Entergy

Entergy Nuclear Operations, Inc.
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, MA 02360

January 12, 2016

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

SUBJECT: Emergency Plan Implementing Procedure Revision

Pilgrim Nuclear Power Station
Docket No. 50-293
License No. DPR-35

LETTER NUMBER: 2.16.002

Dear Sir or Madam:

In accordance with 10 Code of Federal Regulations (CFR) 50.4, Entergy Nuclear Operations, Inc. is providing the latest revision to the Entergy EP-IP-310. The procedure revisions were reviewed in accordance with 10 CFR 50.54(q). The 50.54(q) reviews are also provided in the letter attachment.

The PNPS Emergency Plan continues to meet the planning standards outlined in 10 CFR 50.47, the effectiveness of the emergency plan is not reduced, and the changes did not require prior U.S. Nuclear Regulatory Commission approval.

If you have any questions or require additional information, please contact me at (508) 830-8227.

There are no commitments contained in this letter.

Sincerely,

Donna Calabrese
Emergency Planning Manager

KLS/jc

Attachment:
1. EP-IP-310 Revision 10 procedure and associated 50.54(q) Review

AX45
NRR

cc:

Director of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555

U.S. Nuclear Regulatory Commission
Region 1 – Incident Response Center
2100 Renaissance Blvd., Suite 100
King of Prussia, PA 19406-2713

NRC Resident Inspector
Pilgrim Nuclear Power Station

Attachment 1

Letter Number 2.16.002

EP-IP-310, Offsite Monitoring Team Activation and Response, Revision 10 and associated 10 CFR 50.54(q) Review

RTYPE H8.24

Offsite Monitoring Team Activation And Response

Change Statement

(a) Clarify wording regarding placement of detector when performing Iodine Cartridge Field Analysis. Page 9.

TABLE OF CONTENTS

1.0 PURPOSE

This Procedure provides instructions to Offsite Monitoring Team (OMT) members assigned to the Emergency Operations Facility (EOF). The OMTs will ascertain the radiological conditions in the environment during an emergency situation. The survey results obtained will help to determine and verify the protective action recommendations for the general public.

2.0 REFERENCES

[1] EP-PP-01, "PNPS Emergency Plan"

3.0 DEFINITIONS

None

4.0 RESPONSIBILITIES

[1] The Offsite Monitoring Team (OMT) Coordinator is responsible for:

(a) Dispatching and directing the Offsite Monitoring Teams.

(b) Reporting directly to the Radiological Assessment Coordinator (RAC) all survey and sample results obtained by the OMTs.

[2] The Offsite Monitoring Teams (OMTs) are responsible for:

(a) Directly monitoring radiological conditions in the environs as directed by the OMT Coordinator.

5.0 DETAILS

5.1 PRECAUTIONS AND LIMITATIONS

None

5.2 PROCEDURE

5.2.1 OMT Activation

When the Emergency Operations Facility (EOF) is to be activated, upon arrival the Radiological Monitoring Teams shall:

[1] Obtain team assignments and designation from the OMT Coordinator. If the Rad Lab and OMT Coordinator is not present, pair up in RP Monitor/Driver Teams.

[2] Sign in on the EOF manpower status board.

[3] Obtain an OMT procedure packet from the procedure cabinet.

[4] When all checks and inventories according to Section 5.2.2 have been completed, report to the OMT Coordinator for the dispatch briefing.

NOTES

1. The key to the Field Logistics area is located in the key box outside the door. The combination to the padlock is 000.
2. The keys to the OMT vehicles are located in the key box inside the security area.

5.2.2 Equipment Checks And Inventory

[1] Instrument Checks

(a) Obtain a set of instruments.

(b) Perform the necessary instrument checks. Conduct physical checks, calibration checks, battery checks, and source checks as appropriate.

(c) Verify operability of each type of air sampler.

(d) Record the equipment checks as listed on Attachment 9.1 (OMT Equipment Checklist).

[2] Field Kit Checks

(a) Obtain an OMT field kit from the Field Logistics area.

