Entergy

Entergy Operations, Inc
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601
Tel 914 272 3370

John F. McCann
Vice President - Nuclear Safety,
Emergency Planning and Licensing

ENOC-10-00034

November 2, 2010

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

Subject: Follow-up Action to NRC Enforcement Discretion Letter EA-09-190, *Holtec Elimination of Multi-Purpose Canister (MPC) Shop Helium Leak Rate Test*

Arkansas Nuclear One
Units 1 & 2
Docket Nos. 50-313, 50-368, & 72-13
License Nos. DPR-51 & NPF-6

Grand Gulf Nuclear Station
Docket No. 50-416 & 72-50
License No. NPF-29

Indian Point Nuclear Generating Units
Units 1, 2, & 3
Docket Nos. 50-003, 50-247, 50-286 & 72-51
License Nos. DPR-5, DPR-26, & DPR-64

James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333 & 72-12
License No. DPR-59

River Bend Station
Docket No. 50-458 & 72-49
License No. NPF-47

Vermont Yankee Nuclear Power Station
Docket No. 50-271 & 72-59
License No. DPR-28

References:
1) NRC Letter to Holtec, "Exercise of Enforcement Discretion – Holtec International, EA-09-190," dated August 6, 2009
2) Holtec Letter to NRC, "Reply to EA-09-190," dated September 2, 2009
3) NRC Letter to Holtec, "Response to Holtec International (Holtec) Reply to EA-09-190," dated January 12, 2010.

Dear Sir or Madam:

The Nuclear Regulatory Commission (NRC) notified Holtec International (Holtec) regarding a violation of NRC requirements by letter dated August 6, 2009 (Reference 1). Specifically, Holtec eliminated shop helium leak testing of the multi-purpose canister (MPC) during fabrication without prior NRC approval. By letter dated September 2, 2009 (Reference 2),

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Holtec provided a response to the violation which included analysis that supports continued use of loaded MPCs that were not tested during fabrication.

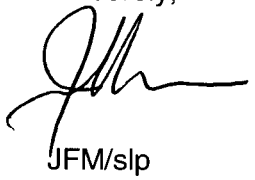
Spent fuel storage activities are conducted at nuclear facilities operated by Entergy Operations, Inc. and Entergy Nuclear Operations, Inc. (Entergy) using the Holtec International HI STORM 100 Cask System. Entergy currently has loaded MPCs at independent spent fuel storage installations (ISFSIs) that were not helium leak tested. Specifically, Arkansas Nuclear One (ANO), Grand Gulf Nuclear Station (GGNS), Indian Point (IPEC), James A. FitzPatrick (JAF), River Bend Station (RBS), and Vermont Yankee (VY) are the general licensees for the ISFSIs at each of these facilities.

A teleconference was held on December 1, 2009, with NRC, Holtec, and the affected licensees. The NRC requested that general licensees with MPCs that were not helium leak tested during fabrication provide information related to their site-specific determinations that the MPCs could remain in service. Accordingly, the requested information is provided in Attachments 1 through 6 for each Entergy facility.

There are no new commitments contained in this submittal.

If you have any questions concerning this submittal, please contact me.

Sincerely,



JFM/slp

Attachments:

1. NRC Requested Information for Arkansas Nuclear One
2. NRC Requested Information for Grand Gulf Nuclear Station
3. NRC Requested Information for Indian Point, Unit Nos. 1, 2, and 3
4. NRC Requested Information for James A. FitzPatrick
5. NRC Requested Information for River Bend Station
6. NRC Requested Information for Vermont Yankee

cc:

Mr. William Dean
Regional Administrator
U. S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406-1415

NRC Senior Resident Inspector
Arkansas Nuclear One
P. O. Box 310
London, AR 72847

NRC Senior Resident Inspector
Indian Point Energy Center
450 Broadway
P. O. Box 249
Buchanan, NY 10511-0249

NRC Senior Resident Inspector
River Bend Station
PO Box 1050
St. Francisville, LA 70775

