



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001**

March 18, 2020

Dr. K. P. Singh  
President and CEO  
Holtec International  
Krishna P. Singh Technology Campus  
1 Holtec Boulevard  
Camden, NJ 08104

**SUBJECT: STAFF REVIEW OF HOLTEC INTERNATIONAL RESPONSE TO THE U.S. NUCLEAR REGULATORY COMMISSION FOLLOW-UP INSPECTION REPORT NUMBER 07201014/2019-201, AND NOTICE OF VIOLATION**

Dear Dr. Singh:

This letter refers to the U.S. Nuclear Regulatory Commission's (NRC's) in-office review of your response to a Notice of Violation (NOV) (NRC's Agencywide Documents Access and Management System [ADAMS] Accession No. ML19242B835). The NOV was issued for failure to conduct an adequate evaluation in accordance with 10 CFR 72.48 prior to making proposed design changes (ADAMS Accession No. ML19228A016).

On August 28, 2019, you responded to the NOV. The NRC has found your response inadequate, in that, the corrective actions you took in response to the violation, your analysis that serves as part of the basis for your 72.48 evaluation, did not fully address the violation.

The Holtec analysis that was the subject of the violation assessed a different minimum Multi-Purpose Canister (MPC) wall thickness (0.216") than what is specified in the Final Safety Analysis Report (FSAR), as updated. The NRC determined that the American Society of Mechanical Engineers (ASME) Code equations (NB-3324) used by Holtec as a basis to establish minimum wall thickness are not suitable because the equations are based on design pressure alone. In addition, your analysis did not include design-basis normal, off normal, and accident condition loads in calculating the minimum wall thickness as required by the HI-STORM UMAX, Certificate of Compliance No. 1040, Appendix B, Section 3.3. Further, the ASME Code itself states that the formulas are given as an aid to the designer for determining a tentative thickness and are not to be construed as a formula for acceptable thicknesses. Therefore, the NRC determined that your response failed to demonstrate the technical basis (e.g., or i.e., design methodology, testing or inspection design methodology) to allow a different minimum wall thickness on a generic basis.

The NRC notes that the analysis Holtec completed as a result of the violation is theoretical for generic applicability. Additionally, the NRC has evaluated and considers existing installed MPC's can continue to perform the intended safety function and are not impacted. However, allowing the MPC to scratch, or suffer mechanical wear up to a wall thickness of 0.216", presents a potential impact to the surface of the MPC and affects the confinement design

function as specified in the Holtec Certificate of Compliance 072-01040, Appendix B Technical Specifications, Section 3.3 to meet ASME Section III acceptance limits.

The NRC requests that you clarify your response to the NRC Follow-Up Inspection Report No. 07201014/2019-201 and NOV (ADAMS Accession Nos. ML19228A016 and ML19242B835, respectively). The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.390 "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice", a copy of this letter, its enclosure(s), and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agency wide Documents Access and Management System, accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request that such material is withheld from public disclosure, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21 "Protection of Safeguards Information: Performance Requirements."

Please contact Mr. Earl C. Love at (301) 415-7011, or via electronic mail at [earl.love@nrc.gov](mailto:earl.love@nrc.gov), if you have any questions or need assistance regarding this matter.

Sincerely,

*/RA/*

Alayna Pearson, Acting Chief  
Inspections, and Operations Branch  
Division of Fuel Management  
Office of Nuclear Material Safety  
and Safeguards

Docket Nos. 72-1014, 72-1040,  
and 72-1032

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DOCUMENT DATED: March 18, 2020

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**ADAMS Accession No.: ML19330F234**

**\*via email**

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