



Bob Holden, Governor • Stephen M. Mahfood, Director

## DEPARTMENT OF NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL QUALITY  
P.O. Box 176 Jefferson City, MO 65102-0176

May 14, 2001

Ms. Sharon Cotner  
FUSRAP Program Manager  
United States Army Corp of Engineers  
8945 Latty Avenue  
Berkeley, MO 63134

Re: Report on Properties Remediated by Department of Energy. (see attachment)

Dear Ms. Cotner:

This letter is the formal transmittal of the Department of Natural Resources "Report on Properties Remediated by Department of Energy." It's being sent in accordance with our discussion on providing a formal submittal such that the Corps can document requests that could necessitate additional manpower. Our request follows:

**Please consider the comments provided within the introduction of the attached report during the Corps current study of North County St. Louis FUSRAP vicinity properties previously remediated by the Department of Energy.**

As a reminder, the Department of Natural Resources holds the position that risk levels exceeding the CERCLA criteria of  $1 \times 10^{-6}$  should not be designated as "unrestricted use" and Institutional Controls may apply.

We appreciate the Corps stating the upcoming findings of said investigations of DOE remediated vicinity properties, with conclusions regarding property status, will be released for regulator review in a draft format prior to finalization. If you have any questions or concerns, please contact Eric Gilstrap of my staff at (314)877-3250.

Sincerely,

*Eric Gilstrap*

*for* Larry Erickson, P.E.  
DOE Unit Chief

C: Mr. Dan Wall, U.S. EPA  
Mr. Ric Cavanagh, Chairman of the St. Louis FUSRAP Oversight Committee

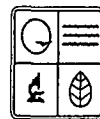
EG

enclosed: Report on Properties Remediated by the Department of Energy



# Missouri Department of Natural Resources Hazardous Waste Program

Federal Facilities Section  
FUSRAP/ VPs



## Report on Properties Remediated by Department of Energy

### I. Introduction.

Some of the St. Louis FUSRAP North County Vicinity Properties were remediated by the Department of Energy (DOE) from 1987 through 1996. This report is intended to identify properties where remediation was performed and has documentation, by a federal agency or it's contractor, stating the property is released for unrestricted use.

Please note the following concerns pertaining to potential incompleteness regarding characterization/investigation of these properties:

- Further investigation is needed regarding impact of criterion used in pre-1995 removal actions. Pre-1995 removal action summaries use dose rates rather than contaminate activity levels as criterion. Doses were computed, then reported with a "background" value of 9.4  $\mu\text{R/hr}$  subtracted. The net value was then compared to 11.4  $\mu\text{R/hr}$  to determine whether further action was required.
- Statistic, or otherwise, based sampling methods were not used to confirm the likely hood of the properties not being contaminated. (With the exception of releasing an excavation once a removal action had occurred.) Contamination detection was solely based on field instruments that can not readily detect Thorium-230 and other radionuclides that are predominately alpha emitters. ORISE states within Interim Letter Reports "As a result of these concerns not being addressed, it is ESSAP's opinion that other small areas of residual Th-230 in excess of 15pCi/g may remain on the property."<sup>1</sup>
- Clarification may have to be provided to property owners that received letters stating or implying their property was "suitable for release" or "can be released without radiological restrictions". The above concerns apply and, in a couple instances, documentation shows contaminants were left in place due to inaccessibility. See Section IV titled Owner/Public Notification.

### II. BNI September 10, 1997 Map depiction of Remediated Properties.

The following properties are depicted as "remediated" on the BNI September 10, 1997 Map titled St. Louis North County FUSRAP Properties: 3(L), 4(L), 5(L), 6(L), 19, 20, 21, 22, 23, 24, 26, 27, 30, 31A, 32, 33, 34, 36, 37, 39, 40,

<sup>1</sup> This disclaimer is found within documentation associated with vicinity properties: 4(L), 21, 22, 23, 24, 26, 27, 30, 31A, 32, 35, 36, 37, 38, 39, & 40. Note: Not all properties had an Interim Letter Report available for viewing, therefore this disclaimer may still apply. Applicability would also still exist for any property where similar screening/investigative practices occurred. No documentation depicts a difference or change in operations.

