

NRR-PMDAPEm Resource

From: Huffman, William
Sent: Thursday, March 12, 2015 1:00 PM
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Cc: Wastler, Sandra; Cervera, Margaret; Purdy, Gary; Carter, Ted; Watson, Bruce; Khanna, Meena
Subject: Request for Additional Information on Kewaunee 50.54(p) Changes to Physical Security Plan - TAC MF5779

On March 3, 2015, the staff sent Dominion Energy Kewaunee (DEK or the licensee) the draft Request for Additional Information (RAI) provided below. This RAI is related to changes made to the Kewaunee Power Station Physical Security Plan in accordance with 10 CFR 50.54(p).

A clarification call was conducted with representatives of the NRC staff and DEK representatives on March 10, 2015. During the clarification call, the following actions were agreed to by both the NRC staff and the licensee:

- 1) The RAI below does not contain any security sensitive information that would be considered Official Use Only and the RAI can be made publicly available.
- 2) DEK stated that the information requested by the RAI was understood and no additional clarifying changes were necessary.
- 3) DEK requested that the response date for this RAI be revised to May 11, 2015. The NRC staff considered a response date of May 11, 2015, to be acceptable.
- 4) The NRC staff stated that a publicly available version of this RAI would be placed in ADAMS via the NRC e-capture process.

By letter dated September 17, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14281A755), Dominion Energy Kewaunee, Inc. (DEK or the licensee) submitted Revision 4 to the Kewaunee Power Station Physical Security Plan, Security Training and Qualification Plan, Safeguards Contingency Plan, and Independent Spent Fuel Storage Installation Security Program under the provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) 50.54(p)(2). This revision was preceded by Revisions 1 through 3 of the Kewaunee Physical Security Plan as provided by DEK letters dated June 11, 2013, October 2, 2013, and November 5, 2013 (ADAMS Accession Nos. ML13171A023, ML13277A015 and ML13311A048 respectively). In addition, the licensee responded to a previous NRC staff request for additional information related to these plans on November 21, 2013 (ADAMS Accession No. ML13326B016). The enclosures to these letters contained safeguards information and were withheld from public disclosure.

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the submittals to ensure compliance with 10 CFR 50.54(p)(2) and Section 72.186(b) to ensure that the changes did not decrease the safeguards effectiveness of the NRC-approved security plans. The NRC staff has determined that additional information is needed to continue the review as discussed in the RAIs below. The NRC considers that timely responses to RAIs help ensure sufficient time is available for the NRC staff review and contribute towards the NRC's goal of efficient and effective use of staff resources. Therefore, the staff is requesting your response by April 6, 2015.

You may request a conference call to discuss the contents of this draft RAI with the NRC staff, including any change to the proposed schedule. Please send me an e-mail if you do not need a conference call to clarify the draft RAI.

Respectfully,

Bill Huffman
Kewaunee Project Manager

NRR/DORL/LPL4-2
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DRAFT REQUEST FOR ADDITIONAL INFORMATION

KEWAUNEE POWER STATION

REVISIONS TO SECURITY PLAN, TRAINING AND QUALIFICATION PLAN,

SAFEGUARDS CONTINGENCY PLAN, AND

INDEPENDENT SPENT FUEL STORAGE INSTALLATION (ISFSI) SECURITY PROGRAM

DOCKET NUMBER 50-305 (TAC No. MF5779)

Dominion Energy Kewaunee, Inc., (DEK) the licensee for Kewaunee Power Station (KPS) has submitted four 10 CFR 50.54(p)(2) changes (Revisions 1 through 4) to the Kewaunee Power Station Physical Security Plan. As required by 10 CFR 50.54(p)(2), any revision to the security plans must be accompanied by documentation supporting the changes. As described in NEI 11-08, the supporting information should provide a clear and accurate description of the actual implementation of the security plans at KPS. The NRC performed a review of the changes and found that the rationale provided was limited and that further information is needed.

