64362

ARGONNE NATIONAL LABORATORY
ENVIRONMENTAL ASSESSMENT DIVISION
9700 SOUTH CASS AVENUE, BUILDING 900, ARGONNE, ILLINOIS 60439

TELEPHONE 630/252-7669
FAX 630/252-4336

August 23, 1996

Karen Reed
U.S. Department of Energy
Weldon Spring Site Remedial
Action Project
7295 Highway 94 South
St. Charles, MO, 63304

Dear Karen:

Please find attached a copy of the responses to MDNR comments received on the revised draft final of the *Engineering Evaluation/Cost Analysis for the Proposed Removal Action at the Southeast Drainage near the Weldon Spring Site, Weldon Spring, Missouri*, dated June 25, 1996. Please feel free to call me at (630) 252-7669 if we could be of further assistance.

Sincerely,

Mary Picel

Mary Picel
Environmental Assessment Division

MP:psp

Enclosures

cc: w/o enclosures
S. McCracken, DOE
J. Van Fossen, DOE

K. Warbritton, PMC

Y. Deyo, PAI

D. Blunt, ANL
J. Ditmars, ANL
I. Hlohowskyj, ANL
J. Peterson, ANL

Responses to MDNR Comments on the Revised Draft Final of the Southeast Drainage EE/CA, June 1996

1. *Comment: Page 1, second paragraph, third sentence: The sentence implies that the sediment only has radioactive contamination. Since this is not the case, please clarify the statement.*

Response: The text has been revised to remove the implication that there is only radioactive contamination in sediment. However, radioactive contaminants are the principal concern in this sediment; chemical contamination is present but is generally at low levels and in very localized areas.

2. *Comment: Page 3, first paragraph, last sentence: The document indicates that material from the southeast drainage will be placed in the Ash pond area for interim storage. Is there enough room for this material?*

Response: The excavated material from the drainage will be stored on-site at either the Ash Pond storage area or the Material Staging Area. Either area is appropriate and has sufficient space available for storage of the waste. The choice of which storage area to use will depend on specific activities being performed at the site when remediation of the drainage is conducted.

3. *Comment: page 3, second paragraph: MDOH assisted in the development of this document and should be identified.*

Response: The MDOH has been added to the list of agencies in Chapter 1.

4. *Comment: Page 7, section 2.2.1, second paragraph: Remediation is not to be based on mobilization of conventional equipment only, but should consider smaller, lower impact equipment in addition to the conventional equipment.*

Response: Comment noted. The conventional equipment described in the EE/CA includes smaller, lower impact equipment to minimize environmental damage to the drainage.

5. *Comment: Page 7, section 2.2.1 second paragraph, last sentence: Please provide the documentation that determines that the number of samples collected in each segment is statistically adequate to support the risk conclusions.*

Response: A copy of this evaluation will be forwarded for your information.

6. *Comment: Page 9, section 2.2.1, first paragraph, last sentence: Please provide the data sufficiency exercise documentation.*

Response: See response to Comment 5.

7. *Comment: Page 9, section 2.2.1, second paragraph: Bechtel performed many of the early studies for this area. Those studies indicated high levels of contamination in different portions of the drainage than what is shown in this document. Shouldn't the previous information also be included here? Also, has that previous information been included in the risk assessment?*

Response: Bechtel did perform water quality studies for the Southeast Drainage in the early 1980's; this information was used in developing the environmental monitoring program for the drainage. Oak Ridge Associated Universities was the first agency to collect sediment samples in the drainage. As explained in the EE/CA, these data were used qualitatively to focus the recent sampling program which was a more thorough investigation. The historic data were not included in the risk assessment because the recent sampling effort provides data that are more representative of current conditions and the number of samples collected are sufficient for risk calculations.

8. *Comment: Page 9, section 2.2.1, third paragraph: The document states that 10 samples were analyzed, 6 composite samples from 19 locations and 4 discrete samples. However, the figure referenced depicts many more than 10 locations. Please clarify.*

Response: Comment noted. The figure has been revised to indicate the appropriate sampling locations.

9. *Comment: Page 13, section 2.2.2, last paragraph, first sentence: Please provide what the higher levels of uranium are.*

Response: This sentence has been modified to provide the range of concentrations detected in the springs. This information is also provided in Table 2.2.

