



June 5, 2009

Mr. William Brach  
c/o Document Control Desk  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Subject: 10 CFR 72.48 Evaluation #762, Revision 1

Reference: HI-STORM 100 Dry Cask Storage System, USNRC Docket 72-1014

Dear Mr. Brach:

Subsequent to our letter dated March 13, 2009, Holtec International has continued its review of our historical records and technical rationale for removing the helium leak test of the MPC Enclosure Vessel's shop welds through the §72.48 evaluation #762, Revision 0. The company determined that while the safety evaluation was technically accurate, it relied on historical information from our archives and on technical justifications that were not articulated with sufficient clarity in the §72.48 evaluation document. This brevity may well lead a reader unfamiliar with the historical antecedents of the modification to conclude that a deficiency exists. To address this issue in a comprehensive manner, the following remedial action has been implemented.

A focused training of personnel engaged in preparing documentation pursuant to 10CFR72.48 has been conducted to ensure that the justification for the modification is articulate and self-contained.

The §72.48 evaluation has been revised to reinforce the justification which concluded that helium leakage testing of fully radiographed welds could be eliminated. The enhanced justification consists of five strands of logic, namely:

- a) The helium leak test conducted in 2002 on a prototypical MPC to quantify the leak rate witnessed by the Spent Fuel Project Office (SFPO), currently Spent Fuel Storage and Transportation (SFST).
- b) The results from the helium leakage test on 194 Holtec MPCs which have been performed.
- c) A complete description of how a weld performed and inspected per ASME Section III, Subsection NB ensures the leak tightness of the pressure vessel.
- d) The application of the approved NRC/SFST guidance in ISG-18, which supported the removal of the helium leakage test on the MPC lid-to-shell weld, to the MPC confinement boundary shop welds.

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- e) An analytical method to predict leakage of helium from a Holtec MPC under an extremely conservative (a plausibly counter-factual) porous media model for the MPC welds. This model indicates that the leakage rate will, even with the conservative assumptions, remain below ANSI N14.5 definition of leaktight.

The above justifications have been incorporated in the revised §72.48 evaluation. This revised §72.48 evaluation has also been used as the illustrative example in our internal training mentioned above.

Holtec continues to assert that the elimination of the helium leakage test for the shop welds does not diminish the capability of the welds and we believe that the material in Attachment 1 will dispel any residual concerns about the sufficiency of the welds and regulatory compliance. Nevertheless, we have taken immediate steps, in good faith and at our own cost, to ensure that the *shop travelers* for all MPCs placed in fabrication after June 30, 2009 will contain the provision for helium leakage testing of confinement welds made in the shop. Holtec plans to discontinue the testing only after (and if) we have a written directive from SFST that such testing can be eliminated.

Attachment 1 to this letter contains the revised §72.48 evaluation. Attachments 2 through 4 to this letter are Holtec Position Papers referenced in the revised §72.48 evaluation provided to assist the Staff in their review. All pages of these documents containing Holtec proprietary information are marked as such on the top of the page and an affidavit pursuant to 10 CFR 2.390 is provided in Attachment 5 requesting their withholding from the public.

Based on review of our manufacturing records and census of clients, approximately 120 MPCs have not had the helium leakage test and have been (or soon will be) loaded with fuel. The maximum heat load at loading for the population of MPCs without the leakage test is ~27 kW, which is ~70% of the Design Basis Heat load of 36.9 kW approved in CoC Amendment 5.

Based on the technical information compiled in Attachment 1, we submit that the margin of safety in the MPCs without the helium leakage test remains undiminished. We would appreciate SFST's confirmation of our position in this matter as soon as possible to allay the HUG membership's remaining concerns regarding this matter.



We also anticipate that SFST would concur with our safety findings documented in the revised §72.48 evaluation and officially endorse the removal of the helium leakage test from our MPC manufacturing cycle prior to its reinstatement.

Sincerely,

Tammy Morin  
Acting Licensing Manager  
Holtec International

Attachments:

- (1) 10 CFR 72.48 Evaluation # 762, Revision 1 (Proprietary)
- (2) Holtec Dry Storage Position Paper DS-329, Revision 0 (Proprietary)
- (3) Holtec Position Paper DS-213, Revision 2 (Proprietary)
- (4) Holtec Position Paper DS-328, Revision 1 (Pages 1 -12, Proprietary)
- (5) Affidavit Pursuant to 10 CFR 2.390 (Non-Proprietary)

cc: Mr. Raymond Lorson, Deputy Director, Technical Review Directorate, SFST, USNRC  
Mr. Nader Mamish, Deputy Director, Licensing & Inspection Directorate, SFST, USNRC  
Mr. Eric Benner, Branch Chief, Licensing & Inspection Directorate, SFST, USNRC  
Mr. John Goshen, Sr. Project Manager, Licensing & Inspection Directorate, SFST, USNRC  
Holtec User Group, Letter only via email  
K.P. Singh, Holtec, Letter only via email  
Excom, Holtec, Letter only via email  
Dr. Stefan Anton, Holtec, Letter only via email  
5014INT, Holtec, Letter only via email  
Mr. Rick Am, HMD (Holtec), Letter only via email  
Mr. Vaughn Curcio, HMD (Holtec), Letter only via email

**AFFIDAVIT PURSUANT TO 10 CFR 2.390**

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I, Tammy S. Morin, being duly sworn, depose and state as follows:

- (1) I have reviewed the information described in paragraph (2) which is sought to be withheld, and am authorized to apply for its withholding.
- (2) The information sought to be withheld are Holtec 72.48 evaluation and Position Papers provided in Attachments 1 through 4 to Holtec letter Document ID 5014684, which contains Holtec Proprietary information.
- (3) In making this application for withholding of proprietary information of which it is the owner, Holtec International relies upon the exemption from disclosure set forth in the Freedom of Information Act ("FOIA"), 5 USC Sec. 552(b)(4) and the Trade Secrets Act, 18 USC Sec. 1905, and NRC regulations 10CFR Part 9.17(a)(4), 2.390(a)(4), and 2.390(b)(1) for "trade secrets and commercial or financial information obtained from a person and privileged or confidential" (Exemption 4). The material for which exemption from disclosure is here sought is all "confidential commercial information", and some portions also qualify under the narrower definition of "trade secret", within the meanings assigned to those terms for purposes of FOIA Exemption 4 in, respectively, Critical Mass Energy Project v. Nuclear Regulatory Commission, 975F2d871 (DC Cir. 1992), and Public Citizen Health Research Group v. FDA, 704F2d1280 (DC Cir. 1983).

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- (4) Some examples of categories of information which fit into the definition of proprietary information are:
- a. Information that discloses a process, method, or apparatus, including supporting data and analyses, where prevention of its use by Holtec's competitors without license from Holtec International constitutes a competitive economic advantage over other companies;
  - b. Information which, if used by a competitor, would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing of a similar product.
  - c. Information which reveals cost or price information, production, capacities, budget levels, or commercial strategies of Holtec International, its customers, or its suppliers;
  - d. Information which reveals aspects of past, present, or future Holtec International customer-funded development plans and programs of potential commercial value to Holtec International;
  - e. Information which discloses patentable subject matter for which it may be desirable to obtain patent protection.

The information sought to be withheld is considered to be proprietary for the reasons set forth in paragraphs 4.a and 4.b above.

- (5) The information sought to be withheld is being submitted to the NRC in confidence. The information (including that compiled from many sources) is of a sort customarily held in confidence by Holtec International, and is in fact so held. The information sought to be withheld has, to the best of my knowledge and belief, consistently been held in confidence by Holtec International. No public disclosure has been made, and it is not available in public sources. All

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disclosures to third parties, including any required transmittals to the NRC, have been made, or must be made, pursuant to regulatory provisions or proprietary agreements which provide for maintenance of the information in confidence. Its initial designation as proprietary information, and the subsequent steps taken to prevent its unauthorized disclosure, are as set forth in paragraphs (6) and (7) following.

- (6) Initial approval of proprietary treatment of a document is made by the manager of the originating component, the person most likely to be acquainted with the value and sensitivity of the information in relation to industry knowledge. Access to such documents within Holtec International is limited on a "need to know" basis.
- (7) The procedure for approval of external release of such a document typically requires review by the staff manager, project manager, principal scientist or other equivalent authority, by the manager of the cognizant marketing function (or his designee), and by the Legal Operation, for technical content, competitive effect, and determination of the accuracy of the proprietary designation. Disclosures outside Holtec International are limited to regulatory bodies, customers, and potential customers, and their agents, suppliers, and licensees, and others with a legitimate need for the information, and then only in accordance with appropriate regulatory provisions or proprietary agreements.
- (8) The information classified as proprietary was developed and compiled by Holtec International at a significant cost to Holtec International. This information is classified as proprietary because it contains detailed descriptions of analytical approaches and methodologies not available elsewhere. This information would provide other parties, including competitors, with information from Holtec International's technical database and the results of evaluations performed by Holtec International. A substantial effort has been expended by Holtec International to develop this information. Release of this information would improve a competitor's position because it would enable Holtec's competitor to copy our technology and offer it for sale in competition with our company, causing us financial injury.

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- (9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to Holtec International's competitive position and foreclose or reduce the availability of profit-making opportunities. The information is part of Holtec International's comprehensive spent fuel storage technology base, and its commercial value extends beyond the original development cost. The value of the technology base goes beyond the extensive physical database and analytical methodology, and includes development of the expertise to determine and apply the appropriate evaluation process.

The research, development, engineering, and analytical costs comprise a substantial investment of time and money by Holtec International.

The precise value of the expertise to devise an evaluation process and apply the correct analytical methodology is difficult to quantify, but it clearly is substantial.

Holtec International's competitive advantage will be lost if its competitors are able to use the results of the Holtec International experience to normalize or verify their own process or if they are able to claim an equivalent understanding by demonstrating that they can arrive at the same or similar conclusions.

The value of this information to Holtec International would be lost if the information were disclosed to the public. Making such information available to competitors without their having been required to undertake a similar expenditure of resources would unfairly provide competitors with a windfall, and deprive Holtec International of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing these very valuable analytical tools.

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Document ID 5014684  
Non-Proprietary Attachment 5

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STATE OF NEW JERSEY     )  
  )     ss:  
COUNTY OF BURLINGTON )

Ms. Tammy S. Morin, being duly sworn, deposes and says:

That she has read the foregoing affidavit and the matters stated therein are true and correct to the best of her knowledge, information, and belief.

Executed at Marlton, New Jersey, this 5<sup>th</sup> day of June, 2009.



Tammy S. Morin  
Holtec International

Subscribed and sworn before me this 5<sup>th</sup> day of June, 2009.



MARIA C. MASSI  
NOTARY PUBLIC OF NEW JERSEY  
My Commission Expires April 25, 2010