On November 5-6, 2014, NRC performed a site visit at KPS. During the site visit, NRC assessed the implementation of the security strategy at KPS and was able to determine that the strategy in place provides high assurance of adequate protection of the spent fuel pool and, therefore, did not constitute a reduction in safeguards effectiveness of the security program. However, as stated during the site visit, the NRC determined that the limited information provided in the submissions was also not consistent with the implementation of the program at the site. NRC has also determined that the limited information provided does not adequately describe the rationale for the changes that resulted in the current implementation of the protective strategy.

In response to this request, DEK is requested to provide information to support changes to the security plans that is consistent with those provided in the recent protective strategy briefings and walkdowns at KPS.

RAI No. 1

Provide a detailed narrative of the current security program. The narrative should provide enough detail for NRC to fully understand the current security program. In addition, provide appropriate schematics and pictures of the spent fuel pool, including elevations, access areas, pool wall configuration etc., sufficient to support an understanding of the current security program. Provide the justification for the changes which concluded that the current program continues to provide high assurance of adequate protection of the spent fuel. The level of detail should be consistent with that provided in the recent protective strategy briefings and walkdowns at KPS or as described in NEI-11-08.

The detailed narrative should provide the following information to support the changes made to the KPS security program.

- (1) Provide a description of the external protective measures implemented to protect against the DBT land vehicle bomb assault. This description should include:
 - a. a copy of the revised blast analysis that was the basis for the reconfiguration of the site's vehicle barrier systems (including a description of the methodology used in calculating the minimum safe standoff distances for the protection of personnel, equipment, and systems necessary to prevent spent fuel sabotage);
 - b. any measures implemented to prevent removal or modification of established vehicle barriers;

- c. the timeliness of implementation or timelines associated with a response to the removal or modification of vehicle barriers (if applicable);
- d. the level of response (e.g. number of responders, depictions or pictures of response locations demonstrating distance between response locations and vehicle barriers, field of fire diagrams, configuration and hardening associated with the protected positions used by these responders) (if applicable);
- e. how the external response affects the implementation of the strategy for internal response to target set elements (include the timelines from ready rooms/locations to external positions and from external positions to the assigned internal position(s));
- f. the locations of all active vehicle barrier control panels and a description of their operation to include any override capabilities within the alarm stations/other locations and whether externally accessible panels will be disabled and the method for disabling the panels; and
- g. a narrative description of the process for vehicle search and access through the vehicle barrier systems including any additional vehicle control measures implemented at the site (e.g. tire spikes, additional passive vehicle barriers, vehicle disabling measures, patrols and verification of vehicle disabling measures, etc.).

(2) Provide a description of the external protective measures implemented to protect against the DBT ground assault. This description should include:

- a. the periodicity of owner controlled area (OCA) surveillance and the identification of the members of the security organization responsible for performing OCA surveillance (including the methodology of surveillance implemented (e.g. indirect closed circuit television cameras (CCTVs) or direct (Security Officer observation));
- b. the identification of initial response locations that provide external interdiction and are assigned to address the external ground assault;
- c. the identification of the responders that are assigned to respond to an external threat and whether these responders are also assigned responsibilities for internal response;
- d. how the external response affects the implementation of the strategy for internal response to target set elements (include the timelines from ready rooms/locations to external positions and from external positions to the assigned internal position(s));
- e. any analysis conducted to identify and mitigate the susceptibility of external response locations to sniper/suppressive fire;
- f. diagrams of the external fields of fire that depict elevations, structural impediments that restrict fields of fire, and any designated no fire areas; and
- g. the identification and implementation of any security CCTVs used within the protected area (in addition to the CCTVs for protected area (PA) perimeter assessment) and through the internal areas of the plant such as vital areas (VAs) to track adversary movement or unauthorized activity.

