Springs, Chanel

From: Bartlett, Matthew
Sent: Thursday, July 14, 2011 7:35 AM
To: John Miller; thomasjh@comcast.net; Faraz, Yawar; Marble, Julie; John Stamatkos
Cc: Guardiola, Maria; Hiltz, Thomas
Subject: 07-01-11 Final Meeting Summary of Discussions with International Isotopes Inc. on Seismic, Integrated Safety Analysis, and Human Factors

Meeting Summary of Discussions with International Isotopes Inc. on Seismic, Integrated Safety Analysis, and Human Factors 07-01-11

Attendees:

NRC
INIS
John Stamatakos-NRC contractor
John Miller-INIS
Yawar Faraz-NRC
Jim Thomas-INIS
Matthew Bartlett-NRC
Tommy Thompson-INIS
Maria Guardiola-NRC
Mike Davis-INIS
Dennis Morey-NRC
Tom Hiltz-NRC
Sean Peters-NRC
Julie Marble-NRC
Doug Coe-NRC

ISA Discussion

The integrated safety analysis (ISA) discussion focused on the need for some buildings at the International Isotopes Inc. (INIS) proposed facility to be declared Items Relied on for Safety (IROFS). INIS expressed concern that these buildings could be considered sole IROFS subject to QL1 QA requirements in accordance with the QA Plan. According to INIS, it would be inappropriate to apply QL1 requirements to such building structures.

INIS indicated that it could resolve the sole IROFS issue for seismic induced building failures which only result in high or intermediate consequences to a worker, by identifying IROFS in addition to the structural portions of the building being

relied upon for safety. These may include seismic monitors and alarms in conjunction with a worker's trained response such as timely evacuation of the building. However, for seismic induced building failures which result in high or intermediate consequences to a member of the public, the structural portions of the building being relied upon for safety would be the only IROFS that could appropriately be applied. The NRC staff agreed that this approach would be consistent with the regulations. The NRC staff added that INIS would need to demonstrate the appropriateness of the availability and reliability of the IROFS consisting of the seismic monitoring and alarming feature in conjunction with worker response.

According to INIS, QA applied to certain structural IROFS, such as portions of buildings relied on for safety, would be different from QA applied to all other IROFS. As such, INIS inquired about the idea of developing a separate QA plan to address such structural IROFS. In addition, INIS inquired if the NRC would approve use of such a QA Plan as an IROFS. The NRC staff responded that QA Plan implementation is considered a management measure, and as such, cannot be considered an IROFS. Both the NRC and INIS agreed that additional discussions on this topic may be useful.

Seismic

The seismic reviewer received clarification that certain buildings designated as IROFS will be designed as PC-3 structures in accordance with DOE standard 1020-2002, such that they will retain their safety functions even in the event of the 10,000 year return period seismic event. This approach will be relied on by IIFP to meet the highly unlikely performance objectives in 10 CFR Part 70. These buildings will have a dedicated graded QA program based on nuclear grade codes and standards. In addition, some buildings may need to be declared as IROFS in order to meet the unlikely performance objectives in 10 CFR Part 70. These buildings will be built to withstanding the 2500 year return seismic

event, per the IBC codes, but do not need a dedicated QA with nuclear grade codes and standards. INIS also clarified that they do not intend to conduct a site specific seismic evaluation as suggested in their RAI response, other than to do a site specific geotechnical study to characterize the soils and to complete the seismic site response modeling.

Human Factors
NRC staff emphasized that INIS needs to incorporate the Human Factors Engineering Implementation Plan (HFE-IP) into the License Application, not in the ISA Summary. INIS questioned the level of detail being requested for this type of Part 40 facility, considering the limited radiological hazards. The scope of the review is limited to IROFS which involve some human actions. A detailed description of the design is not required in the HFE-IP, but rather a description of the methodology used to achieve the intent of the guidance. The NRC staff stated that commitments to standards, or portions of standards could provide the needed methodology to demonstrate compliance with the acceptance criteria. The NRC staff stated that the guidance in NUREG-1520 calls for incorporation of a human factors expert into their design team early in the design process and indicated that NUREG-0711 Appendix E calls out guidance for levels of expertise. The technical reviewer will put together a second round of RAIs. Additional discussions will be scheduled to ensure the RAIs are well understood.

Sincerely,

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