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HI-STORE CIS Facility Fire Protection Plan

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**Proprietary Classification**

This is a non-proprietary version of a proprietary report.

Export Control Status

Not applicable.

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REVISION LOG

Revision	Revision Changes
0	Initial issue.
1	Removed references to GTCC and reactor internals which are not currently approved contents for HI-STORE. Made updates throughout to refer to the NFPA code requirements more generally. Revised Section 6 to change “should” statements to “shall” statements. Revised Section 7.1 for additional detail on permanent fire loads with regards to diesel tanks. Revised Section 7.3 to add more specific requirements for audits and qualifications for the personnel performing those audits. Updated Section 8.0 for consistency with latest HI-STORE Emergency Response Plan.

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10.0	APPENDICES	Withheld.

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1.0 INTRODUCTION

Holtec International (Holtec) is currently seeking a Nuclear Materials License from the Nuclear Regulatory Commission (NRC) requesting authorization to construct and operate a Central Interim Storage (CIS) Facility (HI-STORE) to store 500 sealed canisters containing spent fuel from commercial US nuclear power plants. This CIS Facility would remain in operation until such time that the Department of Energy is prepared to accept Spent Nuclear Fuel (SNF) from commercial nuclear plant licensees. When the requested CIS Facility license is issued by the NRC, Holtec subsequently anticipates requesting an amendment to the license to request authorization to possess and store an additional 500 canisters for each of 19 subsequent expansion phases to be completed over the course of years. Ultimately, Holtec anticipates that approximately 10,000 SNF canisters would be stored at the CIS Facility upon completion of all 20 phases.

This document is the Fire Protection Plan for the HI-STORE facility. It describes design features, personnel, equipment, and procedures that provide means for the prevention, detection, containment, and suppression of fires within the facility.

2.0 REGULATORY COMPLIANCE

This Fire Protection Plan was developed to comply with 72.122(c) [3.1] with guidance from NUREG-1567 [3.2] to describe the proposed plan to ensure that a fire in the HI-STORE CIS Facility will not significantly increase the risk of radioactive releases to the environment.

3.0 REFERENCES

- 3.1 10 CFR 72.122, Overall Requirements.
- 3.2 NUREG-1567, Standard Review Plan for Spent Fuel Dry Storage Facilities.
- 3.3 Holtec International Report HI-2115090, Final Safety Analysis Report on the HI-STORM UMAX Canister Storage System, Revision 2, July 11, 2014.
- 3.4 Deleted.
- 3.5 Holtec International Report HI-2177535, HI-STORE Emergency Response Plan.
- 3.6 Holtec International Report HI-2177562, HI-STORE Training and Qualification Program.
- 3.7 OSHA Regulations, 29 CFR Part 1920, Procedure for Variations from Safety and Health Regulations under the Longshoremen's and Harbor Workers' Compensation Act.

4.0 DEFINITIONS

- 4.1 Agency: Any organization that acts in the place of a government and by its authority (e.g., the Federal Emergency Management Agency is an agency of the Federal Government).
- 4.2 Alert: An Alert is an emergency class within the Operational emergency. An Alert represents events in progress or having occurred which involve an actual or potential reduction for the level of Facility safety and protection. Any environmental release of

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hazardous materials is expected to be limited to small fractions of the appropriate PAG or ERPG at the Facility.

- 4.3 Corrective Actions: Corrective Actions are measures taken to terminate or mitigate the consequence of an emergency at or near the source of the emergency.
- 4.4 Emergency: An emergency is the most serious event and consists of any unwanted operational, civil, natural-phenomenon, or security occurrence that could endanger or adversely affect people, property, or the environment.
- 4.5 Emergency Action Level: Specific, predetermined, observable criteria used to detect, recognize, and determine the emergency class of Operational emergencies. An EAL can be an instrument reading, an equipment status indicator, a measurable parameter for Facility or off-sitemap discrete, observable event, or results of analysis.
- 4.6 NFPA: The National Fire Protection Association produces and publishes a large set of consensus standards and other guidance documents collectively referred to as “National Fire Codes.” The codes are recognized guidance on fire-related issues and are frequently adopted in whole or in part by regulators, municipalities, insurers, and facility owners as a means of establishing minimum levels of fire protection performance, design, and practice.

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