



10 CFR 50.90
10 CFR 50.54(q)(4)

July 29, 2021

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

Pilgrim Nuclear Power Station
Renewed Facility Operating License No. DPR-35
Docket No. 50-293 and 72-1044

Subject: Response to Request for Additional Information (RAI) - License Amendment
Request to Approve the Pilgrim Nuclear Power Station Independent Fuel Storage
Installation Only Emergency Plan

References:

1. Letter from Holtec Decommissioning International, LLC (HDI) to US NRC, "License Amendment Request to Approve the Pilgrim Nuclear Power Station Independent Fuel Storage Installation Only Emergency Plan," February 18, 2021 (ML21049A192)
2. Letter from Holtec Decommissioning International, LLC (HDI) to US NRC, "Supplemental Information to Update – License Amendment Request to Approve the Pilgrim Nuclear Power Station Independent Fuel Storage Installation Only Emergency Plan," May 20, 2021 (ML21140A045)
3. US NRC Letter to Andrea Sterdis (HDI) "Pilgrim Nuclear Power Station – Request for Additional Information Regarding Pilgrim – License Amendment Request Independent Spent Fuel Storage Installation Only Emergency Plan (EPID: L-2021-LLA-0021)," July 9, 2021 (ML21161A107)

By letter dated February 18, 2021 (Reference 1) Holtec Decommissioning International, LLC, (HDI) submitted a License Amendment Request (LAR) for Pilgrim Nuclear Power Station (PNPS). The proposed amendment would revise the site emergency plan for the Independent Site Fuel Storage Installation (ISFSI) Only condition.

Subsequently, by letter dated May 20, 2021 (Reference 2), HDI submitted supplemental information to update the LAR based on requests for additional information (RAIs) received

by Oyster Creek Nuclear Generating Station on an LAR for a change to their emergency plan to ISFSI only.

By letter dated July 9, 2021, the NRC issued a formal RAI (Reference 3) and requested a response no later than August 10, 2021.

Attachment 1 to this letter provides HDI's response to the NRC's RAI. Attachment 2 provides updated clean pages of the ISFSI Only Emergency Plan. HDI has reviewed the information supporting a finding of No Significant Hazards Consideration and the Environmental Consideration provided to the NRC in Reference 1. The additional information provided in this submittal does not affect the previously stated bases in Reference 1 for concluding that the proposed license amendment does not involve a significant hazards consideration. In addition, the information provided in this submittal does not affect the bases for concluding that neither an environmental impact statement nor an environmental assessment needs to be prepared in connection with the proposed amendment.

The proposed changes are being submitted to the NRC for approval prior to implementation, as required under 10 CFR 50.54(q)(4).

There are no regulatory commitments contained in this submittal.

If you have any questions or require additional information, please contact me at (856) 797-0900, ext. 3813 or a.sterdis@holtec.com.

I declare under penalty of perjury that the foregoing is true and correct. Executed on July 29, 2021.

Sincerely,

Andrea L. Sterdis
HDI Vice President, Regulatory and Environmental Affairs
Holtec Decommissioning International, LLC

Attachment 1. Response to NRC's Request for Additional Information
Attachment 2. Updated (clean) pages of the Pilgrim Nuclear Power Station Independent Fuel Storage Installation Only Emergency Plan (IOEP)



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HDI-PIL-21-090

Attachment 1

Independent Fuel Storage Installation Only Emergency Plan

Response to NRC's Request for Additional Information

(7 pages follow)

SUMMARY

By letter dated February 18, 2021 (Reference 1) Holtec Decommissioning International, LLC, (HDI) submitted a License Amendment Request (LAR) for Pilgrim Nuclear Power Station (PNPS). The proposed amendment would revise the site emergency plan for the Independent Site Fuel Storage Installation (ISFSI) Only condition.

Subsequently, by letter dated May 20, 2021 (Reference 2), HDI submitted supplemental information to update the LAR based on requests for additional information (RAIs) received by Oyster Creek Nuclear Generating Station on an LAR for a change to their emergency plan to ISFSI only.

By letter dated July 9, 2021, the NRC issued a formal RAI (Reference 3) and requested a response no later than August 10, 2021.