(b) If the seal on the kit has been broken, then inventory the field kit.

(c) Obtain a package of silver zeolite cartridges from the cabinet in the Field Logistics area.

(d) Synchronize watches with the EOF clock.

(e) Distribute thermoluminescent dosimetry (TLD) and self-indicating dosimetry (SID) to each team member.

(f) Record name and Social Security number on the TLD. Don the TLD.

(g) Zero and don the SID.

(h) Record the results of the field kit inventory on Attachment 9.1 (OMT Equipment Checklist) (inventory is "SAT" if seal is intact).

[3] Vehicle Checks

(a) Obtain a set of keys for an OMT vehicle.

(b) Perform the vehicle checks in accordance with Attachment 9.2 (OMT Vehicle/Communications Checklist).

[4] Communications Checks

(a) Obtain a portable radio from the Field Logistics area.

(b) Verify communications with the EOF by testing the equipment listed on Attachment 9.2 (OMT Vehicle/Communications Checklist).

NOTE

OMTs are not to proceed from the EOF without a full briefing by the OMT Coordinator or Radiological Assessment Coordinator.

5.2.3 Offsite Monitoring

[1] Continuously observe radiation levels while traveling.

[2] While operating inside a radiation field, periodically check the SID reading. If it becomes necessary to rezero the SID, ensure the final and new initial values are reported to the OMT Coordinator.

[3] Boundary information on the leading edge, trailing edge, and outer edges of the plume should be relayed to the OMT Coordinator when available.

5.2.4 Surveys

[2] Surveys taken in the early stages of an accident will be primarily involved with plume assessment and tracking.

NOTE

Radiation and airborne surveys reported to the EOF for use in dose assessment should be centerline values. Survey data reported to the EOF is recorded on Attachment 9.3 (OMT Sample/Survey Sheet).

[3] Radiation Surveys

(a) Using the dose rate meter, perform and record the survey at waist level with the beta window closed.

(b) Using the dose rate meter, perform and record the survey at waist level with the beta window open.

(c) Using the dose rate meter, perform and record the survey at ground level with the beta window closed.

(d) Using the dose rate meter, perform and record the survey at ground level with the beta window open.

(e) Report radiation levels to the OMT Coordinator. Record all information on Attachment 9.3 (OMT Sample/Survey Sheet).

[4] Airborne Surveys

(a) Load a silver zeolite cartridge, arrow pointing in the direction of the air flow, into the sample apparatus.

(b) Place the air sampler 3 to 4 feet off the ground.

NOTE

Exceeding a 2 SCFM flow rate may give erroneous iodine concentration levels.

(c) Draw a 20 cu. ft. air sample (2 SCFM for 10 minutes) unless otherwise directed by the EOF.

(d) Continue to monitor radiation levels while sampling. Record and report any significant changes.

(e) After the sample has been obtained, record the start time, stop time, and sample flow rate on Attachment 9.3 (OMT Sample/Survey Sheet).

(f) Proceed to an area of low background for counting of the sample. Monitor and report radiation levels while tracking plume boundaries.

(g) Particulate Filter Field Analysis

(1) Determine background using a count rate meter with an HP-210 probe (or equivalent).

(2) Count the particulate filter.

(3) Store the particulate filter in a sealed petri dish. Mark the dish with the appropriate sample number and record all information on Attachment 9.3 (OMT Sample/Survey Sheet).

(h) Iodine Cartridge Field Analysis

(1) Connect the NaI probe to the E-600 (or equivalent).

(2) Turn the function switch to the scaler position.

NOTE

Avoid using the E-600 in high background locations (e.g., 2 to 5 mR/hr). The OMT Coordinator is to be contacted if background count rates exceed 40,000 cpm for a 1-minute count time. OMT Coordinator should recommend another counting location (i.e., one with a lower background).

(3) Perform a 1-minute background count by pressing the "*" button located on the E-600 handle.

(4) Place the iodine cartridge in a sample bag and record its dose rate.

(5) Place the detector on top of the sample with the flow arrow pointing away from the detector face

(6) Count the sample for 1 minute by pressing the "*" button.

