAAC listed below to verify that it properly reflects the applicants intentions based on the SRP and the most current revision of the DCD. Verify and provide the status of any tentative COL action items assigned based on DCD changes. Explain what actions the applicant will take to revise PS-ITAAC to reflect the applicant's intentions in the S-COL application.*

*The below ITAAC reference numbers from (DCD), Tier 1, Table 2.19-1, revision 6, have been cross-referenced with NUREG-800 Standard Review Plan (SRP) (Draft), 14.3.12 Appendix "A" for clarification. (ADAMS Accession Number: ML ML092600348)*

<i>DCD Table 2.1.9-1 # 2a</i>	<i>SRP Appendix "A" #2a</i>
<i>DCD Table 2.1.9-1 # 2b</i>	<i>SRP Appendix "A" #2b</i>
<i>DCD Table 2.1.9-1 # 2c</i>	<i>SRP Appendix "A" #2c</i>
<i>DCD Table 2.1.9-1 # 3a</i>	<i>SRP Appendix "A" #3a</i>
<i>DCD Table 2.1.9-1 # 3b</i>	<i>SRP Appendix "A" #3b</i>
<i>DCD Table 2.1.9-1 # 3c</i>	<i>SRP Appendix "A" #3c</i>
<i>DCD Table 2.1.9-1 # 4a</i>	<i>SRP Appendix "A" #4a</i>
<i>DCD Table 2.1.9-1 # 4b</i>	<i>SRP Appendix "A" #4b</i>
<i>DCD Table 2.1.9-1 # 4c</i>	<i>SRP Appendix "A" #4c</i>
<i>DCD Table 2.1.9-1 # 5</i>	<i>SRP Appendix "A" #5</i>
<i>DCD Table 2.1.9-1 # 7</i>	<i>SRP Appendix "A" #7</i>
<i>DCD Table 2.1.9-1 # 8a</i>	<i>SRP Appendix "A" #8a</i>
<i>DCD Table 2.1.9-1 # 8b</i>	<i>SRP Appendix "A" #8b</i>
<i>DCD Table 2.1.9-1 # 9</i>	<i>SRP Appendix "A" #9</i>
<i>DCD Table 2.1.9-1 # 1 1c</i>	<i>SRP Appendix "A" #1 1c</i>
<i>DCD Table 2.1.9-1 # 1 1b</i>	<i>SRP Appendix "A" #1 1c</i>

*Regulatory Basis: 10CFR 52.47(b)(1) The application must also contain: (1) The proposed inspections, tests, analyses, and acceptance criteria that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, a facility that incorporates the design certification has been constructed and will be operated in conformity with the design certification, the provisions of the Act, and the Commission's rules and regulations.*

**Response**

The response to RAI 14.03.12-1 addresses the revised COLA PS-ITAAC that will be incorporated in a future COLA revision to address the changes to 10 CFR 73.55, while accounting for the revised ESBWR DCD PS-ITAAC.

**Proposed COLA Revision**

See markups in the response to RAI 14.03.12-1 in attachment 2 of this letter.



**Attachment 4  
NRC3-10-0017**

**Response to RAI Letter No. 26  
(eRAI Tracking No. 4486)**

**RAI Question No. 14.03.12-3**

**NRC RAI 14.03.12-3**

*ITAAC # 3*

*Fermi, S-COL application revision 1, Part 10, Combine License Application (including Inspection, Testing, Analyses, and Acceptance Criteria (ITAAC), section 2.2 states that Physical Security PS ITAAC are contained in the DCD Tier 1. The GE Hitachi DCD is being revised (RAI 14.3-440 S01 response letter 4/11/09) to address the new Part 73.55 rule requirements. The current revision of the DCD does not fully address the below listed PS-ITAAC. Explain how Fermi 3, will address these PS ITAAC areas? Explain what actions the applicant will take to revise the PS-ITAAC to reflect the applicant's intentions in the S-COL application.*