Changes made to the previously submitted PNPS ISFSI Only Emergency Plan are shown as markups at the end of the RAI response as necessary. Attachment 2 to this submittal supplement contains clean corrected Emergency Plan pages for replacement.

NRC RAIs and HDI's (PNPS) RAI RESPONSES

NRC RAI-1

Requirement:

- *10 CFR 50.47(b)(12), requires that arrangements are made for medical services for contaminated injured individuals.*
- *10 CFR Part 50, Appendix E.IV.E.6, requires arrangements for transportation of contaminated injured individuals from the site to specifically identified treatment facilities outside the site boundary.*
- *Associated guidance in NUREG-0654, Section II.B, Evaluation Criterion L.4, states that each licensee shall arrange for transporting victims of radiological accidents to medical facilities.*

Issue: Section 2.1, "Overview of ISFSI Emergency Plan," of Enclosure 1, Attachment 1, "Pilgrim Nuclear Power Stations ISFSI Only Emergency Plan," states, in part,

...ambulance services are provided by American Medical Response (AMR), Inc....

Further, Section 5.2.2, "Ambulance Services," of Enclosure 1, Attachment 1, states,

Notification via a commercial phone line to the Plymouth Fire Department (the ambulance Dispatcher) provides for a coordinated communications link to the ambulances responding to PNPS or transporting personnel from the from PNPS. Radiation monitoring services shall be provided by PNPS whenever it becomes

necessary to use the ambulance service for the transportation of contaminated persons.

HDI stated in the supplemental response, for HDI-Pilgrim Response to NRC RAI – 1,

Not applicable to the PNPS submittal. The IOEP specifies that ambulance services are provided by American Medical Response (AMR), Inc. and coordinated by the Plymouth Fire Department.

However, it is not clear to NRC staff that the American Medical Response provides transportation for contaminated injured personnel.

Request: Please clarify that American Medical Response provides transportation for contaminated injured personnel.

HDI (PNPS) Response to RAI-1

Brewster Ambulance Service is currently under contract with the town of Plymouth to provide medical transportation service to the Plymouth area. PNPS has confirmed that Brewster Ambulance Service is capable of transporting contaminated injured personnel. American Medical Response no longer provides this service to the Plymouth area.

DPP-PIL-EP-001 (IOEP), Section 2.1 “Overview of ISFSI Emergency Plan” on page 6 has been changed as follows:

Emergency services are provided by local, public, and private entities. Fire support services are provided by the Plymouth Fire Department; law enforcement support services are provided by local, Commonwealth, and Federal law enforcement authorities, as appropriate; ambulance services are provided by Brewster Ambulance Service; and medical services are provided by Beth Israel Deaconess Medical Center and Morton Hospital.

NRC RAI-2

Requirement:

- *10 CFR 50.47(b)(5), as exempted, requires procedures have been established for notification, by the licensee, of State and local response organizations....*
- *10 CFR Part 50, Appendix E.IV.D.3, as exempted, requires a licensee to have the capability to notify responsible State and local governmental agencies after declaring an emergency.*
- *Associated guidance in NUREG-0654, Section II.B, Evaluation Criterion E.1, states that each licensee shall establish procedures which describe mutually agreeable bases for notification of response organizations consistent with the emergency classification and action level scheme.*

Issue: Section 9.2, "Emergency Messages," of Enclosure 1, Attachment 1, states, in part:

The Emergency Director is responsible for the notification of an emergency declaration to MEMA [Massachusetts Emergency Management Agency], the Plymouth Fire Department, and the NRC within 60 minutes of the event classification or change in classification.

However, Section 5.1.2 "Commonwealth and Local Government Notifications", of the current

"PNPS Permanently Defueled Emergency Plan," Revision 53 (ADAMS Accession No. ML20121A144), (Reference 4) states,

Notification to the responsible Commonwealth and Town of Plymouth authorities is required within 60 minutes of the emergency classification. The commercial telephone network serves as the primary means to provide emergency notification to Commonwealth and Town of Plymouth agencies. It is used to provide initial and updated notifications and for general information flow between these agencies.

The current text in the IOEP Section 9.2 does not detail how the local Plymouth Township government will be notified.