Mr. John Boska
Project Manager
NRC NRR DORL

Mr. Bhalchandra Vaidya
Project Manager
NRC NRR DORL

Mr. Alan Wang
Project Manager
NRC NRR DORL

Mr. Elmo Collins
Regional Administrator
U. S. Nuclear Regulatory Commission
Region IV
612 E. Lamar Blvd., Suite 400
Arlington, TX 76011-4125

NRC Senior Resident Inspector
Grand Gulf Nuclear Station
Port Gibson, MS 39150

NRC Senior Resident Inspector
James A. FitzPatrick Nuclear Power Plant
PO Box 136
Lycoming, NY 13693

NRC Senior Resident Inspector
Vermont Yankee
Entergy Nuclear Vermont Yankee, LLC
PO Box 157
Vernon, Vermont 05354

Mr. James Kim
Project Manager
NRC NRR DORL

Mr. Kaly Kalyanam
Project Manager
NRC NRR DORL

Attachment 1

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NRC Requested Information for:

Arkansas Nuclear One, Units 1 and 2

A teleconference was held by the NRC with Holtec and general licensees with loaded MPCs that were not subjected to helium leak testing during fabrication for the purpose of discussing continued use of the affected MPCs. The following list, taken from the NRC Conversation Record (ML0935100008), identifies the information requested by the NRC. The requested information for Arkansas Nuclear One (ANO), Units 1 and 2, is provided immediately following the NRC requested information below:

1. **NRC Request:**

   Information that the thermal heat load for the spent fuel and internal helium conditions that had been loaded into the MPCs was bounded by the thermal and over pressure helium analyses provided by Holtec in their corrective action response to the NRC Enforcement Discretion letter dated August 6, 2009; for MPCs loaded above 21 kilowatts (kW) the NRC requested that the site provide information regarding the length of time that would elapse before the spent fuel heat load would decay below 21 kW.

   ANO Response:

   ANO currently has seven MPCs loaded with spent fuel in the independent spent fuel storage installation (ISFSI) that were not helium leak tested during fabrication. These casks were loaded in accordance with the requirements of Certificate of Compliance (CoC) 1014, Amendments 2 and 5. Of the seven MPC's, two MPC's have been loaded with a heat load above 21kw. The maximum heat load for these MPCs is 27.637 kW. Accordingly, these casks are bounded by the thermal and overpressure helium analyses provided by Holtec letter to the NRC dated September 2, 2009. The heat load for these casks is projected to be less than 21kW by December 1, 2015.

2. **NRC Request:**

   Information that the site radiological monitoring programs had not detected any adverse effluent conditions associated with the use of the MPCs, and that all measured site radiological parameters were within the limits provided in 10 CFR 72.104.

   ANO Response:

   Entergy has reviewed the results of the Annual Radiological Environmental Operating Reports since the beginning of Holtec ISFSI storage operations in 2003. The results of this review determined that there is no discernable increase in dose to the public as the result of storage of casks that were not helium leak tested. Results contained in the Annual Radiological Environmental Operating Report for this period were within the limits specified in 10 CFR 72.104. Based on the use of stringent and consistent fabrication requirements, leakage from these casks is not considered credible. Accordingly, these casks are bounded by the existing analysis for compliance with 10 CFR 72.104.

3. **NRC Request:**

Information that the sites dispositioned the deficiency through their non-conforming and corrective action process and determined that continued use of the MPCs was found to be acceptable.

ANO Response:

Condition Reports CR-ANO-C-2009-00307 and CR-ANO-C-2009-01531 were initiated for the Holtec failure to perform the required helium leak test during fabrication. A prompt determination of operability was prepared and a determination made that the affected MPCs would perform their intended safety function. This determination was based on an operability review.

Attachment 2

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NRC Requested Information for:

Grand Gulf Nuclear Station

A teleconference was held by the NRC with Holtec and general licensees with loaded MPCs that were not subjected to helium leak testing during fabrication for the purpose of discussing continued use of the affected MPCs. The following list, taken from the NRC Conversation Record (ML0935100008), identifies the information requested by the NRC. The requested information for Grand Gulf Nuclear Station (GGNS) is provided immediately following the NRC requested information below:

1. **NRC Request:**

   Information that the thermal heat load for the spent fuel and internal helium conditions that had been loaded into the MPCs was bounded by the thermal and over pressure helium analyses provided by Holtec in their corrective action response to the NRC Enforcement Discretion letter dated August 6, 2009; for MPCs loaded above 21 kilowatts (kW) the NRC requested that the site provide information regarding the length of time that would elapse before the spent fuel heat load would decay below 21 kW.