*The below ITAAC reference numbers from (DCD), Tier 1, Table 2.19-1, revision 6, have been cross-referenced with NUREG-800 Standard Review Plan (SRP) (Draft), 14.3.12 Appendix "A" for clarification. (ADAMS Accession Number: ML ML092600348)*

*Regulatory Basis: 10CFR 52.47(b)(1) The application must also contain: (1) The proposed inspections, tests, analyses, and acceptance criteria that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, a facility that incorporates the design certification has been constructed and will be operated in conformity with the design certification, the provisions of the Act, and the Commission's rules and regulations.*

<i>DCD Table 2.1.9-1 # 1b</i>	<i>SRP Appendix "A" #1a</i>
<i>DCD Table 2.1.9-1 # 6a</i>	<i>SRP Appendix "A" #6</i>
<i>DCD Table 2.1.9-1 # 10a</i>	<i>SRP Appendix "A" #10</i>
<i>DCD Table 2.1.9-1 # 1 1a</i>	<i>SRP Appendix "A" #1 1a</i>
<i>DCD Table 2.1.9-1 # 1 1b-1</i>	<i>SRP Appendix "A" #1 1b</i>
<i>DCD Table 2.1.9-1 # 12a</i>	<i>SRP Appendix "A" #12</i>
<i>DCD Table 2.1.9-1 # 13b-1</i>	<i>SRP Appendix "A" #13b</i>
<i>DCD Table 2.1.9-1 # 15a</i>	<i>SRP Appendix "A" #15</i>
<i>DCD Table 2.1.9-1 # 16a-1</i>	<i>SRP Appendix "A" #16a</i>
<i>DCD Table 2.1.9-1 # 16b-1</i>	<i>SRP Appendix "A" #16b</i>
<i>DCD Table 2.1.9-1 # 16c-1</i>	<i>SRP Appendix "A" #16c</i>

**Response**

The response to RAI 14.03.12-1 addresses the revised COLA PS-ITAAC that will be incorporated in a future COLA revision to address the changes to 10 CFR 73.55, while accounting for the revised ESBWR DCD PS-ITAAC.

**Proposed COLA Revision**

See markups in the response to RAI 14.03.12-1 in attachment 2 of this letter.

**Attachment 5**  
**NRC3-10-0017**

**Response to RAI Letter No. 26**  
**(eRAI Tracking No. 4487)**

**RAI Question No. 13.06.01-1**

**NRC RAI 13.06.01-1**

*NEDE-33391, Rev 2, ESBWR "Safeguards Assessment Report." Describe how the specific security features identified in NEDE-33391 will be tracked, incorporated, verified, and demonstrated for Fermi Unit 3 physical protection program.*

*Regulatory Basis: 10 CFR Part 73.55(a): (2) The security plans must identify, describe, and account for site-specific conditions that affect the licensee's capability to satisfy the requirements of this section. (3) The licensee is responsible for maintaining the onsite physical protection program in accordance with Commission regulations through the implementation of security plans and written security implementing procedures.*

**Response**

The latest revision of NEDE-33391, ESBWR "Safeguards Assessment Report" will be used to develop a strategy that will be tested and implemented to protect Fermi 3 against the adversary characteristics of the Design Basis Threat. The assumptions in the report will be analyzed when developing the protective strategy.

Verification of the report will be included as part of the information provided in the New Plant Physical Security Program Milestone Implementation Schedule submittal. Detroit Edison intends to submit, within 12 months after issuance of a Combined License, the information specified in the NEI Template for New Plant Physical Security Program Milestone Implementation Schedule. This template was submitted to the NRC by NEI on September 13, 2007 and endorsed by the NRC in a letter dated January 8, 2008. The implementation milestones will be updated every 6 months until 12 months before scheduled fuel load, and every month thereafter until either the operational programs listed in FSAR Table 13.4-201 have been fully implemented or Fermi 3 has been placed in commercial service, whichever come first, as stated in the NEI template.

