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Docket No.

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SUMMARY OF GEOCHEMISTRY DATA REVIEW RICHLAND, WASHINGTON, JULY 21-23, 1987 (Return to WM, 623-SS)

NRC Geochemistry staff and their contractor conducted a geochemistry data review of hydrazine experiments during the week of July 20, 1987. Also attending were representatives of the Yakima Indian Nation, Confederated Tribes of the Umatilla Indian Reservation. and Nez Perce Tribe.

The objective of the data review was to gain information to formalize the NRC Site Technical Position (STP) on DOE's use of hydrazine in testing. The STP involves assessing the use of hydrazine in experiments to study radionuclide sorption reactions under reducing conditions. DOE-BWI made available data/information in the form of laboratory record books and monthly/annual reports in the following areas of concern:

- o Redox condition or Eh established by the addition of hydrazine
- o Rate of reduction of radionuclides by hydrazine and the identification of radionuclide species
- o Effect of added hydrazine on the pH of test solutions
- Interactions/interference of hydrazine with sorption reactions and/or with rocks or minerals
- Interaction of hydrazine with experimental containers, and the stability of hydrazine during tests

These records are clearly identified as for experimental development only, and not to be used in the licensing process. This may be subject to change if these data are subsequently qualified.

Attachment No. 1 presents the list of attendees; Attachment No. 2 presents the agenda for the data review meeting; Attachment No. 3 contains data-related questions which the NRC submitted prior to the meeting; Attachment No. 4 presents a listing of the data (indexes) that were reviewed; Attachment No. 5 is a list of data/information that was or is to be copied and provided to the NRC; Attachment No. 6 contains copies of the Data Clarification questions submitted during the data examination.

- 1. Data Review Summary
 - <u>July 21</u>: NRC staff and contractor discussed data review objectives with DOE-BWI. After that, BWI furnished all available data concerning the questions contained in Attachment No. 3 and NRC staff and their contractor spent the day reviewing the available data. At the end of the day, the NRC presented to the DOE a list of data/information to be copied and brought back to HQ.

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- <u>July 22</u>: NRC staff and their contractor continued the data review. Date clarification questions were submitted by NRC to DOE, and DOE response was made during the final phase of the review meeting. At the end of the review meeting, the NRC presented to DOE an additional list of documents to be copied and shipped to NRC's office in Silver Spring, Maryland. Finally, the NRC staff summarized the meeting activities with DOE-BWI staff during a debriefing meeting.
- 2. Action Items
 - o The NRC will provide a response to the DOE in 30 to 60 days on the data examination. It is expected that this will be essentially a preliminary redraft of the STP.
 - Because several of the considerations that involve the use of hydrazine are inferential, a potential need for further discussion on the future use of hydrazine was identified.
 - The purpose of the July 21-22, 1987, data examination was strictly for clarification. The purpose of any future meetings that may be arranged on this subject will be to discuss interpretations.
 - The two data-clarification questions that were not addressed during the data examination because of the unavailability of investigators will be responded to in writing within the time frame needed to redraft the STP. These are identified in Attachment No. 6 as "Name of Responder: G. S. Barney."

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David J.

NRC DATE EXAMINATION July 21-22, 1987

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