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

72-1014

March 30, 2010

**Subject:** Response to First Request for Additional Information to License Amendment  
Request No. 8 to Holtec International HI-STORM 100 Certificate of Compliance  
No. 1014 (TAC NO. L24398)

**References:**

- [1] Holtec Letter 5014692 dated November 24, 2009
- [2] NRC Letter (Goshen) to Holtec (Morin), dated March 24, 2010

Dear Mr. Goshen:

By letter dated November 24, 2009 [1], Holtec submitted a license amendment request (LAR) to amend the HI-STORM 100 certificate to add a new MPC model called the MPC-68M. By letter dated March 25, 2010 [2], the NRC provided a first request for additional information on the LAR. This letter provides the response to the request for additional information on LAR 1014-8.

RAI No. 1 requested Holtec submit criticality calculation package HI-2012771, Revision 15, Appendix X and Appendix Y. A hardcopy of the appendices are provided in Enclosure 1 to this letter. Additionally, an electronic copy of the appendices is provided on the enclosed hard drive as indicated in Attachment 1.

RAI No. 2 requested Holtec submit thermal calculation package HI-2043317, Revision 8, Appendix K. A hardcopy of the appendix is provided in Enclosure 2 to this letter. Additionally, an electronic copy of the appendix is provided on the enclosed hard drive as indicated in Attachment 1.

RAI No. 3 requested Holtec submit thermal calculation package HI-2012787, Revision 12, Supplement 54. A hardcopy of the supplement is provided in Enclosure 3 to this letter. Additionally, an electronic copy of the supplement is provided on the enclosed hard drive as indicated in Attachment 1.

RAI No. 4 requested Holtec submit the applicable computer input and analysis files identified in the calculation packages requested in RAI Nos. 1, 2, and 3. These files are provided on the enclosed hard drive in Enclosure 4. Attachment 1 to this letter provides a listing of the files on the hard drive. Enclosure 4 (hard drive) will only be sent in the package sent to the Spent Fuel Storage and Transportation office and not in the package to the USNRC Document Control Desk.

NMSSDI



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Attachment 2 to this letter is an affidavit prepared in accordance with 10 CFR 2.390 requesting that the calculation packages and computer files transmitted with this letter to be withheld from public disclosure due to their proprietary nature.

We hope our rapid response to your request results in a timely restart of the review process. Please do not hesitate to contact us if you require anything further.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Morin".

Ms. Tammy S. Morin  
Licensing Manager  
Holtec Technical Services  
Holtec International

cc: Mr. Eric Benner, USNRC  
Mr. Douglas Weaver, USNRC  
Holtec Group 1

Non-Proprietary Attachment 1

Holtec Letter.5014699

The following files are on the hard drive in Enclosure 4 to Holtec letter 5014699.

The Hard Drive can be identified by the following:

Manufacturer: Seagate

Total Storage Capacity: 250 GB

PN: 9KW2A4-500

SN: 2GE21KGA

The hard drive has the following subdirectories:

\\Criticality\

RAI 1\

RAI 4\

\\Thermal\

RAI 2\

RAI 4\

\\Stuctural\

RAI 3\

RAI 4\

All of the files on the hard drive are identified in the tables below.

<b>Subdirectory: \\criticality\RAI 1\</b>		
<b>File Name</b>	<b>File Type</b>	<b>Size (kB)</b>
HI-2012771R15 Appendix X and Y	Adobe pdf	473

<b>Subdirectory: \\criticality\RAI 4\</b>		
<b>File Name</b>	<b>File Type</b>	<b>Size (kB)</b>
3rl5ic3	Input	18
3rl5ic3o	Output	237
3rl5ic4	Input	18
3rl5ic4o	Output	237
3rn5ic4	Input	18
3rn5ic4o	Output	243
3rn5ic6	Input	18
3rn5ic6o	Output	237
80a5c31	Input	14
80a5c31o	Output	193
80a5c32	Input	14
80a5c32o	Output	193
80a5c33	Input	14
80a5c33o	Output	193
80a5c34	Input	14
80a5c34o	Output	193
80a8d11	Input	13
80a8d11o	Output	198
80a8d12	Input	13

<b>Subdirectory: \\criticality\RAI 4\</b>		
<b>File Name</b>	<b>File Type</b>	<b>Size (kB)</b>
80a8d12o	Output	219
80a8d13	Input	13
80a8d13o	Output	267
80a8d14	Input	13
80a8d14o	Output	191
80a8d15	Input	13
80a8d15o	Output	190
80a8e02	Input	13
80a8e02o	Output	210
80a8e03	Input	14
80a8e03o	Output	196
80a8e06	Input	14
80a8e06o	Output	195
80a8e08	Input	14
80a8e08o	Output	196
80a8e09	Input	14
80a8e09o	Output	196
80a8e10	Input	14
80a8e10o	Output	195
80a8e11	Input	14
80a8e11o	Output	196
80a8e12	Input	14
80a8e12o	Output	196
80a8e13	Input	14
80a8e13o	Output	196
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80a8e14o	Output	196
80a8e16	Input	14
80a8e16o	Output	196
80a8e17	Input	14
80a8e17o	Output	197
80a8k03	Input	14
80a8k03o	Output	194
80a8k06	Input	14
80a8k06o	Output	194
80a8k08	Input	14
80a8k08o	Output	195
80a8k09	Input	14
80a8k09o	Output	195
80a8k10	Input	14
80a8k10o	Output	194
80a8k11	Input	14
80a8k11o	Output	195