(3) Provide a description of the internal protective measures implemented to protect against the DBT ground assault. This description should include:

- a. the identification of response ready rooms in relation to initial response locations including distance and response timelines;

- b. the identification of the initial internal response locations for each responder and any preplanned redirect response locations for each responder; and
- c. the physical configuration of the internal defensive fighting positions and how this configuration provides protection from the weapons, explosives, and tactics of the DBT.
- d. the standard rate of travel (usually derived in feet per second) for responders carrying full complement of weapon and contingency equipment;
- e. the standard rate of travel (usually derived in feet per second) for adversaries carrying a full complement of equipment as outlined in Regulatory Guide (RG) 5.69;
- f. the delays associated with the barriers that are identified as a component of the licensee's protective strategy; and
- g. whether the response is initiated by detection and assessment at the PA perimeter prior to the completed breach.

Timelines can be derived using calculations or through the actual performance of timeline drills conducted using various armed responders that provide a reasonable representation of the response force to obtain an average response time.

(4) Provide a description of the physical protection measures implemented to mitigate the actions and effects of the passive insider, active insider, and the active violent insider. This description should include:

- a. the periodicity and methodology for conducting patrols of areas containing target set elements (including the identification of the members of the security organization responsible for conducting these patrols);
- b. a narrative description of the configuration of the alarm stations and the duties and responsibilities of the alarm station operators that ensures:
 - i. that neither alarm station operator could perform actions to independently disable security equipment;
 - ii. the protection of the alarm station operators from being incapacitated from the actions of an active violent insider;
- c. the number of responders staged in each response ready room to mitigate the actions and effects of the passive insider and active violent insider; and
- d. any additional physical protection measures (e.g. supervision and oversight, additional patrols, communication/radio checks, etc.) implemented to mitigate the actions and effects of the passive insider and active violent insider.

(5) Provide a description of the physical protection measures for the protection of unattended openings that intersect security boundaries at the site. This description should include:

- a. a narrative description of the physical barriers implemented for the various unattended openings at the site;
- b. the methodology implemented for monitoring the various unattended openings at the site (i.e. intrusion detection equipment or direct observation);
- c. the periodicity for monitoring unattended openings at the site to ensure exploitation is detected and the factors used to establish the monitoring periodicity;

- d. the specific location of the unattended opening being monitored (i.e. the external opening outside of the security boundary or the internal opening inside of the security boundary or both);
- e. the member(s) of the security organization responsible for monitoring the unattended openings at the site;
- f. the response to areas inside of the security boundaries where the unattended openings terminate/exit (i.e. the specific members of the response organization that respond to each, the timelines from ready rooms to the response location in the vicinity of the unattended opening exit point; and
- g. the effect that this response has on the internal response to targets set elements).

Regulatory Basis for RAI 1

73.55(b) *General performance objective and requirements.* (1) The licensee shall establish and maintain a physical protection program, to include a security organization, which will have as its objective to provide high assurance that activities involving special nuclear material are not inimical to the common defense and security and do not constitute an unreasonable risk to the public health and safety.

(2) To satisfy the general performance objective of paragraph (b)(1) of this section, the physical protection program must protect against the design basis threat of radiological sabotage as stated in § 73.1.

(3) The physical protection program must be designed to prevent significant core damage and spent fuel sabotage. Specifically, the program must:

(i) Ensure that the capabilities to detect, assess, interdict, and neutralize threats up to and including the design basis threat of radiological sabotage as stated in § 73.1, are maintained at all times.

(ii) Provide defense-in-depth through the integration of systems, technologies, programs, equipment, supporting processes, and implementing procedures as needed to ensure the effectiveness of the physical protection program.

(4) The licensee shall analyze and identify site-specific conditions, including target sets, that may affect the specific measures needed to implement the requirements of this section and shall account for these conditions in the design of the physical protection program.