   GGNS Response:

   GGNS currently has seven MPCs loaded with spent fuel in the independent spent fuel storage installation (ISFSI) that were not helium leak tested during fabrication. These casks were loaded in accordance with the requirements of CoC 1014, Amendment 2. The maximum heat load for these MPCs is 21.8197 kW. Accordingly, these casks are bounded by the thermal and overpressure helium analyses provided by Holtec letter to the NRC dated September 2, 2009. The heat load for these casks was below the 21kW heat load on June 18, 2008.

2. **NRC Request:**

   Information that the site radiological monitoring programs had not detected any adverse effluent conditions associated with the use of the MPCs, and that all measured site radiological parameters were within the limits provided in 10 CFR 72.104.

   GGNS Response:

   GGNS has reviewed the results of the Annual Radiological Environmental Operating Reports since the beginning of ISFSI storage operations in 2006. The results of this review determined that there is no discernable increase in dose to the public as the result of storage of casks that were not helium leak tested. Results contained in the Annual Radiological Environmental Operating Report for this period were within the limits specified in 10 CFR 72.104. Based on the use of stringent and consistent fabrication requirements, leakage from these casks is not considered credible. Accordingly, these casks are bounded by the existing analysis for compliance with 10 CFR 72.104.

3. NRC Request:

Information that the sites dispositioned the deficiency through their non-conforming and corrective action process and determined that continued use of the MPCs was found to be acceptable.

GGNS Response:

Condition Report CR-GGN-2009-03928 was initiated for the Holtec failure to perform the required helium leak test during fabrication. A prompt determination of operability was prepared and a determination made that the affected MPCs would perform their intended safety function. This determination was based on an operability review.

Attachment 3

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NRC Requested Information for:

Indian Point, Unit Nos. 1, 2, and 3

A teleconference was held by the NRC with Holtec and general licensees with loaded multi-purpose canisters (MPCs) that were not subjected to helium leak testing during fabrication for the purpose of discussing continued use of the affected MPCs. The following list, taken from the NRC Conversation Record (ML0935100008), identifies the information requested by the NRC. The requested information for Indian Point (IPEC) is provided immediately following the NRC requested information below:

1. **NRC Request:**

   Information that the thermal heat load for the spent fuel and internal helium conditions that had been loaded into the MPCs was bounded by the thermal and over pressure helium analyses provided by Holtec in their corrective action response to the NRC Enforcement Discretion letter dated August 6, 2009; for MPCs loaded above 21 kilowatts (kW) the NRC requested that the site provide information regarding the length of time that would elapse before the spent fuel heat load would decay below 21 kW.

   IPEC Response:

   IPEC currently has eight (five Unit 1 and three Unit 2) MPCs loaded with spent fuel in the independent spent fuel storage installation (ISFSI) that were not helium leak tested during fabrication. These casks were loaded in accordance with the requirements of Certificate of Compliance (CoC) 1014, Amendments 2 and 4. The maximum heat load for these MPCs is 14.839 kW. Accordingly, these casks are bounded by the thermal and overpressure helium analyses provided by Holtec letter to the NRC dated September 2, 2009.

2. **NRC Request:**

   Information that the site radiological monitoring programs had not detected any adverse effluent conditions associated with the use of the MPCs, and that all measured site radiological parameters were within the limits provided in 10 CFR 72.104.

   IPEC Response:

   Entergy has reviewed the results of the Annual Effluent and Waste Disposal Reports since the beginning of ISFSI storage operations in 2007. The results of this review determined that there is no discernible increase in dose to the public as the result of storage of casks that were not helium leak tested. Results contained in the Effluent and Waste Disposal Report for this period were within the limits specified in 10 CFR 72.104. Based on the use of stringent and consistent fabrication requirements, leakage from these casks is not considered credible. Accordingly, these casks are bounded by the existing analysis for compliance with 10 CFR 72.104.

