

OCT 15 1992

Mr. Khosrow B. Semnani, President
 Envirocare of Utah, Inc.
 215 S. State Street
 Suite 1160
 Salt Lake City, Utah 84111

Dear Mr. Semnani:

As you are aware, our respective staffs met on October 1, 1992. The purpose of the meeting was to provide Envirocare the opportunity to present their resolutions to the NRC staff's additional information requests dated August 27, 1992. The additional information is needed in order to provide a correct and complete Environmental Report (ER) to support the preparation of the Draft Environmental Impact Statement (DEIS). In accordance with agency procedures, the Nuclear Regulatory Commission staff has prepared the enclosed meeting summary. If you have any comments or questions concerning the summary, please contact me at (301) 504-3439 or Sandra Wastler of my staff at (301) 504-2582.

Sincerely,
 (SIGNED) JOHN J. SURMEIER
 John J. Surmeier, Chief
 Uranium Recovery Branch
 Division of Low-Level Waste Management
 and Decommissioning
 Office of Nuclear Material Safety
 and Safeguards

Enclosure: As stated

cc: L. Anderson, Utah
 D. Hiller, Envirocare
 D. Wallace, PNL

Distribution: See attached list

SUBJECT ABSTRACT: MEETING SUMMARY

JFC :LLUR	:LLUR	:LLUR
NAME: SWastler	:MFliegel	:JSurmeier
DATE: 10/12/92	:10/14/92	:10/15/92

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Paul J. Merges, Ph.D
New York Department of
Environmental Conservation
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Albany, NY 12233

Distribution:

Docket No. 40-8989

Central File#

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PGarcia,URFO

LPittiglio

DSollenberger,GPA/SP

JCallan,RIV

CHackney,RIV,SLO

JGilliland,RIV,PAO

RHall,RIV,URFO

RFonner,OGC

MFinkelstein,OGC

STurk,OGC

Suttal,OGC

TCombs,GPA/CA

SEPTEMBER 9, 1992 MEETING SUMMARY

ATTENDEES

<u>NRC</u>	<u>ENVIROCARE</u>	<u>PNL</u>
J. Surmeier	G. Hellstrom	R. Wallace
M. Fliegel	S. Pleasure	
S. Wastler	V. Andrews	
L. Hamdan		
R. Abu-Eid		
W. Brach		

PURPOSE:

The purpose of the meeting was to provide Envirocare of Utah, Inc. the opportunity to present their resolution to the NRC's August 27, 1992, additional information request. The additional information is needed in order to provide a correct and complete Environmental Report (ER) to support the preparation of the Draft Environmental Impact Statement (DEIS). In addition, the NRC staff had requested the presence of Envirocare's health physicist and hydrologist in order to discuss specific concerns raised in the licensing review that had direct implications in the environmental review. The licensing review trails the environmental review by at least 6 weeks.

SPECIFIC COMMENTS: Envirocare presented their proposed specific responses to question no. 72-109, individually. Only those questions where there was disagreement, clarification, or modification to the proposed response are discussed below. For the remaining questions, Envirocare's proposed resolution, based on the discussion, appears adequate.

77. Envirocare provided travel time through the shallow unconfined aquifer to the site boundary. The NRC, however, still has problems with the travel time because it considers some of the hydrologic parameters used in the calculation of the travel time to be incorrect. Specifically, the NRC considers the effective porosity to be too high, the hydraulic conductivity to be underestimated, and the gradient to be underestimated. At this point S. Pleasure for Envirocare and L. Hamdan for NRC went to another meeting room to discuss the hydrology issues in detail. A summary of this side meeting is attached.
89. NRC indicated in our August 27, 1992 request for additional information that the characteristics of the waste to be accepted by Envirocare, as provided in their August 12, 1992, submittal was sufficient. As a result of the licensing review and the review of the characteristics of the waste that was provided, the

NRC has identified significant concerns regarding the basic information and analysis on waste characteristics, source term, dose calculations, and radiological impacts.