(7) Remove and label the sample. Record all information on Attachment 9.3 (OMT Sample/Survey Sheet).

(8) Perform another background count by pressing the "*" button. Notify the EOF if background has changed by more than a factor of two. Recount the sample and verify background as directed by the EOF.

(i) Record all data on Attachment 9.3 (OMT Sample/Survey Sheet) and report the results to the OMT Coordinator.

5.2.5 Team Deactivation

When told to deactivate by the OMT Coordinator, the OMTs shall:

[1] Return to the EOF and transfer all samples to the OMT Coordinator.

NOTE

Vehicle air cleaners could have high dose rates.

[2] Survey the OMT vehicles. Pay particular attention to the wheel wells, air cleaner, and door handles.

[3] Remove any anti-contamination clothing (as applicable) and perform a whole body frisk.

[4] Report any contamination found to the OMT Coordinator and await further instructions.

[5] Debrief with the OMT Coordinator. Ensure at least the following is done:

(a) All survey records are turned in.

(b) All checks and inventories are turned in.

(c) Any procedural problems are reported.

(d) Any equipment problems are reported.

(e) All applicable exposure records are correct and current.

[6] Inventory and restock the field kits.

[7] Clean out the OMT vehicles and refill the fuel tank.

6.0 INTERFACES

None

7.0 RECORDS

The following documents are generated as a result of the implementation of this Procedure:

- OMT Equipment Checklist
- OMT Vehicle/Communications Checklist
- OMT Sample/Survey Sheet

The completed documents are to be turned in to the OMT Coordinator in the EOF.

8.0 REQUIREMENTS AND COMMITMENTS

None

9.0 ATTACHMENTS

9.1 OMT EQUIPMENT CHECKLIST

9.2 OMT VEHICLE/COMMUNICATIONS CHECKLIST

9.3 OMT SAMPLE/SURVEY SHEET

9.4 DOCUMENT CROSS-REFERENCE

ATTACHMENT 9.1 **OMT EQUIPMENT CHECKLIST**

Sheet 1 of 2

TEAM: _____ DATE: _____

TEAM MEMBERS: _____ _____

_____ _____

Ion Chamber

Type: _____

Serial No.: _____

Cal Due: _____

Source Check: _____

Beta Corr. Factor: _____

Dose Rate Meter

Type: _____

Serial No.: _____

Cal Due: _____

Source Check: _____

Analyzer with NaI probe

Type: _____

Serial No.: _____

Cal Due: _____

Efficiency: _____

Count Rate Meter

Type: _____

Serial No.: _____

Cal Due: _____

Source Check: _____

HP-210 Probes (2)

Serial No.: _____

Cal Due: _____

Serial No. _____

Cal Due: _____

ATTACHMENT 9.1 **OMT EQUIPMENT CHECKLIST**

Sheet 2 of 2

Air Sampler	Air Sampler
Type: _____	Type: _____
Serial No.: _____	Serial No.: _____
Cal Due: _____	Cal Due: _____

Instrument Check(s): _____ (SAT/UNSAT)

Kit Inventory: _____ (SAT/UNSAT)

Comments: _____

_____

_____

_____

ATTACHMENT 9.2 **OMT VEHICLE/COMMUNICATIONS CHECKLIST**

Sheet 1 of 1

TEAM: _____ DATE: _____

Vehicle No.: _____

Fuel Level (fill if < 1/2) _____ (Check)

Vehicle Lights _____ (Operates)

Spotlights _____ (Operates)

Emergency (Strobe) Lights _____ (Operates)

Power Inverter _____ (Operates)

Spare Tire _____ (Check)

Tow Strap _____ (Available)

Condition of Tires _____ (Sat/Unsat)

Jump Battery or Cables _____ (Available)

Communications

Vehicle Radio _____ (Operates)

Portable Radio _____ (Operates)

Cellular Telephone _____ (Operates)

Vehicle Check: _____ (Sat/Unsat)

Communications Check: _____ (Sat/Unsat)