3. NRC Request:

Information that the sites dispositioned the deficiency through their non-conforming and corrective action process and determined that continued use of the MPCs was found to be acceptable.

IPEC Response:

Condition Report CR-IP2-2009-2983 was initiated for the Holtec failure to perform the required helium leak test during fabrication. A prompt determination of operability was prepared and a determination made that the affected MPCs would perform their intended safety function. This determination was based on an operability review.

Attachment 4

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NRC Requested Information for:

James A. FitzPatrick

A teleconference was held by the NRC with Holtec and general licensees with loaded multi-purpose canisters (MPCs) that were not subjected to helium leak testing during fabrication for the purpose of discussing continued use of the affected MPCs. The following list, taken from the NRC Conversation Record (ML0935100008), identifies the information requested by the NRC. The requested information for James A. FitzPatrick (JAF) is provided immediately following the NRC requested information below:

1. **NRC Request:**

   Information that the thermal heat load for the spent fuel and internal helium conditions that had been loaded into the MPCs was bounded by the thermal and over pressure helium analyses provided by Holtec in their corrective action response to the NRC Enforcement Discretion letter dated August 6, 2009; for MPCs loaded above 21 kilowatts (kW) the NRC requested that the site provide information regarding the length of time that would elapse before the spent fuel heat load would decay below 21 kW.

   JAF Response:

   JAF currently has two MPCs loaded with spent fuel in the independent spent fuel storage installation (ISFSI) that were not helium leak tested during fabrication. These casks were loaded in accordance with the requirements of Certificate of Compliance (CoC) 1014, Amendment 5. The maximum heat load for these MPCs is 15.937 kW. Accordingly, these casks are bounded by the thermal and overpressure helium analyses provided by Holtec letter to the NRC dated September 2, 2009.

2. **NRC Request:**

   Information that the site radiological monitoring programs had not detected any adverse effluent conditions associated with the use of the MPCs, and that all measured site radiological parameters were within the limits provided in 10 CFR 72.104.

   JAF Response:

   Entergy has reviewed the results of the Annual Radiological Environmental Operating Reports since the beginning of ISFSI storage operations in 2002. The results of this review determined that there is no discernible increase in dose to the public as the result of storage of casks that were not helium leak tested. Results contained in the Annual Radiological Environmental Operating Report for this period were within the limits specified in 10 CFR 72.104. Based on the use of stringent and consistent fabrication requirements, leakage from these casks is not considered credible. Accordingly, these casks are bounded by the existing analysis for compliance with 10 CFR 72.104.

3. **NRC Request:**

Information that the sites dispositioned the deficiency through their non-conforming and corrective action process and determined that continued use of the MPCs was found to be acceptable.

JAF Response:

Condition Report CR-JAF-2009-002669 was initiated for the Holtec failure to perform the required helium leak test during fabrication. A prompt determination of operability was prepared and a determination made that the affected MPCs would perform their intended safety function. This determination was based on an operability review.

Attachment 5

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NRC Requested Information for:

River Bend Station

A teleconference was held by the NRC with Holtec and general licensees with loaded multi-purpose canisters (MPCs) that were not subjected to helium leak testing during fabrication for the purpose of discussing continued use of the affected MPCs. The following list, taken from the NRC Conversation Record (ML0935100008), identifies the information requested by the NRC. The requested information for River Bend Station (RBS) is provided immediately following the NRC requested information below:

1. **NRC Request:**

   Information that the thermal heat load for the spent fuel and internal helium conditions that had been loaded into the MPCs was bounded by the thermal and over pressure helium analyses provided by Holtec in their corrective action response to the NRC Enforcement Discretion letter dated August 6, 2009; for MPCs loaded above 21 kilowatts (kW) the NRC requested that the site provide information regarding the length of time that would elapse before the spent fuel heat load would decay below 21 kW.