**41, 42, 43, 44, 45, 47, 48, and 53.** Vicinity Property 52 is depicted without as having no contamination found.

### **III. Misc. Documents depiction of Remediated Properties.**

Removal actions/remediations are documented through Interim Letter Reports (ORISE to DOE), Post Remedial Action Reports, Draft Verification Surveys, letters to the property owner, or other correspondence for the following properties: **3(L), 4(L), 5(L), 6(L), 19, 20, 21, 22, 23, 24, 26, 27, 28, 30, 31A, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 47, 48, 52, and 53.**

### **IV. Owner/Public Notification.**

This section pertains to properties for notification sent to the owner/utilities that remediation to "free release" or "unrestricted use" is explicitly stated or could be implied. The following is a list of these properties with a lengthier description provided below: **3(L), 4(L), 5(L), 6(L), 19, 20, 21, 22, 24, 30, 32, 36, 37, 40, 41, 43 and 52<sup>2</sup>.**

- 3(L), 4(L), 5(L), 6(L) Letters of release were sent to the owner.
- 19, 20: A Post Remedial Action Report for VPs 19, 20, 41, & 43 was finalized and sent to Missouri Department of Natural Resources. Transmittal to the owner is not known.
- 21: A letter was sent to owner on 3/26/99, per their request, stating attached reports "indicates your property is certified as suitable for release in accordance with Department of Energy criteria". Note: The Draft Verification Survey of VPs 21, 22, 23, 24, 26, 27, 30, 32, 36, & 37 included, on page 16, ORISE's disclaimer regarding potential for Th-230 to remain on the property. Also, the report notes contamination left in place due to endangerment to slope stability of a roadbed. It is unknown if the latter refers to a city street, driveway, or parking lot.
- 22: The owner and a realtor received a letter, dated 2/24/97, stating "...property is released without radiological restrictions". Note: The Draft Verification Survey of VPs 21, 22, 23, 24, 26, 27, 30, 32, 36, & 37 included, on page 16, ORISE's disclaimer regarding potential for Th-230 to remain on the property.
- 24: The owner received a letter, dated 3/12/97, stating "...property can be released without radiological restrictions".
- 30: Letter of release was prepared for the owner, but whether it was sent is not known. Volume of soil removed was 50 cubic yards.
- 32: Letter of release was sent to the owner. Volume of soil removed was 8 cubic yards.
- 36: A letter was mailed to a LaCleda Gas stating soils are not contaminated and HP support from USACE would not be required.

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<sup>2</sup> No remediation occurred. Correspondence states no concentrations exceeding guidelines was detected.

- 37: See note under VP36. However this stipulation is given: contaminated soil does not exist on 37 within twenty feet of Hazelwood Boulevard.
- 40: BNI sent a letter of release to owner specifying information as based on verbal comments from ORISE and that a format report will follow. The latter, the Interim Letter Report Verification Survey (I.L.R.V.S.), was prepared a month later but not released to the owner. The I.L.R.V.S. included the disclaimer regarding potential for Th-230 to remain on the property.
- 41, 43: A Post Remedial Action Report for VPs 19, 20, 41, & 43 was finalized and sent to Missouri Department of Natural Resources. Transmittal to the owner is not known. Also, documentation notes contamination left in place at VP 41 due to endangerment to slope stability of roadbed. It is unknown if the latter refers to a city street, driveway, or parking lot.
- 52: Separate and distinct letters to Kenneth Balk & Associates and Schnuck's Foods were mailed stating no concentrations exceeding guidelines were found.

#### V. Summary Table of Findings.

A table, Summary of Vicinity Properties Status, showing findings from this study is attached to report. It is meant to ease further references to this document, but PLEASE refer to the previous sections for a detailed explanation of its contents (particularly related to Owner/Public Notification).

