



December 20, 2011

Robert G. Smith, P.E.
Site Vice President

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

SUBJECT: Entergy Nuclear Operations, Inc.
Pilgrim Nuclear Power Station
Docket No. 50-293
License No. DPR-35

Response to Additional Requests for Information (RAIs) to NRC Bulletin 2011-01, Mitigating Strategies

- References:
1. USNRC letter to Entergy, Request for Additional Information Regarding Pilgrim Nuclear Power Station - 60-Day Response to NRC Bulletin 2011-01, Mitigating Strategies, dated November 21, 2011 (Letter No. 1.11.057)
 2. Entergy letter to USNRC, 60-Day Response to NRC Bulletin 2011-01, Mitigating Strategies, dated July 8, 2011 (Letter No. 2.11.041)

LETTER NUMBER 2.11.072

Dear Sir or Madam:

By letter in Reference 1, the NRC issued a request for additional information (RAI) for the 60-day response to NRC Bulletin 2011-01 (Reference 2). Attachment 1 to this letter provides the RAI responses requested within 30 days.

There are no new commitments contained in this submittal.

Should you have any questions concerning this letter, or require additional information, please contact Joseph R. Lynch at 508-830-8403.

I declare under penalty of perjury that the foregoing is true and correct. Executed on December 20, 2011

Sincerely,

Robert G. Smith P.E.
Site Vice President

RGS/rmb

Attachment: 1. Response to Requests for Additional Information (4 Pages)

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NRK



cc:

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(w/o Attachments)

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Attachment 1

2.11.072

Response to Requests for Additional Information

(4 Pages)

**Pilgrim Nuclear Power Station
NRC Bulletin 2011-01, "Mitigating Strategies"
Request for Additional Information for the 60 – Day Response**

- 1. Describe in detail the testing and inventory of communications equipment to ensure that it is available and functional when needed.**

The bulletin requested that each licensee describe in detail the testing and control of equipment supporting the mitigating strategies to ensure that it will be available and functional when needed. Communications equipment needed to support the mitigating strategies was described in the NRC Safety Evaluation documenting the NRC review of your response to Section B.5.b of the Interim Compensatory Measures Order (EA-02-026), and typically includes radios, satellite phones, spare batteries, and chargers. The NRC staff could not determine if you performed activities to ensure that communications equipment will be available and functional when needed.

Response:

The testing and control of equipment supporting the mitigating strategies to ensure that it will be available and functional when needed is controlled by various station procedures. Communications equipment needed to support the mitigating strategies are tested through the station Preventative Maintenance (PM) Database to ensure that tests are conducted within the schedule of testing.

Communications equipment includes those utilized for firefighting response, operational recovery of the plant, plant security, and emergency response. The communication methods include portable radios, cell phones, paging system, and dedicated telephone lines as shown below.

By performing daily checks, monthly and/ or quarterly surveillances for testing and inventory as required by station procedures, these activities will ensure that plant communications equipment will be available and functional when needed.

Communication Method	Locations Available	Test Method/ Periodicity	Items verified (e.g. proper quantities, locations, equipment is accessible)
Portable Radios/ batteries/ chargers	Control Room, Fire Brigade/ EMT Equipment Room in O&M Building, SEP Diesel Pump House, Time Tunnel Area, Security Gate 8	Monthly Functional Checks	Quantity, location and functional test
Cell Phones	Various locations throughout the site	Used daily as part of routine operations	Functional test
Paging System (Gaitronics)	Various locations throughout the site	Used daily as part of routine operations	Functional test
Dedicated Phone Lines	Control Room, Security Offices	Tested daily as part of routine operations	Functional test
Emergency Response Dedicated Equipment	Control Room, Technical Support Center, Operations Support Center, Emergency Operations Facility	Monthly Functional Checks Quarterly Facility and Equipment Surveillances and Tests	Quantity, location and functional test

2. Describe in detail how you ensure that a vehicle is available to move the B.5.b portable pump and other B.5.b equipment to the appropriate place when needed.

The bulletin requested that each licensee describe in detail the controls for assuring equipment needed to execute the mitigating strategies will be available when needed. A vehicle is typically needed to implement the strategies since the portable pump and other equipment is stored away from target areas. The NRC staff could not determine if you performed activities to ensure that a tow vehicle would be available when needed.

Response: PNPS utilizes dedicated station equipment to maneuver equipment associated with the B.5.b program. PNPS also has at their disposal non-dedicated station owned equipment to maneuver the B.5.b equipment in the unlikely event of a failure of the dedicated equipment.

PNPS has purchased a mid sized KUBOTA tractor exclusively for the use of transporting pump P-159 and its associated equipment to required staging areas. PNPS utilizes a tandem trailer arrangement whereby both the pump and the equipment trailer are capable of being towed by the single unit. The KUBOTA tractor was purchased exclusively for Operations use and is under Operations control at all times. The keys are in the possession of the Operations department and the equipment is checked twice weekly to ensure it is in place and available for use.

