ISFSI Pad Design Issues

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Part 72 Regulations

Originally stated, "cask storage pads and areas have been designed to adequately support the static load of the stored casks" (10CFR72.212(b)(2)(ii))

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HI-STORM CoC/SER under Amendment 1 in 2002

Some history:

The ISFSI pads for free-standing casks were considered Not Important to Safety (NITS).

These requirements have not changed in subsequent amendment versions.

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HI-STORM CoC/SER under Amendment 2 in 2005

- **Statements added about using acceleration time histories**
- **Recognition of soil/structure interaction effects**
- **Requirements have not changed in subsequent amendment versions.**

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NUREG/CR-6865

- **Sandia National Laboratories was contracted by NRC to investigate the seismic behavior of dry cask storage systems (DCSS) containing spent fuel.**

- **Results of this research effort were expected to aid the NRC staff in performing the safety review of licensing applications of DCSSs**

- **To date there has been no issuance of a formal guidance document**

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NRC ISFSI PAD Inspections

NRC Inspectors questioned whether the ISFSI pads should be classified as Important to Safety

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Early Holtec ISFSI Pad Designs

2000 - 2004 timeframe

Computer codes utilized

NRC inspection

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Recent Pad Inspection Results

Methodologies questioned by NRC Inspectors

- **Use of computer code**
- **Use of NUREG**

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Use of Different Computer Codes

DYNAMO

LS-DYNA

SASSI / ANSYS

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Path Forward & Success Criteria

- **Discussions with key NRC technical experts**

- **Acceptable methodology for ISFSI pad analyses**

- **Holtec proposed methodology formally accepted   (Topical Report)**

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