**Proposed COLA Revision**

None

**Attachment 6  
NRC3-10-0017**

**Response to RAI Letter No. 26  
(eRAI Tracking No. 4489)**

**RAI Question No. 13.06.01-2**

**NRC RAI 13.06.01-2**

*Physical Security Plan, Section 9, clarify the statement "Security Officers are properly equipped with weapons and equipment..." Page 4 of the PSP does not appear to include the title "security officer." However, "Armed Security Officer" and "Unarmed individuals" are defined. Clarify whether all "Security Officers" are armed.*

*Regulatory Basis: 10 CFR 73.55(k)(6). Armed security officers. (i) Armed security officers, designated to strengthen onsite response capabilities, shall be onsite and available at all times to carry out their assigned response duties. (ii) The minimum number of armed security officers designated to strengthen onsite response capabilities must be documented in the security plans.*

**Response**

Not all security officers are armed but they are provided with equipment used in the performance of their assigned duties, which may include non-lethal weapons. The statements mentioned in the RAI above are standard text from the NEI 03-12, Revision 6 template, which has been endorsed by the NRC. Security officer is a recognized title used in the industry to identify members of the security force/organization, which includes Armed Security Officers and Unarmed Individuals.

**Proposed COLA Revision**

None

**Attachment 7  
NRC3-10-0017**

**Response to RAI Letter No. 26  
(eRAI Tracking No. 4493)**

**RAI Question No. 12.02-6**

**NRC RAI 12.02-6**

*Combined License (COL) Information Item EF3 COL 12.2-2-A in Section 12.2.2.1, "Airborne Releases Offsite," states in part that site-specific doses are discussed in Subsection 12.2.2.2, "Airborne Dose Evaluation Offsite." COL Information Item EF3 COL 12.2-2-A in Section 12.2.2.2, "Airborne Dose Evaluation Offsite," states in part that calculations of doses and pathways are provided in Tables 12.2-18aR and 12.2-18bR, which then further reference meteorological information from Table 12.2-15R.*

*Site-specific information in Combined License Information Item 2.0-2-A includes Figure 2.1-203 to describe the site boundary. Table 12.2-15R, Airborne Sources Calculation, in describing X/Q and D/Q data used in the calculations, refers to Tables 2.3-328 through 2.3-339. However, as shown in Table 2.3-305, the applicant did not appear to have included several sectors that occur over the adjacent Lake Erie in calculating the dose to individuals at the site boundary. The site boundary over Lake Erie is irregular and appears to be a shorter distance, less than the 800 meter bounding value from the ESBWR DCD which the applicant incorporated by reference, and the distance to site boundary is marked "NA" instead of indicating the distance. It is not clear whether the applicant included the sectors marked "NA" as part of its assessment and estimate of the following:*

- (1) the annual average airborne release concentrations at the boundary of the unrestricted area in accordance with 10 CFR 20 limits,*
- (2) the annual air dose at the site boundary in accordance with 10 CFR 50, Appendix I, Section II.B, or*
- (3) the annual dose or dose commitment in 10 CFR 50, Appendix I, Section II.C, for individuals traveling or conducting activities on the water at or outside the site boundary.*

*Please provide information for the DCD Tier 2, Chapter 12, Section 12.2.2, "Airborne and Liquid Sources for Environmental Consideration," regarding assessments and estimated doses pursuant to 10 CFR 20 and 10 CFR 50, Appendix I, Sections II.B and II.C, for those portions of the site boundary which extend over Lake Erie as shown in Figure 2.1-203.*

*It also appears from the marked site boundary in Figure 2.1-203 that there are portions of the open waters of Lake Erie that are in close proximity to the plant and within the site boundary. Please clarify whether the entire area within the marked site boundary over Lake Erie would under the control of the licensee, or if members of the public traveling upon Lake Erie would have unrestricted access to these areas within the site boundary.*



*Please also clarify the numbering convention for these two COL Information Items in the application:*