COMMENTS: _____

_____

_____

ATTACHMENT 9.3 **OMT SAMPLE/SURVEY SHEET**

Sheet 1 of 2

TEAM: _____ DATE: _____

Sample No.: _____

Detailed Location: _____

_____

Distance from Plant: _____ miles

Radiation Survey

Survey Time: A) _____

Dose Rate (Closed Window waist high): B) _____ mR/hr

Dose Rate (Open Window waist high): C) _____ mR/hr

Dose Rate (Closed Window 2" off ground): D) _____ mR/hr

Dose Rate (Open Window 2" off ground): E) _____ mR/hr

Airborne Activity Survey

Sample Start Time: F) _____

Sample Stop Time: G) _____

Sample Flow Rate: H) _____ CFM

Cartridge Dose Rate: I) _____ mR/hr

ATTACHMENT 9.3 **OMT SAMPLE/SURVEY SHEET**

Sheet 2 of 2

Frisker Background: J) _____ cpm

Particulate Filter Count Rate: K) _____ cpm

Initial E-600/NaI Background: L) _____ cpm

Iodine Cartridge Count Rate: M) _____ cpm

Final E-600/NaI Background: N) _____ cpm

E-600/NaI Probe Efficiency: O) _____ cpm/dpm
(fractional value)

COMMENTS: _____

_____

_____

_____

_____

Note if survey/sample was not taken at plume centerline or large variances in background occurred while sampling.

ATTACHMENT 9.4 **DOCUMENT CROSS-REFERENCE**

Sheet 1 of 1

This Attachment lists those documents, other than References, which may be affected by changes to this Procedure.

Document Number	Document Title
EP-IP-260	EOF Operations

Procedure/Document Number: EP-IP-310	Revision: 10
Equipment/Facility/Other: Pilgrim Nuclear Power Station	
Title: Offsite Monitoring Team Activation and Response	

Part I. Description of Activity Being Reviewed (event or action, or series of actions that may result in a change to the emergency plan or affect the implementation of the emergency plan):

This non-intent change to this procedure revised the wording: "Place the sample bag next to the detector ensuring that the flow arrow is pointing away from the face of detector." to read: "Place the detector on top of the sample with the flow arrow pointing away from the detector face."

Part II. Activity Previously Reviewed?
Is this activity fully bounded by an NRC approved 10 CFR 50.90 submittal or Alert and Notification System Design Report?

If YES, identify bounding source document number/approval reference and ensure the basis for concluding the source document fully bounds the proposed change is documented below:

☐ YES 50.54(q)(3) Evaluation is NOT required. Enter justification below and complete Part VI.	☒ NO Continue to next part

Justification:

☐ Bounding document attached (optional)

Part III. Applicability of Other Regulatory Change Control Processes

Check if any other regulatory change processes control the proposed activity.(Refer to EN-LI-100)

NOTE: For example, when a design change is the proposed activity, consequential actions may include changes to other documents which have a different change control process and are **NOT** to be included in this 50.54(q)(3) Screening.

APPLICABILITY CONCLUSION

☒ If there are no controlling change processes, continue the 50.54(q)(3) Screening.
☐ One or more controlling change processes are selected, however, some portion of the activity involves the emergency plan or affects the implementation of the emergency plan; continue the 50.54(q)(3) Screening for that portion of the activity. Identify the applicable controlling change processes below.
☐ One or more controlling change processes are selected and fully bounds all aspects of the activity. 50.54(q)(3) Evaluation is NOT required. Identify controlling change processes below and complete Part VI.

