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Use with LWP-18001

INL USQ PROCESS
REASONABILITY DETERMINATION/POTENTIAL INADEQUACY IN THE SAFETY ANALYSIS (PISA) FORM
(DO NOT USE FOR PROPOSED CHANGES)

Facility or Activity: Advanced Test Reactor

USQ Process No.: ATR Complex-USQ-2009-389

Subject: Cask Drop onto Equipment Hatch Cover West of ATR Storage Canal

Describe the New Information/Discovery:

Although heavy load cask drop accident analyses have been performed for the ATR storage canal area, a specific analysis for heavy load drops has not been found for drops onto the metal equipment hatch cover west of the storage canal. Damage caused by a heavy load drop onto the hatch cover may exceed the consequences of the ATR safety basis analyses.

Identify the applicable safety basis document(s) (e. g., DSA, SAR, BIO, TSRs, etc.):

SAR-153 Upgraded Final Safety Analysis Report for the Advanced Test Reactor

I. REASONABILITY DETERMINATION (Reasonability determinations made as part of the ATR Design Basis Reconstitution effort may be documented per SP-10.2.4.9)

Is it reasonable that the potential for an inadequate safety analysis exists based on the new information or discovery described above? ☐ Yes ☒ No

If "Yes," proceed to Sections II, III, and IV.
If "No," provide an explanation and basis for the reasonability determination.

SAR-153 section 15.8.10 discusses the consequence of heavy load drops north of the ATR storage canal. Section 15.8.10 states: a) "it must be assumed that the dropped cask will fail the floor [north of the canal wall] and fall into the basement below the handling area." and b) "Cask lifts west of building grid 7.5 are limited to 3 ft. above the floor to protect the canal west end support structure." This 3-ft limit is based on an analysis on a 30-ton cask drop onto the canal wall. The hatch cover may or may not transfer the impact energy from a cask drop to the canal wall. If the impact energy is not transferred to the canal wall and the cask falls in the basement, the SAR analysis (referenced in statement a) above) for a drop onto the canal area floor north of the canal will be enveloping. If, on the other hand, the impact energy is transferred to the canal wall, the SAR analysis (reference in statement b) above) also will be enveloping.

J C Chapman USQ Evaluator Print/Type Name	USQ Evaluator Signature	18 May 2009 Date
E J Schuebert Nuclear Facility Manager Print/Type Name	Nuclear Facility Manager Signature	5/18/09 Date

If the answer to the question above is "No," file the completed form. Do not complete Section II, III, or IV.

If the answer to the question above is "Yes," complete Section II, III, and IV.

II. PISA DECLARATION

What is the basis for concern that the safety basis may not be bounding or may be otherwise inadequate? Provide an explanation.

A PISA exists. Complete the following actions