(1) EF3 COL 12.2-2-A in Section 12.2.2.1

(2) EF3 COL 12.2-2-A in Section 12.2.2.2

**Response**

FSAR Tables 2.3-307, 2.3-308, and 2.3-309 provide Atmospheric Dispersion Factors (X/Qs) and Deposition Factors (D/Qs) at the site boundary for a Ground-Level Release (for the Radwaste Building Ventilation Stack (RW-VS)), a release from the Reactor Building/Fuel Building Ventilation Stack (RB-VS), and a release from the Turbine Building Ventilation Stack (TB-VS), respectively. As shown in these tables, the ENE, E, ESE, and SE directions are not included as these sectors are bounded by water (Lake Erie) and therefore not considered in the determination of the maximum off-site long term X/Q and D/Q values since long-term occupancy by a member of the public is not possible. In addition, as described in FSAR Section 2.1.2.3:

“The water portion of Fermi 2 and Fermi 3 EABs in Lake Erie is controlled through security surveillance, use of the public address (PA) system to warn boaters, and placement of buoys which identify the area as restricted. Additional protection is provided by the designation of all waters and adjacent shoreline as a security zone as set forth in 33 CFR 165.915. Entry into this zone is prohibited unless authorized by the U.S. Coast Guard.”

The attached Figure 1 shows the security zone in Lake Erie (as defined in 33 CFR 165.915) overlaid on FSAR Figure 2.1-203. As shown the security zone extends well into Lake Erie and would preclude unrestricted use of open water areas in close proximity to the plant in the ENE, E, ESE, and SE sectors by the public. Using the scale shown on Figure 1, the closest distance between the Fermi 3 postulated release locations and security zone in the ENE, E, ESE, and SE sectors is located in the SE sector border with the SSE sector and is greater than one mile. X/Q values at a distance of one mile are provided in FSAR Tables 2.3-328 through 2.3-339 for all sixteen sectors. The following Tables 1 through 3 show the X/Qs for the RW-VS, RB-VS, and TB-VS for a distance of one mile for the ENE, E, ESE and SE directions. The current X/Q values are provided in the mark-up to the FSAR in Detroit Edison letter NRC3-10-0015 dated March 30, 2010 (ML100960474).

**Table 1**  
**RW-VS X/Q Values at One Mile (sec/m<sup>3</sup>)**

Direction	X/Q No Decay, Undepleted	X/Q 2.26 Day Decay, Undepleted	X/Q 8.0 Day Decay, Undepleted
ENE	6.361E-06	6.320E-06	5.558E-06
E	6.136E-06	6.092E-06	5.361E-06
ESE	8.155E-06	8.096E-06	7.124E-06
SE	5.169E-06	5.135E-06	4.517E-06

**Table 2**  
**RB-VS X/Q Values at One Mile (sec/m<sup>3</sup>)**

Direction	X/Q No Decay, Undepleted	X/Q 2.26 Day Decay, Undepleted	X/Q 8.0 Day Decay, Undepleted
ENE	2.744E-07	2.739E-07	2.588E-07
E	2.076E-07	2.072E-07	1.963E-07
ESE	2.135E-07	2.131E-07	2.013E-07
SE	1.859E-07	1.856E-07	1.754E-07

**Table 3**  
**TB-VS X/Q Values at One Mile (sec/m<sup>3</sup>)**

Direction	X/Q No Decay, Undepleted	X/Q 2.26 Day Decay, Undepleted	X/Q 8.0 Day Decay, Undepleted
ENE	2.491E-07	2.487E-07	2.294E-07
E	1.847E-07	1.843E-07	1.712E-07
ESE	1.995E-07	1.991E-07	1.839E-07
SE	1.745E-07	1.742E-07	1.607E-07

The determination of the annual average airborne release concentrations for comparison with 10 CFR 20 limits is provided in FSAR Section 12.2.2.1, results are summarized in Table 12.2-17R (current revision is attached with Detroit Edison letter NRC3-10-0015, dated March 30, 2010 (ML100960474)). The results in Table 12.2-17R are determined using the greater of the site specific or ESBWR DCD, Revision 6, X/Q values. Specifically, Table 12.2-17R was developed using the site specific X/Q values for releases from the RB-VS and the TB-VS and the X/Q values for releases from the RW-VS from the ESBWR DCD, Revision 6. Table 4 provides the X/Q values used in the determination of the airborne release concentrations in Table 12.2-17R.