10. *Comment: Page 17, section 2.3.1, second paragraph, fifth sentence: Please provide the subsurface data mentioned here. We have been unable to find the data in Appendix A. Why were there only two subsurface samples collected for chemical contaminants? Will two samples provide enough information to show that a statistically significant set of data was collected for the subsurface?*

Response: All data from the recent sampling effort are included in the Southeast Drainage Soils Sampling Report which is referenced in the EE/CA. Location-specific risk calculations were done only for the radiological data because the primary contributor to the estimated potential risks is from radioactive contamination. The two subsurface samples referred to in the text are historic data collected by the Project Management Contractor in 1989. These samples showed low levels of metals and no detections of PCBs or nitroaromatic compounds; these results were consistent with other historic data for surface soil. The recent sampling effort concentrated on surface soil because historic data indicated that chemical contamination in sediment was present at low levels. The sampling strategy was designed to collect enough data to adequately determine potential risk to a recreational visitor associated with exposure to surface soil.

11. *Comment: Page 19, section 2.3.2, first paragraph: Were the alpha and beta values used in the risk assessments? If these values were not used, what is the reasoning for exclusion?*

Response: Measurements of alpha and beta values (which are not specific to any radionuclide) can be used as a general indicator of contamination levels in an environmental medium. These values were not used because the concentrations of the individual radionuclides present in the drainage are needed to perform risk calculations.

12. *Comment: Page 21, section 2.3.3: Why were only the springs used for surface water characterizations? Shouldn't information from near the mouth of the Southeast Drainage have been included?*

Response: Surface water at the springs is considered to be representative of surface water conditions in the drainage. The Southeast Drainage is an ephemeral stream; temporary pools of water exist upstream and downstream of the springs during precipitation events. Water from these temporary pools is lost to the streambed and reappears downstream in the springs. Surface water upstream and downstream of the mouth of the drainage has also been monitored as part of the environmental monitoring program for the site. These data were not used in the risk assessment because of the high dilution factor from the Missouri River. The risk assessment focused on evaluating conditions within the drainage itself.

13. *Comment: If remediation option 2.1 is selected , DOE should continue monitoring the area to assure that sediment redeposition or further impact from groundwater to the soil has not increased the exposure. If future characterization data show exposure concerns, DOE would be responsible for remediation.*

Response: Planning for the proposed action does include surface water quality monitoring and implementation of erosion controls during the removal action. Monitoring of the drainage will continue as part of the site environmental monitoring program. If results of future monitoring show exposure concerns, DOE would take appropriate actions to ensure protection of human health and the environment.

Karen/Tom/Yvonne

STATE OF MISSOURI
Mel Carnahan, Governor • David A. Shorr, Director
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL QUALITY
P.O. Box 176 Jefferson City, MO 65102-0176

August 29, 1996

Mr. Jerry Van Fossen
Deputy Project Manager
U. S. Department of Energy
Weldon Spring Site Remedial Action Project
7295 Highway 94 South
St. Charles, Missouri 63304

Dear Mr. Van Fossen:

The Department of Energy, Weldon Spring Site Remedial Action Project, proposes to address the Southeast Drainage through a removal action supported by an Engineering Evaluation/Cost Analysis (EE/CA). The proposed action, as we understand, is to excavate selected contaminated materials within the drainage area. The risk level, as presented, is no greater than 1 in 10,000 additional cancers for children playing in the drainage.

At this time we find the proposed plan unacceptable. The Missouri Department of Natural Resources prefers that remediation of the Southeast Drainage be conducted to allow "unrestricted use." This is defined as no risk in excess of 1 in 1,000,000 additional cancers based on a residential scenario.

We recognize the unique and sensitive nature of the environment in the Southeast Drainage. We also recognize that the population in this area is rapidly expanding, which will affect the existing and future land use. Thus, we could accept Option 2.2 as described in the EE/CA, which provides a balance of maximizing removal of contaminated material and minimizing the ecological impact to the drainage. Also, this option provides no risk in excess of 1 in 100,000 additional cancers.

Minimizing the ecological impact to the area includes proper selection of the type and size of equipment used for remediation. Deed restrictions must also be placed on the property limiting future land use options if unrestricted levels are not obtained. In addition, continued monitoring must occur to ensure the cleanup remains protective. The Department of Energy will not be released from future liabilities should the area be recontaminated with radionuclides requiring additional cleanup.

RECYCLED PAPER

020005
AUG 30 1996

If you have any questions or comments, feel free to contact me at (573) 751-6892.

Sincerely,

DIVISION OF ENVIRONMENTAL QUALITY

John A. Young

John A. Young
Director

JAY:lee

c: Dan Wall, EPA Region VII