Applicant's Environmental Report Associated with Request for Exemption from Holtec Certificate of Compliance 72-1014

Pursuant to 10 CFR 51.60, an environmental report is needed to support the exemption request submitted in Reference [1]. The required environmental report is provided below.

Purpose of Environmental Report

The purpose of this assessment is to evaluate the environmental impacts of the proposed exemption request as required by 10 CFR 51.60(b)(1)(iii) with information outlined in 10 CFR 51.45. The information contained in this assessment is intended to aid the NRC staff in performing an environmental assessment.

Environmental Impacts of the Proposed Action

The Certificate of Compliance (CoC) for the Holtec International HI-STORM 100 Storage System, Appendix B, Section 3.3 states that the governing code for HI-STORM System MPCs, overpacks, and transfer casks is the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) 1995 Edition with Addenda through 1997, with exceptions as noted in the same section. As stated in Reference [1], Holtec requested an exemption to allow the use of the ASME Code, 2007 and 2010 Editions, specifically for Section II Material SA-516/516M. The 2007 and 2010 editions of the ASME Code allow for slightly increased manganese content with an associated marginal reduction in carbon content.

As described in the exemption request, the change is essentially the adoption of an equivalent ASME Code material specification. Since the change in the material specification does not adversely impact the characteristics of the material, the safety analyses or evaluations for the HI-STORM 100 System for normal, off-normal and accident conditions are not adversely impacted, and no changes to these analyses and evaluations are required. Moreover, no technical changes are required to existing safety analysis or safety evaluations. Additionally, since the revised material composition is endorsed by the ASME code, the high level of confidence in the quality and safety of the material as it applies to high pressure vessel applications remains unchanged. There is no risk to public health and safety from the use of the updated material specification.

Based on the above, the HI-STORM 100 system design functions impacting interaction with the environment are unchanged by the minor change in manganese content. Holtec concludes that there are no gaseous, liquid, or solid effluents (radiological or non-radiological), or radiological exposures (worker or member of the public) associated with the proposed action. The potential for land disturbances is not applicable to the proposed action, as it relates to a generic license. Therefore, approval of the requested exemption for the use of ASME 2007/2010 code material has no impact on the environment.

Adverse Environmental Effects Which Cannot be Avoided Should the Exemption be Approved

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As noted previously, there are no environmental impacts associated with approval of this exemption. Therefore, there are no adverse environmental effects which cannot be avoided should the exemption request be approved.

Alternative to the Proposed Action

An alternative to the proposed exemption would be to continue to use ASME Code material from the 1995 Edition with Addenda through 1997, as currently allowed by the Certificate of Compliance. This alternative causes increased difficulties and costs in procurement and manufacturing, without any added safety benefit, as described in the exemption request.

Environmental Impacts of the Alternatives to the Proposed Action

The alternative to the proposed action is to maintain the requirement for use of the ASME Code 1995 with Addenda through 1997. There are no environmental impacts of this alternative, as this alternative represents the same material currently approved for use.

Analysis

Holtec International's request for exemption from 10 CFR 72.212(a)(2) and 10 CFR 72.214 has no adverse impact to the environment. Approval of the exemption request would allow for the use of a material composition considered equivalent by the ASME Code without a reduction in the level of quality and safety. The alternative to the proposed exemption would result in considerable costs, and provides no improvement in environmental or radiological effects.

As a result of this environmental assessment, Holtec concludes that the proposed action, allowing for the use of the ASME Code 2007/2010 edition for material SA-516/516M in the HI-STORM 100 system, is in the public interest, because it avoids the financial effects associated with the alternative to the proposed action, with no change to the environmental or radiological effects.

References

[1] Holtec Exemption Request for Use of ASME 2007/2010, Attachment 1 to Holtec Letter 5014780, ADAMS No: ML14352A384

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