Additionally, neither Section 6.1.1 "ISFSI Shift Supervisor/Emergency Director" nor Section 9.3, "Means of Providing Emergency Notification," of Enclosure 1, Attachment 1 contains any reference for contacting the local government entity(ies).

HDI stated in the supplemental response, for HDI-Pilgrim Response to NRC RAI – 4,

Not applicable to the PNPS submittal.

The Emergency Director directly notifies both state and local governmental response agencies.

Request: Pease clarify how the Plymouth Township will be notified for an emergency at the PNPS ISFSI.

HDI (PNPS) Response to RAI-2

Procedures have been established for the prompt notification to MEMA and the Town of Plymouth in the event of an emergency declaration. PNPS Procedure EP-IP-100, "Emergency Assessment and Response, Attachment 9.2 "Event Notification Checklist" provides the contact number for the Town of Plymouth that would be used by the Emergency Director to notify the town of an event at the Station.

NRC RAI-3

Requirement:

- 10 CFR 50.47(b)(12), requires arrangements to be made for medical services for contaminated injured individuals.

- *10 CFR Part 50, Appendix E.IV.E.5, requires arrangements for medical service providers qualified to handle radiological emergencies onsite.*
- *Associated guidance in NUREG-0654, Section II.L, Evaluation Criterion 1, states each organization shall arrange for local and backup hospital and medical services having the capability for evaluation of radiation exposure and uptake, including assurance that persons providing these services are adequately prepared to handle contaminated individuals.*

Issue: *Section 2.1 of Enclosure 1, Attachment 1, states,*

...and medical services are provided by Beth Israel Deaconess Medical Center.

However, Section 5.2.3, "Hospitals," of Enclosure 1, Attachment 1, states,

An agreement is in place with BID [Beth Israel Deaconess] - Plymouth and Morton Hospital for medical treatment of patients from PNPS who have injuries complicated by radioactive contamination.

Request: *Please clarify this inconsistency between the two sections in the proposed IOEP and whether both facilities are available for medical treatment of contaminated individuals.*

HDI (PNPS) Response to RAI-3

BID – Plymouth is the primary facility where a contaminated injured person would be transported. In the event that this hospital is unable to support receiving a contaminated injured person, Morton Hospital is the back up hospital. There are letters of agreement in place with both entities. DPP-PIL-EP-001 (IOEP), Section 2.1 "Overview of ISFSI Emergency Plan" on page 6 has been changed as follows:

Emergency services are provided by local, public, and private entities. Fire support services are provided by the Plymouth Fire Department; law enforcement support services are provided by local, Commonwealth, and Federal law enforcement authorities, as appropriate; ambulance services are provided by Brewster Ambulance Service; and medical services are provided by Beth Israel Deaconess Medical Center and Morton Hospital.

NRC RAI-4

Requirement:

- *10 CFR 50.47(b)(11), requires means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA [U.S Environmental Protection Agency] Emergency Worker and Lifesaving Activity Protective Action Guides.*

- *Associated guidance in NUREG-0654, Section II.K, Evaluation Criterion 1, each licensee shall establish onsite exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Actions Guides (EPA 520/1-75/001).*

Issue: Section 15.1, “Exposure Guidelines,” Enclosure 1, Attachment 1,

Table 15-1, “Response Worker Emergency Dose Limits,” contains the guidelines for emergency exposure criteria, which is consistent with Table 2-2, “Response Worker Guidelines,” of the EPA’s “Protective Action Guide and Planning Guidance for Radiological Incidents.”

Additionally, Section 8.0 “References”, of Enclosure 1, Attachment 1, states, U.S.

Environmental Protection Agency, “Protective Action Guide and Planning Guidance for Radiological Incidents,” dated January 2017 (EPA-400/R-17/001)

However, Table 2-2 is in the 1999 version of EPA-400. The updated 2017 version of EPA-400 has Table 3-1, “Emergency Worker Guidelines.”

