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## Department of Energy

Oak Ridge Operations Office  
P.O. Box 2001  
Oak Ridge, Tennessee 37831—

January 24, 1997

Mr. Mitchell C. Scherzinger, Environmental Engineer  
Federal Facilities Section  
Missouri Department of Natural Resources  
P.O. Box 176  
Jefferson City, Missouri 65102-0176

Dear Mr. Scherzinger:

### **RESPONSE TO MDNR COMMENTS ON THE FUSRAP QUARTERLY PROGRESS REPORT FOR THE PERIOD JULY - SEPTEMBER 1996**

On December 3, 1996, the Missouri Department of Natural Resources (MDNR) submitted comments to the Department of Energy (DOE) regarding the Formerly Utilized Sites Remedial Action Program (FUSRAP) Quarterly Progress Report for the period July through September 1996. The purpose of this letter is to respond to those specific comments as outlined in the letter.

### **RESPONSE TO MDNR'S COMMENTS ON THE MAIN BODY OF THE REPORT**

- 1) MDNR has not yet concurred with the use of this crushed material from the 50 Series buildings as backfill for the Plant 2 excavation.

RESPONSE: DOE acknowledges that MDNR has not concurred on the use of this material as backfill. The use of this material as backfill would be part of the restoration activities for the Plant 2 excavation. All plans for the excavation and restoration of the Plant 2 area will be reviewed with MDNR prior to the start of work.

- 2) Although soils with elevated concentration of radionuclides have been left in place at the North Riverfront Trail, they meet the limited recreational use, risk based scenario proposed.

RESPONSE: DOE concurs.

- 3) Cleanup efforts at the North Riverfront Trail achieved the limited recreational use, risk based scenario and not a supplemental guideline of 50 pCi/g.

Clarify the meaning of the word "clean."

The MDNR has in the past verbally requested that fill material be analyzed for chemical and radioactive contaminants, and that the FFS be provided with this information.

RESPONSE: DOE concurs that cleanup efforts at the North Riverfront Trail do achieve the limited recreational use, risk based scenario. The use of the word "clean" refers to backfill

material whose radiological concentrations are at or below background. DOE has taken samples of its backfill material per MDNR's verbal request. Results from these sampling activities will be provided to MDNR under separate cover.

- 4) The use of the term "brown fields" is inappropriate. MDNR strongly requests that you not utilize this term in reference to St. Louis - FUSRAP.

RESPONSE: DOE acknowledges MDNR's sensitivity to the use of the term "brown fields" in reference to St. Louis - FUSRAP.

- 5) Would any of the waste generated from the two SLDS cleanup activities in and of themselves preclude shipment without placarding, disposal at Envirocare, or be subject to any other regulatory requirements, prior to final disposal.

RESPONSE: In general, waste shipments generated from SLDS cleanup activities are not regulated as hazardous materials by the Department of Transportation and do not require placarding. All of the waste shipped from these cleanup activities meet requirements for Envirocare disposal. No additional regulatory requirements are required.

- 6) Change the word "group" to "Task Force"

RESPONSE: DOE will incorporate this change in subsequent quarterly reports.

- 7) Paragraph should reflect the fact that the MDNR referred this matter to the Missouri Attorney General's Office.

RESPONSE: DOE acknowledges this comment.

#### RESPONSE TO MDNR'S COMMENTS ON THE SAMPLING AND ANALYSIS ADDENDUM TO THE REPORT

##### Radon

- \* The MDNR requests that this information be presented in an isotope-specific format. Should present sampling procedures preclude such analysis, the MDNR requests that DOE amend their procedures such that this data will be available for the quarter beginning January 1997.

RESPONSE: Current procedures monitor the combined Rn-220 (thoron) and Rn-222 concentrations in total. This is a conservative approach since it measures both isotopes. We can monitor Rn-222 alone and then calculate the Rn-220 concentration. However, Rn-220 is a daughter product of Th-232 and historical data does not indicate significant concentrations of Th-232 at HISS. Therefore it is reasonable to assume that all detected radon is Rn-222 and there is no need, and would not be cost effective, to determine the Rn-220 concentration alone.

### External Gamma Radiation

- \* Due to the potential for misinterpretation, in the future please indicate that these samples were taken from fixed monitoring stations and not thermoluminescent dosimeters worn by workers in these contaminated areas.

RESPONSE: Future reports will note that the TETLDs are from fixed locations and are not personnel dosimetry.

### Stormwater Surveillance

- \* Paragraph 2, Indicate that the results of the stormwater analysis for SLAPS, which was not available for this report, will be incorporated into the report for the fourth quarter.

RESPONSE: There is not a regulatory requirement for stormwater samples being collected at SLAPS. However, as a Best Management Practice, DOE collects stormwater samples at SLAPS during the second quarter and fourth calendar year quarter. The next reporting of these results will be in the fourth quarter report.

### Characterization Samples - North County

- \* The statement that the site-specific risk-based criteria is 50 pCi/g for any radionuclide is inaccurate. The site-specific risk-based criteria (598 hours per year exposure at an excess risk to cancer no greater than  $1 \times 10^{-5}$ ) equates to an exposure less than 13 mR/h. The DOE used 50 pCi/g as an initial proposal for site remediation although this was not necessarily based upon a site specific risk-based criteria.

RESPONSE: While the heading for this comment refers to North County Characterization Samples, DOE believes the text refers to the SLDS Riverfront Trail remedial action.

DOE demonstrated through use of dose modeling (RESRAD), and a conservative scenario (598 hr/yr fisherman), that a 50 pCi/g clean-up criteria for any radionuclide achieved the agreed to dose limit (13 mR/h). The 50 pCi/g and 13mR/h are different manifestations of the effort to achieve the same remedial action goal.

### Post-Remedial Action Samples - North County

- \* In reference to the area of contamination at 14 pCi/g for thorium-230, was further remediation conducted in the area and if not, why was the intent of the ALARA process not met?

RESPONSE: DOE Order 5400.5 Chapter IV, Residual Radioactive Material, provides the clean-up criteria which are protective of the 100 mrem/yr dose limit to the public. The subsurface criterion for Th-230 is 15 pCi/g. Therefore, no further remediation at that location was required.

M.C. Scherzinger

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## SLDS -Building 116

- \* It is stated, that the purpose of this survey was to determine if conditions are changing, but fails to state previous results. Amend text to incorporate a comparison of results.

RESPONSE: The reference to contamination "changing" is inaccurate. The survey is more accurately described as assurance that the contamination control procedures in place at the St. Louis Site are being effectively implemented. If any significant deviation from established levels is noted, appropriate corrective measures would be implemented. During the third quarter, no significant deviations were identified.

Please contact Wayne Johnson at (423) 575-5165 if you have additional questions or concerns regarding our response to your comments.

Sincerely,

  
for David G. Adler, Site Manager  
Former Sites Restoration Division

WFJ:lag:LR\_1893

cc: Dan Wall, US EPA

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Formerly Utilized Sites Remedial Action Program (FUSRAP)

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# ADMINISTRATIVE RECORD

for the St. Louis Site, Missouri

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