Specifically, NRC questioned whether the inventory provided was used in the dose modeling. Envirocare indicated the answer was no, that actually the modeling discussed in the ER and LA was from a Rogers and Associates report done for the State of Utah in licensing the LLW site. The modeling was actually used to limit the waste coming into the LLW facility by back calculation from the dose to onsite workers and the Pt 20 offsite dose at the fence line. However, the PATHRAE model used in the LA and in the ER shows the standards are exceeded. Neither the inventory, waste characteristics or the modeling were done for the 11e.(2) site and, therefore, are not applicable to the current licensing action. This same incorrect information was used to evaluate the radiological impacts in Chapter 5.0 of the ER.

As a result of the discussions, Envirocare will provide additional information regarding the basic information and analysis of waste characteristics, source term, dose calculations, and radiological impacts. Envirocare indicated that additional modeling would also be provided.

92. The text was changed to indicate that the Envirocare well was four miles to the northeast, however, none of the figures had been modified to show the location of this well. ENV indicated that the location of the well would be put on Figure 2.2. Envirocare needs to submit revised Figure 2.2.
93. ENV had indicated that they would address the degradation of the unconfined aquifer and the confined aquifer, as necessary. Page 4-11 was modified accordingly, but was omitted from the package. It was noted that the outcome of the hydrology discussions may impact the proposed resolution of this issue. Envirocare needs to provide page 4-11.
94. ENV had indicated that the size of the disturbed area is 110 acres and inconsistencies in the ER would be corrected. Pages 4-15 and 4-16 with this correction were omitted from the package. Envirocare needs to provide pages 4-15 and 4-16.
95. ENV modified this section in an attempt to better define the effects of effluent in the environment. Although, the logic behind ENV's proposed revision made sense, the way the revision was worded led to conclusion that ENV had specific plans or procedures for dealing with excess moisture. ENV needs to explain in more detail how effluent will be handled.
97. ENV stated that the chapter would be modified to summarize the data and conclusions regarding the impacts that are to be discussed in Section 5.2 and 5.5 of the ER. The revisions to

chapter 5.0 did not resolve the deficiencies regarding the evaluation of radiological impacts. As a minimum, ENV needs to discuss the population dose outside the site boundary for some distance, dose to the occasional hiker or recreational user impacts to the biota, bio-intrusion. ENV was given a copy of the radiological impacts section of the Slick Rock EIS in order to demonstrate the type of conclusions that have to be drawn based on the information provided in the ER. In addition, as stated in question no. 89 above, since the basic dose calculations, source terms, and waste inventory are incorrect, the corresponding impacts that are discussed in this chapter may be incorrect.

As a result of the discussions on question nos. 89 and 97, Envirocare will provide additional information regarding the basic information and analysis of waste characteristics, source term, dose calculations, and radiological impacts. Envirocare indicated that additional modeling would also be provided. ENV was strongly encouraged to interact with NRC staff before running computer models to ensure that there was general agreement as to input parameters, assumptions, as well as any other additional radiological impacts modeling activity.

99. ENV provided the justification of their determination of the maximum credible accident and discussed all credible accidents (i.e., train or truck accident). However, changes to the dose, source term, and waste inventory, resulting from question nos. 89 and 97 above, may require modifications to ENV's responses to this question.
100. ENV revised the treatment of accidents and the dose calculations in the ER. However, changes to the dose, source term, and waste inventory, resulting from question nos. 89 and 97 above, may require modifications to ENV's responses to this question.
101. ENV indicated that they will revise the text to describe the small effect of emptying the rail cars and include in the discussion the fact that the rollover is below grade; has dust suppression and a sump, etc. However, changes to the dose, source term, and waste inventory, resulting from question nos. 89 and 9. above, may require modifications to ENV's responses to this question.
104. ENV revised Chapter 10. NRC indicated that ENV may want to include another alternative, which would consist of a generic western site with deeper groundwater. This alternative would be particularly appropriate to the Criterion 3 alternative discussion regarding below grade disposal. In addition, since the shallow groundwater is the least desirable characteristic of the site, the addition of this alternative could demonstrate up front that the shallow groundwater is mitigated by other desirable characteristics.

