

TELEPHONE LOG	
CONTACT: Tony Campitelli et al	DATE: 5/15/96
TELEPHONE NO.: (610)369-8412	ORGANIZATION: Cabot and NES
TYPE: Visit X Conference Telephone: X In Out	
SUBJECT: Risk Assessment for Revere site	

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### SUMMARY:

On May 15 at 4 p.m. Judi Greenwald (NRC), Jack Parrott (NRC), Tony Campitelli (Cabot), and Karen Craig (NES, Cabot's consultant) discussed the RESRAD (a radiological dose assessment model) analysis for the Risk Assessment for the Revere site. The purpose of the call was for NRC to understand Cabot's rationale for some of their assumptions.

Jack Parrott asked why the well depth of 2000 feet was selected. Ms. Craig said that there is such a well right there on the site and it is used for irrigation, but that there is also a shallower well used for industrial use and that Cabot could certainly use the shallower well because the groundwater pathway was not that important.

Mr. Parrott asked why Cabot turned off the radon pathway. Ms. Craig said that the 15 mrem dose standard in the proposed decommissioning rule excludes the radon pathway. Judi Greenwald said that current NRC practice is to model the radon pathway, but that she would check with her management and get back to Cabot as soon as possible as to whether an exception could be made to current practice in light of the proposed rule. Mr. Campitelli emphasized that this issue is of utmost importance to Cabot Corporation.

Mr. Parrott asked why soil cover was needed for the resident farmer scenario when 90% of the material is "clean soil." Ms. Craig explained that what the Risk Assessment refers to as "clean soil" is really non-radioactive rubble, and nothing can grow in it.

Mr. Parrott asked why Cabot assumed a cover for the industrial scenario. Ms. Craig said that a cover was needed to grow grass. Mr. Parrott said that one didn't necessarily need grass at an industrial facility. Ms. Craig said that Cabot plans to actually put on much more cover than was assumed in the RESRAD analysis. Ms. Greenwald explained that even though NRC believes that Cabot will put a cover on the site, NRC generally does not give credit for a cover because NRC assumes that, under an unrestricted release scenario, someone other than Cabot could come along and remove the cover. NRC could make an exception (to its policy of not giving credit for covers) in the case of the resident farmer scenario, because NRC staff agrees with Cabot's argument that there couldn't be a resident farmer scenario without a soil cover because nothing could grow in the rubble. However, in the case of the industrial scenario, Ms. Greenwald thinks it is less likely that NRC could make an exception, but that she will check with her management.

Mr. Parrott asked about the leach rate calculation. Ms. Greenwald explained that there is no NRC guidance on the translation of leach test results into leach rates and that NRC is in the midst of internal discussions as to the acceptability of Cabot's approach. Ms. Greenwald suggested that Cabot go back to the laboratory which did the leach test results and ask (a) how to apply the uranium leach test results to a mixture of thorium and uranium--i.e., whether the same leach rate should be used by the thorium and the uranium or whether fractions of the leach rate

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should be applied to each nuclide, and whether it should be fractionated in terms of the radioactivity or the mass; (b) for a justification of the NES assumption that the slowly available lab test corresponds to a period of ten years in the real environment, and doesn't depend on individual site characteristics; and (c) for a justification for simply dividing the slowly available uranium by the value for the total available uranium in order to obtain the leach rate, when the two tests are done completely differently.

Ms. Craig agreed to call the laboratory to ask those questions. Ms. Greenwald said that she would send NES a copy of the Draft Shieldalloy EIS to show NES an example of a leach rate calculation that NRC has found acceptable, although it is not yet clear whether that particular method would be applicable to the Cabot site.

Mr. Parrott pointed out that Cabot probably made an error in its calculation of inhalation rate and soil ingestion rate because Cabot only calculated these values for the time onsite. The values for these parameters are supposed to apply to the whole year, and then RESRAD reduces them by the occupancy factor when the model is run. Ms. Craig said she would check on that and fix any errors. Mr. Campitelli asked whether the same problem applied to the drinking water intake and Ms. Craig said she would check on that too.

Mr. Parrott asked why Cabot used 510 liters per year in lieu of the 730 liters per year in PG-8-08. Ms. Craig said that she couldn't find any rationale for that number. Mr. Parrott said he would try to find the rationale. (Post meeting note--The 730 liters per year number is the 90th percentile of water use for American adults; 510 is the mean. NRC prefers the 730 value as being prudently conservative.)

Ms. Greenwald and Ms. Craig agreed to talk on Monday, May 16, to exchange answers to the questions that arose during the meeting.

**ACTION REQUIRED:** Follow up phone call with NES, NRC management decisions

**PERSON DOCUMENTING CONVERSATION:** Judith M. Greenwald, Project Manager

**DISTRIBUTION:** conversation participants; LLDP management