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April 27, 2007

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

Reference: 1. USNRC Docket No. 72-1014 (HI-STORM 100)
 2. Holtec Project 5014
 3. USNRC Letter from Christopher Regan (SFST) to Evan Rosenbaum (Holtec),
 dated 24 January 2007.

Subject: License Amendment Request #6 to HI-STORM 100 CoC

Dear Sir:

Holtec International is pleased to submit our sixth request to amend the Certificate of Compliance for our HI-STORM 100 storage system (LAR 1014-6). This LAR seeks to add the HI-STORM 100U vertical ventilated module to the array of modules presently included in the HI-STORM 100 Certificate of Compliance (CoC). It is recalled that the "100U" model was removed from LAR 1014-3 to permit Holtec to incorporate a SASSI-based soil-structure interaction methodology into the application, and to make other minor changes to the Proposed FSAR as suggested in the Staff's Evaluation Report (Reference 3) on the 100U material in LAR 1014-3.

This submittal is, in essence, a re-submittal of the material on which the Staff's above-mentioned Evaluation Report (Reference 3) was written, with the following major enhancements to accommodate the observations in the Evaluation Report:

1. Additional technical data has been added to the Licensing Drawing, and the definition of critical characteristics has been broadened in line with the Staff's comments.
2. The veracity of a single VVM model with all physical and material nonlinearities to conservatively quantify the seismic response of the storage system has been confirmed by comparison with parametric runs on a multi-VVM SASSI model.
3. All thermal simulations (steady state and transient) have been upgraded to utilize a 3-D CFD model of the VVM, along with the (previously approved) 3-D model of the MPC.
4. A mandatory radiation protection perimeter around the loaded cavities has been incorporated in the Licensing Drawing.

Document ID: 5014618

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To facilitate Staff's review, an "Evaluation Report Compliance Log" is attached. Other attachments include Proposed Revised CoC and Proposed Revised FSAR pages. Proposed Revised FSAR pages include 100U material previously redacted from LAR 1014-3 (and on which the above-mentioned NRC Evaluation Report is based), with appropriate changes incorporated. Proposed Revised FSAR pages are labeled "Rev. 4.A" (the latest FSAR, Rev. 4, was transmitted to the Staff on 10 April 2006).

Finally, to enable an uninterrupted review effort by the staff, the thermal, structural and shielding Calculation Packages and supporting computer data files are being provided, along with a request for withholding of these proprietary documents pursuant to 10 CFR 2.390. This material is provided purely for reference purposes; it is not deemed to be an essential reference unless the Staff's review effort expands to independent analysis.

It must be noted that while the majority of the information presented in this LAR package (i.e., this letter with all attachments) is independent of other Holtec licensing actions, there are some instances where this is not the case for two reasons:

1. The HI-STORM 100U was initially part of our earlier LAR 1014-3, and uses some parameters (i.e., decay heats and radiation source terms.) consistent with that LAR rather than consistent with HI-STORM FSAR Rev. 4.
2. The SFST Staff had indicated a desire to use as much of the above-mentioned NRC Evaluation Report as possible, which precluded "rolling back" the LAR 1014-3 parameters to the HI-STORM FSAR Rev. 4 values.

Specific areas of this LAR package affected in this way are the thermal analysis, the radiation shielding analysis, and the Technical Specifications and Bases. We understand that the review and approval of this LAR package are, therefore, dependent on LAR 1014-3 and cannot be completed before the completion of LAR 1014-3.

We look forward to an expeditious regulatory action on this submittal, whose certification is eagerly awaited by certain users for whom the underground storage technology holds great technical and operational appeal.

The following attachments are provided in electronic format (CD-ROM and/or DVD-ROM).



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Attachment 1: Evaluation Report Compliance Log

Attachment 2: Proposed Revised CoC in Markup Format – Deletions are shown in strikeouts. Insertions are marked by vertical bars in the right margin.

Attachment 3: Proposed Revised FSAR – Revised pages are notated as Rev. 4.A in the footer. Areas of new or modified text are marked by vertical bars in the report margins.

Attachment 4: Affidavit Pursuant to 10CFR2.390 – Affidavit requesting that appropriately marked Holtec Proprietary information in Attachments 6 and 8 be withheld from public disclosure. This attachment has been provided in hardcopy format as well as in electronic format.