Operator tour stations were established to check the vehicle and storage location for:

1. Ignition (starting of tractor)
2. Adequate fuel capacity
3. Absence of warning lights
4. Available receiver hitch
5. No obstructions to prevent access to vehicle or egress from storage location
6. Responsibility information and informational placards attached to vehicle

If the equipment fails or is missing, Operators are prompted to initiate corrective action to ensure the equipment is restored to available status.

The Operations tour also checks the condition of the battery charger and the charged state of the ignition battery for the KUBOTA tractor. A jumper cable is permanently affixed to pump P-159; the jumper cable provides an alternate means of starting the KUBOTA tractor or pump P-159 in the event of a battery failure on either the KUBOTA or P-159. The tour also verifies the jumper cables are in place and ready for immediate use.

In the unlikely event of simultaneous battery failure on both the KUBOTA and P-159, PNPS has a fleet of numerous vehicles that could be used in an emergency to start either piece of equipment. In addition to the KUBOTA tractor, the B.5.b equipment is able to be moved by most commercially available vehicles outfitted with a trailer hitch. Several of the vehicles maintained by PNPS are trucks with the ability to maneuver the B.5.b equipment if needed. This combination of dedicated equipment and station owned equipment ensures the B.5.b pump and associated equipment can be moved from the storage location to its service location.

3. **Identify the minimum inventory frequency for equipment needed for the mitigating strategies not specifically identified in response to the bulletin. Alternatively, describe the inventory frequency for firefighter turnout gear, tools, and instruments needed to support the mitigating strategies.**

The bulletin requested that each licensee describe in detail the controls for assuring equipment supporting the mitigating strategies will be available when needed. Firefighter turnout gear, tools, and instruments are generally needed to implement the mitigating strategies, but not all of these items were clearly included in your response to the bulletin. The NRC staff noted that your response states that tools for fire hose connections are inventoried, but it is not clear if other tools are needed to support the mitigating strategies.

Response: Fire fighting gear, which is available to support mitigating strategies, is inventoried in accordance with the station Fire Brigade Equipment Inspection procedure. All fire fighting gear is checked quarterly, including turnout gear and supporting fire fighting tools, radios, and fans. Equipment used during fire brigade drills is checked upon completion of the drill using this same procedure. A thermal imaging camera is available in the Main Control room and is functionally checked on a monthly basis by the Fire Brigade Equipment Inspection procedure. All tools required for making fire hose connections and operating hydrants are stored in multiple locations on site. Every exterior hydrant house has a full inventory of hydrant tools and valves. The B.5.b portable pump trailer also has the same tools.

Other items that may be needed to support mitigating strategies include hand tools. Tools are inventoried by station procedure in six locations including the upper and lower Switchgear rooms, Control Room, Reactor Building Auxiliary Bay 23' Elevation, Emergency Diesel Generator (EDG) enclosure tool box, and the Safety Enhancement Program (SEP) diesel building toolbox. Additional tools staged for use are stored on the B.5.b portable pump trailer and in the Emergency Equipment Storage Box on the Reactor Building 91'. These tools are kept securely locked and available for Operations personnel use.

Ladders are another item that may be required and are staged for use in various areas throughout the plant. Ladders for Operations use are stored in accordance with safety, seismic and radiological guidelines.

4. Describe in detail the fire brigade training as it relates to all phases of the mitigating strategies.

The bulletin requested that each licensee describe in detail how configuration and guidance management, including training, is assured so that the strategies remain feasible. The safety evaluation documenting the NRC review of your response to Section B.5.b of the Interim Compensatory Measures Order (EA-02-026) states that the expectation for fire brigade training (Phase 1, B.1.I) includes accelerant-fed fires and coordinated fire response. Your response to the bulletin implies that fire brigade training is limited to pump operations.

Response: The following information is provided to describe Fire Brigade training at Pilgrim Nuclear Power Station (PNPS).

Station Personnel	Training	Periodicity	Evaluation
Operations	Initial training and continuing training on the pump operation and procedure/ mitigating strategies	2 years	Classroom and in-plant training with exam
Fire Brigade	Initial training and continuing training on pump operation both classroom and hands-on	Annual	Classroom and in-plant training with exam

The above table listed procedure/mitigating strategies training for licensed operators. As a clarification, non-licensed operators also receive this training.

The fire brigade for PNPS is currently comprised of five members who are predominantly operations personnel (four operators and one security member).

Besides training on the B.5.b pump operation, our Fire Brigade is trained in both classroom and hands-on to deal with Flammable/ Combustible liquid fires and Flammable Gas-fed fires (Use of Foam application, high volume water spray both manually applied and also with remote monitor nozzles). The Fire Brigade is also trained in principles of Incident Command System and Coordinated response / Joint Command with an outside agency (Plymouth Fire Department).