Request: *Please correct this table reference.*

HDI (PNPS) Response to RAI-4

DPP-PIL-EP-001 (IOEP), Section 15.1, “Exposure Guidelines” on page 29 has been changed as follows:

Table 15-1 contains the guidelines for emergency exposure criteria, which is consistent with Table 3-1, “Response Worker Guidelines,” of the EPA’s “Protective Action Guide and Planning Guidance for Radiological Incidents.”

NRC RAI-5

Requirement:

- *10 CFR 50.47(b)(6), requires provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.*
- *Associated guidance in NUREG-0654, Section II.B, Evaluation Criterion J.1, states that Each licensee shall establish the means and time required to warn or advise onsite individuals and individuals who may be in areas controlled by the operator....*

Issue: Section 9.2, “Emergency Messages,” of Enclosure 1, Attachment 1, states, in part:

Accountability of all personnel inside the ISFSI Protected Area should be accomplished within 60 minutes after event declaration and maintained thereafter at the discretion of the Emergency Director. Following announcement of an emergency declaration, onsite personnel are responsible for reporting to designated areas and aiding the accountability process. If personnel are not accounted for, the Emergency Director is notified, and onsite announcements are made.

*Additionally, Section 9.3.3, “ERO Notification,” of Enclosure 1, Attachment 1, states, in part:
The Resource Manager is notified of an emergency declaration by an onsite announcement...*

However, Section 6.1.1 “PNPS Paging System”, of the current “PNPS Permanently Defueled Emergency Plan, Revision 53” states in part,

For all emergency classifications, all personnel within the Protected Area are notified of the declaration, escalation, or termination of an emergency by alarms and verbal announcements over this system. Announcements include the emergency classification and response actions to be taken by site personnel.

Request: *Please clarify how onsite announcements are made.*

HDI (PNPS) Response to RAI-5

Procedures have been established for the prompt notification of ISFSI personnel in the event of an emergency declaration. Announcements, are made via security radios utilizing PNPS Procedure EP-IP-100, “Emergency Assessment and Response”, Attachment 9.2 “Event Notification Checklist”

NRC RAI-6

Requirement:

- *10 CFR 50.47(b)(8), requires adequate emergency facilities and equipment to support the emergency response are provided and maintained.*
- *10 CFR 50.47(b)(14), requires periodic exercises to be conducted to evaluate major portions of emergency response capabilities,*
- *Associated guidance in NUREG-0654, Section II.F, Evaluation Criterion 3, each organization shall conduct periodic testing of the entire emergency communications system.*

Issue: *Section 10.0, Table 10-1 “Communication Systems,” of Enclosure 1, Attachment 1, Provides testing frequency for the commercial telephone system as weekly.*

However, Section 18.2.1, “Communication Drills,” of Enclosure 1, Attachment 1, states in part

The following communications systems, as detailed in Section 10.0, are used on a frequent basis, therefore periodic testing of these systems is not necessary:

- *Commercial Telephone System*
- *Portable Radios*

Request: *Please clarify if weekly testing of the commercial telephone system is required.*

HDI (PNPS) Response to RAI-6

At the ISFSI, testing of both the portable radios and commercial telephone system is done by Security on a more frequent basis in accordance with Security procedures, therefore weekly testing of the commercial telephone system is not required.

References:

1. Letter from Holtec Decommissioning International, LLC (HDI) to US NRC, "License Amendment Request to Approve the Pilgrim Nuclear Power Station Independent Fuel Storage Installation Only Emergency Plan," February 18, 2021 (ML21049A192)
2. Letter from HDI to US NRC, "Supplemental Information to Update – License Amendment Request to Approve the Pilgrim Nuclear Power Station Independent Fuel Storage Installation Only Emergency Plan," May 20, 2021 (ML21140A045)
3. US NRC Letter to Andrea Sterdis (HDI) "Pilgrim Nuclear Power Station – Request for Additional Information Regarding Pilgrim – License Amendment Request Independent Spent Fuel Storage Installation Only Emergency Plan (EPID: L-2021-LLA-0021)" July 9, 2021 (ML21161A107)
4. Letter from Holtec Decommissioning International, LLC (HDI) to US NRC, "PNPS Emergency Plan Revision, Revision 53," February 3, 2020 (ML20121A144)



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HDI-PIL-21-090

Attachment 2

**Updated (clean) pages of the PNPS Independent Fuel Storage Installation Only
Emergency Plan (IOEP)**

(2 pages follow)

	ISFSI Only Emergency Plan	Procedure Number: DPP-PIL-EP-001	Revision: 0
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1.2 Scope

The IOEP has been developed to respond to potential radiological emergencies at the PNPS ISFSI. Because there are no postulated off-normal, natural phenomena or accident events that would result in dose consequences that are large enough to require offsite emergency planning, the overall scope of the IOEP details the actions necessary to safeguard onsite personnel.

