



CONVERSATION RECORD

12/10/2018

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU See below.		DATE OF CONTACT 11/28/2018	TYPE OF CONVERSATION <input type="checkbox"/> E-MAIL <input checked="" type="checkbox"/> TELEPHONE <input type="checkbox"/> INCOMING <input checked="" type="checkbox"/> OUTGOING
E-MAIL ADDRESS		TELEPHONE NUMBER (888) 447-9153	

ORGANIZATION Croft Associates	DOCKET NUMBER(S) 71-9338
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LICENSE NUMBER(S)	CONTROL NUMBER(S)
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SUBJECT
Additional Information Request Teleconference

SUMMARY
NRC participants: Chris Allen, John McKirgan, Jorge Solis, Chris Bajwa, Veronica Wilson, Michel Call and Tae Ahn
Croft participants: Alex Ferguson and Robert Vaughn
Los Alamos National Laboratory: Eva Birnbaum and Kevin John
Brookhaven National Laboratory: Dimitri Medvedev

The phone call between NRC staff and Croft Associates Limited to discuss a request for additional information (ML18341A029) commenced at approximately 10 A.M. eastern standard time. There was no discussion of the information requests associated with the general information review, the thermal review and the operations review because Croft believed the questions were both straightforward and clearly articulated. In addressing the first materials review questions, Croft planned to add an explanation regarding the pyrophoricity of the contents. In discussing the second materials review question, Croft stated their intention to modify the shielding evaluation, the operations section and the maintenance section to address these issues. For the third materials question, Croft committed to providing additional information and analyses in the safety analysis report as well as adding additional information about the spacers to the operations section. In discussing the shielding information requests, Croft focused primarily on RAI 5.1 because adequately and accurately defining the contents had been the most difficult issue in preparing the amendment. Croft

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ACTION REQUIRED (IF ANY)

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NAME OF PERSON DOCUMENTING CONVERSATION
Chris Allen

SIGNATURE
William C. Allen

CONVERSATION RECORD (continued)

SUMMARY: (Continued from page 1)

outlined two possible methods of specifying the contents and asked NRC staff which method was preferable. The first method involved specifying the maximum irradiation time and the minimum decay time to produce the desired amount of Actinium 225 which was the primary isotopes of interest. This method would rely on the radiation measurements taken prior to shipment to ensure that the regulatory dose rate limits were not exceeded. The second method involved calculating the maximum isotopic quantity which would not produce dose rates in excess of the regulatory limits, and prohibiting transport of the irradiated thorium disc until the isotopic quantities were below these maximum values. NRC staff stated the latter option was preferable. NRC staff emphasized that the responsibility for ensuring compliance with regulatory limits was equally shared by the package designer and the package user. Croft also discussed with NRC staff the criteria for listing radionuclides on both the package shipping label and within the safety analysis report. Since NRC regulations do not address package shipping label, NRC staff pointed Croft to 49 CFR 173.443(g). NRC staff then reminded Croft that the radionuclides which had the greatest impact on shielding needed to be listed in the safety analysis report. Subsequently, Croft committed to modifying the shielding analyses as well as the operating instructions to address the shielding information requests. After discussing a response submittal date, the call concluded at approximately 11:00 A.M. eastern standard time.