(5) Upon the request of an authorized representative of the Commission, the licensee shall demonstrate the ability to meet Commission requirements through the implementation of the physical protection program, including the ability of armed and unarmed personnel to perform assigned duties and responsibilities required by the security plans and licensee procedures.

(6) The licensee shall establish, maintain, and implement a performance evaluation program in accordance with appendix B to this part, to demonstrate and assess the effectiveness of armed responders and armed security officers to implement the licensee's protective strategy.

RAI No. 2

Provide documentation from the Force on Force drills, table-top drills, and limited scope drills (10 percent - randomly chosen) used to determine the proposed protective strategy including the number of responders needed to implement the protective strategy. Include a description of how the results of the FOF exercises and drills are incorporated into the protective strategy. The documentation should include:

- (1) the scenario/mission narratives;
- (2) contingency weapons and equipment;
- (3) characteristics of the adversary force
- (4) alarm assessment;
- (5) command and control;
- (6) responder assignments and re-directions;
- (7) physical barrier integrity and delays provided by physical barriers;
- (8) other protective measures and security equipment identified as a component of the protective strategy per the security plan and implementing procedures and operations interfaces;
- (9) Diagrams of
 - a. the specific target set location,
 - b. identify response locations,
 - c. areas of responsibility for each responder,
 - d. the fields of fire for each response location,
 - e. the location in which each adversary was neutralized,
 - f. the responders responsible for the neutralizations for each exercise
 - g. adversary pathway from the OCA through the PA to the target set location for each exercise
 - h. response routes.
- (10) Exercise timeline which depicts each event as it transpired with associated time of occurrence for each exercise and should include adversary task times and response timelines.;
- (11) post exercise critique; and
- (12) any corrective action documents resultant from all exercises conducted.

Regulatory Basis for RAI No. 2:

10 CFR 73.55(k)(1) The licensee shall establish and maintain, at all times, properly trained, qualified and equipped personnel required to interdict and neutralize threats up to and including the design basis threat of radiological sabotage as defined in § 73.1, to prevent significant core damage and spent fuel sabotage.

10 CFR Part 73 Appendix C II (B)(3)(c)(v) Licensees shall develop, implement, and maintain a written protective strategy to be documented in procedures that describe in detail the physical protection measures, security systems and deployment of the armed response team relative to site specific conditions, to include but not be limited to, facility layout, and the location of target set equipment and elements. The protective strategy should support the general goals, operational concepts, and performance objectives identified in the licensee's safeguards contingency plan.

10 CFR 73 Appendix B(VI)(3)(a)-(m)

(a) Licensees shall develop, implement and maintain a Performance Evaluation Program that is documented in procedures which describes how the licensee will demonstrate and assess the effectiveness of their onsite physical protection program and protective strategy, including the capability of the armed response team to carry out their assigned duties and responsibilities during safeguards contingency events. The Performance Evaluation Program and procedures shall be referenced in the licensee's Training and Qualifications Plan.

Sections b – m not provided for brevity.

REFERENCES:

NEI-11-08

For guidance on development of timelines, refer to the following documents:

- NUREG/CR-7145, "Nuclear Power Plant Security Assessment Guide," issued April 2013

- RIS 2003-06, “High Security Protected and Vital Area Barrier/Equipment Penetration Manual,” issued March 20, 2003
- Regulatory Guide 5.54, “Standard Format and Content of Safeguards Contingency Plans for Nuclear Power Plants,” issued April 2014
- Regulatory Guide 5.69, “Guidance for the Application of Radiological Sabotage Design-Basis Threat in the Design, Development and Implementation of a Physical Security Program that Meets 10 CFR 73.55 Requirements,” issued May 2014

Hearing Identifier: NRR_PMDA
Email Number: 1936

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Subject: Request for Additional Information on Kewaunee 50.54(p) Changes to Physical Security Plan - TAC MF5779
Sent Date: 3/12/2015 12:59:39 PM
Received Date: 3/12/2015 12:59:00 PM
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