<b>Subdirectory: \\criticality\RAI 4\</b>		
<b>File Name</b>	<b>File Type</b>	<b>Size (kB)</b>
80a8k12	Input	14
80a8k12o	Output	195
80a8k13	Input	14
80a8k13o	Output	195
80a8k14	Input	14
80a8k14o	Output	194
80a8k16	Input	14
80a8k16o	Output	195
80a8k17	Input	14
80a8k17o	Output	195
80b8a00	Input	13
80b8a00o	Output	189
80c8a00	Input	16
80c8a00o	Output	208
80f6n11	Input	14
80f6n11o	Output	195
80f7a00	Input	13
80f7a00o	Output	188
80g4n03	Input	18
80g4n03o	Output	215
80g4n06	Input	18
80g4n06o	Output	215
80g4n08	Input	18
80g4n08o	Output	215
80g4n09	Input	18
80g4n09o	Output	215
80g4n10	Input	18
80g4n10o	Output	215
80g4n11	Input	18
80g4n11o	Output	216
80g4n12	Input	18
80g4n12o	Output	216
80g4n13	Input	18
80g4n13o	Output	216
80g4n14	Input	18
80g4n14o	Output	216
80g4n16	Input	18
80g4n16o	Output	215
80g4n17	Input	18
80g4n17o	Output	216
80g6a00	Input	16
80g6a00o	Output	209
87b8a00	Input	12

<b>Subdirectory: \\criticality\RAI 4\</b>		
<b>File Name</b>	<b>File Type</b>	<b>Size (kB)</b>
87b8a00o	Output	187
88b8a00	Input	12
88b8a00o	Output	188
88c8a00	Input	12
88c8a00o	Output	188
88d8a00	Input	12
88d8a00o	Output	188
88e8a00	Input	12
88e8a00o	Output	188
88f4n11	Input	15
88f4n11o	Output	200
88f9a00	Input	13
88f9a00o	Output	192
89a8a00	Input	13
89a8a00o	Output	188
89b8a00	Input	13
89b8a00o	Output	189
89c8a00	Input	12
89c8a00o	Output	187
89d8a00	Input	12
89d8a00o	Output	187
89e4n11	Input	14
89e4n11o	Output	195
89e9a00	Input	13
89e9a00o	Output	189
89g8a00	Input	13
89g8a00o	Output	189
h0a8a0a	Input	13
h0a8a0ao	Output	187

<b>Subdirectory: \\thermal\RAI 2\</b>		
<b>File Name</b>	<b>File Type</b>	<b>Size (kB)</b>
HI-2043317R8 - Appendix K	Adobe pdf	536

<b>Subdirectory: \\thermal\RAI 4\</b>		
<b>File Name</b>	<b>File Type</b>	<b>Size (kB)</b>
historm68-met	DBS file	632720
historm68-met.msh	MSH file	446016
3d68-met.cas	CAS file	253998
3d68-met.dat	DAT file	4591243
Udfmpc68.c	C file	3
3d68-met-adb-115279	DAT file	4815262
3d68-met-adb.cas	CAS file	253999

Non-Proprietary Attachment 1  
 Holtec Letter 5014699

<b>Subdirectory: \\thermal\RAI 4\</b>		
<b>File Name</b>	<b>File Type</b>	<b>Size (kB)</b>
mpc68m-hitrac	DBS file	596020
mpc68m-hitrac	MSH file	370970
mpc68m-hitrac	CAS file	216116
mpc68m-hitrac	DAT file	4025990
mpc68m-vacdry	DBS file	430872
mpc68m-vacdry	MSH file	278742
mpc68m-vacdry-29kw	CAS file	169038
mpc68m-vacdry-29kw	DAT file	3402422
mpc68m-vacdry-36.9kw	CAS file	169037
mpc68m-vacdry-36.9kw	DAT file	3402379
udfmpc68	C file	3
udfmpc68-29kW	C file	4
mpc_pres_mpc68m	Excel File	21
thermal-exp	Excel File	22
k-gap-mpc68m	Excel File	20
Free_vol_mpc68m	Excel File	15

<b>Subdirectory: \\structural\RAI 3\</b>		
<b>File Name</b>	<b>File Type</b>	<b>Size (kB)</b>
HI-2012787R12 - Supplement 54	Adobe pdf	417

<b>Subdirectory: \\structural\RAI 4\</b>		
<b>File Name</b>	<b>File Type</b>	<b>Size (kB)</b>
00BSKT68M.inp	INP file	7
00BSKT68M-Shim.inp	INP file	3
00BSKT68M-Side0-ExplicitFuel-Plastic.inp	INP file	11
00PeakPanelDeflection.inp	INP file	4
68M.cdb	CDB file	17738
68MSide	LST file	2698
68MSide.rdb	RDB file	154368
68MSide.rst	RST file	335552
68MSide-Disp	PNG file	57
68MSide-FEM	PNG file	75
68MSide-FEM1	PNG file	36
68MSide-FEM2	PNG file	56
68MSide-Strain	PNG file	32
68MSide-Stress	PNG file	46
68MSide-Stress in Shims	PNG file	26
Modeling Sketch	Adobe PDF	150
peakPanelDeflection	Text Document	1
Shim-68M.cdb	CDB file	1422
Titles	Text Document	1

**AFFIDAVIT PURSUANT TO 10 CFR 2.390**

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I, Tammy S. Mørin, 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 is information provided in Enclosure 1 through 4 to Holtec letter Document ID 5014699. These enclosures contain 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 disclosures to third parties, including any required transmittals to the NRC, have

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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.