CONCLUSION: As a result of the discussions, a major deficiency in Envirocare's submittal was identified in the radiological assessment in Chapter 5.0 (see question nos. 89 and 97), which has implications that affected other ER chapters. As a result, Envirocare stated that they would initiate a contract with Rogers and Associates to remodel the radiologic assessment. ENV was strongly encouraged to interact with NRC staff before running computer models to ensure that there was general agreement as to input parameters, assumptions, as well as any other additional radiological impacts modeling activity.

In addition, the groundwater concerns (see No. 77) also were not resolved. S. Pleasure, Envirocare's contractor, indicated that although most of the NRC's concerns had been resolved, additional information would be needed in order to resolve the concerns on effective porosity. As a result of the discussions, S. Pleasure also indicated that changes to the ER groundwater analysis would also need to be made.

Envirocare, acknowledging that the submittal still had deficiencies, submitted the revised ER page changes for docketing. The NRC agreed to start reviewing the ER page changes and preparation of the DEIS, however the schedule is still dependent on when Envirocare provides the additional information.

MEETING RECORD

OUTSIDE Stanley Plaisier
PARTICIPANT: Bingham Environmental
(801) 532-2230

NRC STAFF Latif Hamdan
INVOLVED: LLWMD/URB
(301) 504-2528

SIGNATURE: AdH
& DATE: October 12, 1992

DATE & TIME October 1, 1992
OF MEETING: 10:30 AM - 2:30 PM

SUBJECT: Ground-water issues in Envirocare's license application for disposal of 11e.(2) byproduct material at Clive, Utah.

PURPOSE: Mr. Plaisier was visiting with the Low Level Waste Division on behalf of Envirocare, to discuss issues related to ground-water protection at the proposed disposal site. He had called in advance (on September 29) to learn about the issues of concern to NRC staff (please refer to my telephone log report on the same subject, dated September 30, 1992).

My meeting with Mr. Plaisier was a side meeting to a broader meeting that was held at NRC headquarters and involved staff from the URB, PNL and Envirocare to discuss the license application.

ISSUES

DISCUSSED: The following issues were discussed in the side meeting: (1) Background ground-water quality; (2) Location of the Point of Compliance; (3) Compatibility of the proposed clay liner and the leachate solution from the waste; (4) Possible disagreements between Envirocare, DOE and possibly the State of Utah as to the source of any detected ground-water contamination in the future; (5) Performance assessment including ground-water flow and contaminant travel time; (6) Inconsistencies in the existing ground-water quality database; (7) Ground-water use and, (8) Values for the hydraulic and contaminant-transport coefficients.

FINDINGS &

AGREEMENTS: Mr. Plaisier agreed with our concerns on Items 1, 3, 4, 5, 6, and 7 and indicated that Bingham Environmental had either taken or would soon be taking corrective action to remedy these issues. He indicated for example that: (a) the background ground-water quality was being re-established; (b) tests would soon be conducted to evaluate the compatibility of the clay with the leachate solution; (c) the performance assessment had been repeated resulting in significantly shorter travel times than those provided in the license application; (d) the existing ground-water quality database had largely been rejected because it contained too many inconsistencies.

Mr. Plaisier asked many questions concerning the selection of the Point of Compliance (Item 2). He particularly wanted to know the regulatory basis for locating the POC at the downstream end of the embankment, which I explained with the help of Appendix A to 10 CFR part 40. He also asked about monitoring at the POC, which I explained in some detail. I indicated to him that we had already transmitted a complete and thorough guidance on monitoring requirements to Envirocare.

Mr. Plaisier and I could not reach agreement on the proper value of the effective velocity for the aquifer (Item 8). He used a value that is 80%-90% of the total porosity to evaluate flow rates. I explained to him that was too high a percentage considering the aquifer lithology, and indicated to him that the effective velocity should be roughly equivalent to the specific yield. He asked for references on the subject, and I provided him with six or seven books/manuals, but he still was not totally convinced.

RECOMMENDED

ACTION: The staff should proceed with the dSER as planned, perhaps with minor modifications to reflect the explanations provided in the meeting by Bingham Environmental.

DISTRIBUTION: J. Surmeier; M. Fliegel; S. Wastler.