Attachment 5: Pursuant to 10CFR2.390 – Affidavit requesting that appropriately marked ICEC Proprietary information in Attachments 7 and 8 be withheld from public disclosure. This attachment has been provided in hardcopy format as well as in electronic format.

Attachment 6: Holtec Calculation Packages HI-2043168 rev. 4 (thermal), HI-2043272 rev. 2 (shielding), and HI-2053389 rev. 3 (structural) – Withholding from public disclosure of this attachment is requested (see Attachment 4).

Attachment 7: ICEC Calculation Package 1160-01 rev. 1 – Withholding from public disclosure of this attachment is requested (see Attachment 5).

Attachment 8: New and Revised Computer Data Files for Documents in Attachments 6 and 7 – Withholding from public disclosure of this attachment is requested (see Attachments 4 and 5).

Please contact us if you have any questions.

Sincerely,

Evan Rosenbaum, P.E.
Project Manager, LAR 1014-6

Approved:

Stefan Anton, Dr.-Ing.
Licensing Manager

cc: Mr. Christopher Regan, NRC

AFFIDAVIT PURSUANT TO 10 CFR 2.390

I, Evan Rosenbaum, being duly sworn, depose and state as follows:

- (1) I am the Holtec International Project Manager for LAR 1014-6 and 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 is Attachments 6 and 8 to Holtec letter Document ID 5014618, containing 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.

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I, Dr. Wen S. Tseng, being duly sworn, depose and state as follows:

- (1) I am the President of International Civil Engineering and Consultants Inc. (ICEC) and 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 is ICEC Calculation 1160-01, containing ICEC Proprietary information.
- (3) In making this application for withholding of proprietary information of which it is the owner, ICEC 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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 - 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 ICEC, its customers, or its suppliers;
 - d. Information which reveals aspects of past, present, or future ICEC customer-funded development plans and programs of potential commercial value to ICEC;
 - 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 ICEC, 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 ICEC. No public disclosure has been made, and it is not available in public sources. All disclosures to third parties, including any required transmittals to the NRC, have been made, or must be

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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 ICEC 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 ICEC 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 ICEC at a significant cost to ICEC. 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 ICEC's technical database and the results of evaluations performed by ICEC. A substantial effort has been expended by ICEC to develop this information. Release of this information would improve a competitor's position because it would enable ICEC's competitor to copy our technology and offer it for sale in competition with our company, causing us financial injury.

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

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.

ICEC's competitive advantage will be lost if its competitors are able to use the results of the ICEC 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 ICEC 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 ICEC of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing these very valuable analytical tools.

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STATE OF CALIFORNIA)
)
COUNTY OF ALAMEDA) ss:

Dr. Wen S. Tseng, being duly sworn, deposes and says:

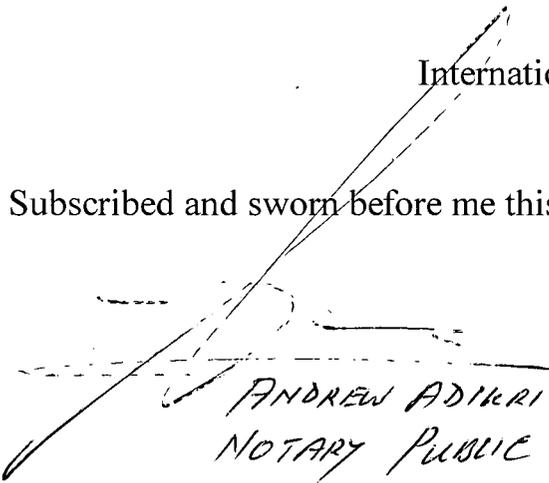
That he has read the foregoing affidavit and the matters stated therein are true and correct to the best of his knowledge, information, and belief.

Executed at Berkely, California, this 23rd day of April, 2007.



Dr. Wen S. Tseng
International Civil Engineering Consultants, Inc. (ICEC)

Subscribed and sworn before me this 23rd day of APRIL, 2007.



ANDREW ADIKRI BAPI.
NOTARY PUBLIC