CONTROLLING CHANGE PROCESSES

10CFR50.54(q)

Part IV. Editorial Change

Is this activity an editorial or typographical change such as formatting, paragraph numbering, spelling, or punctuation that does not change intent. No

Justification:

☐ YES 50.54(q)(3) Evaluation is NOT required. Enter justification and complete Part VI.	☒ NO Continue to next part

Procedure/Document Number: EP-IP-310	Revision: 10
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Part V. Emergency Planning Element/Function Screen (Associated 10 CFR 50.47(b) planning standard function identified in brackets) Does this activity affect any of the following, including program elements from NUREG-0654/FEMA REP-1 Section II?	
1. Responsibility for emergency response is assigned. [1]	☐
2. The response organization has the staff to respond and to augment staff on a continuing basis (24/7 staffing) in accordance with the emergency plan. [1]	☐
3. The process ensures that on shift emergency response responsibilities are staffed and assigned. [2]	☐
4. The process for timely augmentation of onshift staff is established and maintained. [2]	☐
5. Arrangements for requesting and using off site assistance have been made. [3]	☐
6. State and local staff can be accommodated at the EOF in accordance with the emergency plan. [3]	☐
7. A standard scheme of emergency classification and action levels is in use. [4]	☐
8. Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes after declaration of an emergency and providing follow-up notifications. [5]	☐
9. Administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway. [5]	☐
10. The public ANS meets the design requirements of FEMA-REP-10, Guide for Evaluation of Alert and Notification Systems for Nuclear Power Plants, or complies with the licensee's FEMA-approved ANS design report and supporting FEMA approval letter. [5]	☐
11. Systems are established for prompt communication among principal emergency response organizations. [6]	☐
12. Systems are established for prompt communication to emergency response personnel. [6]	☐
13. Emergency preparedness information is made available to the public on a periodic basis within the plume exposure pathway emergency planning zone (EPZ). [7]	☐
14. Coordinated dissemination of public information during emergencies is established. [7]	☐
15. Adequate facilities are maintained to support emergency response. [8]	☐
16. Adequate equipment is maintained to support emergency response. [8]	☐
17. Methods, systems, and equipment for assessment of radioactive releases are in use. [9]	☐
18. A range of public PARs is available for implementation during emergencies. [10]	☐
19. Evacuation time estimates for the population located in the plume exposure pathway EPZ are available to support the formulation of PARs and have been provided to State and local governmental authorities. [10]	☐
20. A range of protective actions is available for plant emergency workers during emergencies, including those for hostile action events.[10]	☐
21. The resources for controlling radiological exposures for emergency workers are established. [11]	☐
22. Arrangements are made for medical services for contaminated, injured individuals. [12]	☐
23. Plans for recovery and reentry are developed. [13]	☐
24. A drill and exercise program (including radiological, medical, health physics and other program areas) is established. [14]	☐
25. Drills, exercises, and training evolutions that provide performance opportunities to develop,	☐

Procedure/Document Number: EP-IP-310	Revision: 10
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Title: Offsite Monitoring Team Activation and Response	

maintain, and demonstrate key skills are assessed via a formal critique process in order to identify weaknesses. [14]	
26. Identified weaknesses are corrected. [14]	☐
27. Training is provided to emergency responders. [15]	☐
28. Responsibility for emergency plan development and review is established. [16]	☐
29. Planners responsible for emergency plan development and maintenance are properly trained. [16]	☐

APPLICABILITY CONCLUSION

x If no Part V criteria are checked, a 50.54(q)(3) Evaluation is NOT required; document the basis for conclusion below and complete Part VI.

☐ If any Part V criteria are checked, complete Part VI and perform a 50.54(q)(3) Evaluation.

BASIS FOR CONCLUSION

The change made to this procedure was a non-intent revision made to clarify wording regarding the placement of the detector when performing Iodine Cartridge Field Analysis. This change does not change intent, facilities, equipment or processes for this procedure or affect any planning standard elements. This revision does not affect the Emergency Plan. No further evaluation is required for this change.

Part VI. Signatures:

Preparer Name (Print) Karen Sullivan	Preparer Signature Electronic Signature	Date: 12/17/2015
(Optional) Reviewer Name (Print)	Reviewer Signature	Date:
Reviewer Name (Print) Tim Garvey Nuclear EP Project Manager	Reviewer Signature Tim Garvey	Date: 12/17/15
Approver Name (Print) Donna Calabrese EP manager or designee	Approver Signature Donna Calabrese	Date: 12/17/2015