   RBS Response:

   RBS currently has eight MPCs loaded with spent fuel in the independent spent fuel storage installation (ISFSI) that were not helium leak tested during fabrication. These casks were loaded in accordance with the requirements of Certificate of Compliance (CoC) 1014, Amendments 2 and 5. The maximum heat load for these MPCs is 18.980 kW. Accordingly, these casks are bounded by the thermal and overpressure helium analyses provided by Holtec letter to the NRC dated September 2, 2009.

2. **NRC Request:**

   Information that the site radiological monitoring programs had not detected any adverse effluent conditions associated with the use of the MPCs, and that all measured site radiological parameters were within the limits provided in 10 CFR 72.104.

   RBS Response:

   Entergy has reviewed the results of the Annual Radiological Environmental Operating Reports since the beginning of ISFSI storage operations in 2005. The results of this review determined that there is no discernible increase in dose to the public as the result of storage of casks that were not helium leak tested. Results contained in the Annual Radiological Environmental Operating Report for this period were within the limits specified in 10 CFR 72.104. Based on the use of stringent and consistent fabrication requirements, leakage from these casks is not considered credible. Accordingly, these casks are bounded by the existing analysis for compliance with 10 CFR 72.104.

3. **NRC Request:**

Information that the sites dispositioned the deficiency through their non-conforming and corrective action process and determined that continued use of the MPCs was found to be acceptable.

RBS Response:

Condition Report CR-RBS-2009-003386 was initiated for the Holtec failure to perform the required helium leak test during fabrication. A prompt determination of operability was prepared and a determination made that the affected MPCs would perform their intended safety function. This determination was based on an operability review.

Attachment 6

ENOC-10-00034

NRC Requested Information for:

Vermont Yankee

A teleconference was held by the NRC with Holtec and general licensees with loaded multi-purpose canisters (MPCs) that were not subjected to helium leak testing during fabrication for the purpose of discussing continued use of the affected MPCs. The following list, taken from the NRC Conversation Record (ML0935100008), identifies the information requested by the NRC. The requested information for Vermont Yankee (VY) is provided immediately following the NRC requested information below:

1. **NRC Request:**

   Information that the thermal heat load for the spent fuel and internal helium conditions that had been loaded into the MPCs was bounded by the thermal and over pressure helium analyses provided by Holtec in their corrective action response to the NRC Enforcement Discretion letter dated August 6, 2009; for MPCs loaded above 21 kilowatts (kW) the NRC requested that the site provide information regarding the length of time that would elapse before the spent fuel heat load would decay below 21 kW.

   VY Response:

   VY currently has five MPCs loaded with spent fuel in the independent spent fuel storage installation (ISFSI) that were not helium leak tested during fabrication. These casks were loaded in accordance with the requirements of Certificate of Compliance (CoC) 1014, Amendment 2. The maximum heat load for these MPCs is 10.231 kW. Accordingly, these casks are bounded by the thermal and overpressure helium analyses provided by Holtec letter to the NRC dated September 2, 2009.

2. **NRC Request:**

   Information that the site radiological monitoring programs had not detected any adverse effluent conditions associated with the use of the MPCs, and that all measured site radiological parameters were within the limits provided in 10 CFR 72.104.

   VY Response:

   Entergy has reviewed the results of the Annual Radiological Environmental Operating Reports since the beginning of ISFSI storage operations in 2008. The results of this review determined that there is no discernible increase in dose to the public as the result of storage of casks that were not helium leak tested. Results contained in the Annual Radiological Environmental Operating Report for this period were within the limits specified in 10 CFR 72.104. Based on the use of stringent and consistent fabrication requirements, leakage from these casks is not considered credible. Accordingly, these casks are bounded by the existing analysis for compliance with 10 CFR 72.104.

3. **NRC Request:**

Information that the sites dispositioned the deficiency through their non-conforming and corrective action process and determined that continued use of the MPCs was found to be acceptable.

VY Response:

Condition Report CR-VTY-2009-002648 was initiated for the Holtec failure to perform the required helium leak test during fabrication. A prompt determination of operability was prepared and a determination made that the affected MPCs would perform their intended safety function. This determination was based on an operability review.