The concepts presented in the IOEP address the applicable regulations stipulated in 10 CFR 50.47, "Emergency Plans," and Appendix E to 10 CFR 50, "Emergency Planning and Preparedness for Production and Utilization Facilities." The IOEP is consistent with the applicable guidelines established in NUREG-0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants." Appendix B Contains a cross-reference to the applicable guidance in NUREG-0654.

Exemptions from selected portions of 10 CFR 50.47 and Appendix E to 10 CFR Part 50 were approved by the Nuclear Regulatory Commission (NRC) on December 18, 2019 (ADAMS Accession Number ML19142A043).


2.0 DISCUSSION

2.1 Overview of ISFSI Emergency Plan

In the event of an emergency at the PNPS ISFSI, actions are required to identify and assess the nature of the emergency and to respond in a manner that protects the health and safety of the public and onsite personnel. This plan describes the organization and responsibilities for implementing emergency measures and describes interfaces with Federal, Commonwealth of Massachusetts, and local organizations which may be notified in the event of an emergency and may provide assistance.

Emergency services are provided by local, public, and private entities. Fire support services are provided by the Plymouth Fire Department; law enforcement support services are provided by local, Commonwealth, and Federal law enforcement authorities, as appropriate; ambulance services are provided by Brewster Ambulance Service; and medical services are provided by Beth Israel Deaconess Medical Center and Morton Hospital.

PNPS is licensed under the requirements of 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities." Consistent with the requirements of 10 CFR Part 50, the IOEP is based on the requirements of 10 CFR Part 50, Section 50.47(b) and Appendix E, "Emergency Planning and

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15.0 RADIOLOGICAL EXPOSURE CONTROL

The means for controlling radiological exposures during an emergency are established for emergency workers. The means for controlling radiological exposures include exposure guidelines consistent with the Environmental Protection Agency's (EPA) Emergency Worker and Lifesaving Activity Protective Action Guides (PAGs).

15.1 Exposure Guidelines

During an emergency, doses above normal occupational radiation exposure limits may be authorized by the Emergency Director for activities such as saving a life, preservation of valuable equipment, or controlling exposure.

All reasonable measures shall be taken to control the radiation exposure to emergency response personnel providing rescue, first aid, decontamination, emergency transportation, medical treatment services, corrective actions, or assessment actions within applicable limits specified in 10 CFR Part 20. The Emergency Director is responsible for authorizing emergency response personnel to receive doses in excess of 10 CFR Part 20 limits. This authority cannot be delegated.

Table 15-1 contains the guidelines for emergency exposure criteria, which is consistent with Table 3-1, "Response Worker Guidelines," of the EPA's "Protective Action Guide and Planning Guidance for Radiological Incidents."

15.2 Radiation Protection

PNPS maintains a radiological exposure control program to ensure that protection against radiological exposure, as set forth in 10 CFR Part 20, is provided. Exposure to individuals providing emergency functions will be consistent with the limits specified in Table 15-1 with every attempt, made to keep exposures As Low As Reasonably Achievable (ALA RA).

15.2.1 Access Control

During a classified emergency, radiological surveys of the ISFSI and its immediate vicinity will be performed to determine the extent of the radiological concern. The Emergency Director will ensure Radiological Control Areas (RCAs) and access controls are established to prevent personnel from entering the area. Recovery and corrective actions will be planned and executed in a manner that minimizes personnel exposure.

15.2.2 Personnel Exposure Monitoring

Personal dosimeters are utilized to monitor the exposure of personnel during normal or emergency conditions. Adequate supplies of dosimeters are maintained for use during an emergency. Procedures describe the types of