**Table 4**  
**X/Q Values Used for Determination of FSAR Table 12.2-17R (sec/m<sup>3</sup>)**

Release Location	X/Q Value
RW-VS	2.0E-05
RB-VS	6.6E-07
TB-VS	7.2E-07

Thus, the values in Table 4 are greater than the corresponding release location values in Tables 1 through 3. Therefore, consistent with the approach used in FSAR Section 12.2, the X/Q values used in determining the airborne release concentrations in Table 12.2-17R are conservative relative the X/Q values at the security zone boundary in the ENE, E, ESE, and SE sectors.

Consistent with Regulatory Guide 1.109, Table 1, for demonstrating compliance with 10 CFR 50, Appendix I, the postulated dose receptors were evaluated at the location(s) that could be occupied and where an exposure pathway and dose receptor actually exist. Dose values were not specifically determined in the ENE, E, ESE, and SE directions as these areas are bounded by water (Lake Erie) and long term occupancy by the public is not possible. The dose values reported in FSAR Section 12.2 are the highest values calculated.

The numbering convention for the COL Information Item 12.2-2-A is correct as shown. The ESBWR DCD, COL 12.2-2A, "Airborne Effluents and Doses," states:

"The COL Applicant is responsible for ensuring that offsite dose (using site-specific parameters) due to radioactive airborne effluents complies with the regulatory dose limits in Sections II.B and II.C of 10 CFR 50, Appendix I. In addition, the COL Applicant is responsible for compliance with Section II.D of 10 CFR 50, Appendix I; airborne effluent concentration limits of 10 CFR 20 Appendix B (Table 2, Column 1); and dose limits of 10 CFR Parts 20.1301 and 20.1302 to members of the public (Subsection 12.2.2.2)."

ESBWR DCD, Section 12.2.2.2, last sentence, identifies COL 12.2-2-A.

Fermi 3 FSAR, Section 12.2.2.2 addresses offsite dose due to airborne releases. Section 12.2.2.2 provides the determination of off-site dose using site specific parameters and demonstrates compliance with 10 CFR 50, Appendix I, Sections II.B and II.C (FSAR Subsection 12.2.2.2.1), 10 CFR 50 Appendix I, Section II.D (FSAR Subsection 12.2.2.2.2), 10 CFR 20 Appendix B, Table 2, Column 1 (FSAR Subsection 12.2.2.2.3), and 10 CFR 20.1301 and 20.1302 (FSAR Subsection 12.2.2.2.4). Thus, COL Item EF3 COL 12.2-2-A is annotated to FSAR Section 12.2.2.2.

Fermi 3 FSAR, Section 12.2.2.1 addresses airborne release offsite. The DCD, Section 12.2.2.1, provides an evaluation of the airborne releases offsite using the reference site X/Q values. As discussed in Note (12) for DCD Table 2.0-1:

“If a selected site has X/Q values that exceed the ESBWR reference site values, the release concentrations in Table 12.2-17 would be adjusted proportionate to the change in X/Q values using the stack release information in Table 12.2-16.”

As shown in FSAR Table 2.0-201, the Fermi 3 site specific X/Q values exceed the ESBWR reference site X/Q values. Thus, FSAR Section 12.2.2.1 provides a site specific determination of off-site airborne releases based on the site specific X/Q values. As described in FSAR Section 12.2.2.1, the results from this determination comply with 10 CFR 20 Appendix B, Table 2. As compliance with 10 CFR 20 Appendix B, Table 2 is part of COL Item 12.2-2-2A, this same COL item is also annotated to FSAR Section 12.2.2.1.

**Proposed COLA Revision**

None



### Figure 1