#### VI. Miscellaneous.

EPA commented, during the September 13, 2000 USACE/EPA/DNR meeting on the North County Feasibility Study and Proposed Plan, EPA guidance specifies removal of contaminants to unrestricted use requires Ra-226 activity levels to not exceed 5 pCi/g on average for all depths. USACE responded the subsurface (below 6") criteria or 15 pCi/g for Radium or Thorium achieves the same goal. The claim is historical removal of Thorium-230 to a level of 15 pCi/g resulted in final levels of Ra-226 less than 5 pCi/g.

#### **Removal action data related to DOE remediated North County Vicinity Properties supports USACE's claim.** Please note the following findings:

- Data in Final Status Surveys of excavations showed in instances with Ra-226 exceeding 5pCi/g, Th-230 levels ranged from several hundred to a thousand pCi/g. Further soil removal was required prior to releasing the excavation.
- Maximum detected concentration of Ra-226 in all grab samples for 34 properties, prior to release of the excavations, was 2.5 pCi/g (including one standard deviation as detected for that sample).
- DNR has the same concerns regarding **Th-232** hazards as Ra-226. The health risks for the two are similar. Data regarding Th-232 was provided for only 4 properties. The maximum levels for those four, prior to release

of an excavation, was 1.4 pCi/g (including one standard deviation as detected for that sample).

**ATTACHMENT starting on next page.**

### VICINITY PROPERTIES STATUS

Vicinity Properties	Depicted as	Depicted as Remediated		Owner/Public Notification re: lack of contamination or remediation to release without restriction.
	Not Contaminated by BNI Map or Misc. Documents.	BNI: Sept. 10, 1997 Map	Misc. Documents	
1	x			
2	x			
3	x			
4	x			
5				
6				
7				
8	x			
9				
10				
11				
12				
13				
14				
14A				
15				
16				
17	x			
18	x			
19		x	x	x
20		x	x	x
20A	x			
21		x	x	x
22		x	x	x
23		x	x	
24		x	x	x
25	x			
26		x	x	
27		x	x	
28	x		x	
29	x			
30		x	x	x
31	x			
31A		x	x	
32		x	x	x
33		x	x	
34		x	x	
35			x	
35A				
36		x	x	x
37		x	x	x
38			x	
39		x	x	

Note: Please refer to verbiage on pages 1 through 5! It provides clarification regarding site status that is not available within this table.

### VICINITY PROPERTIES STATUS

Vicinity Properties	Depicted as Not Contaminated by BNI Map or Misc. Documents.	Depicted as Remediated		Owner/Public Notification re: lack of contamination or remediation to release without restriction.
		BNI: Sept. 10, 1997 Map	Misc. Documents	
40		x	x	x
41		x	x	x
42		x	x	
43		x	x	x
44		x	x	
45		x	x	
46				
47		x	x	
48		x	x	
49	x			
50	x			
51	x			
52	x			x
53		x	x	
54	x			
55				
56				
57				
58				
59	x			
60	x			
61	x			
62	x			
63				
63A	x			
1(L) L: Latty				
2(L)				
3(L)		x	x	x
4(L)		x	x	x
5(L)		x	x	x
6(L)		x	x	x
1(C) C: Creek	x			
2(C)				
3(C)	x			
4(C)	x			
5(C)	x			
6(C)	x			
7(C)	x			
8(C)				
9(C)	x			
10(C)	x			
Ballfields				
Railroad ROW				
Creek				

Note: Please refer to verbiage on pages 1 through 5! It provides clarification regarding site status that is not available within this table.

# FUSRAP Document Management System

Year ID  
00 2590

Further Info?

☐

Operating Unit  
North County

Site

Area

MARKS Number  
FN:1110-1-8100g

Primary Document Type  
Site Management

Secondary Document Type  
Federal, State, Local Technical Record

Subject or Title

MDNR Report on Properties Remediated by the Department of Energy

Author/Originator

Larry Erickson

Company

MDNR

Date

5/14/2001

Recipient(s)

Sharon Cotner

Company (-ies)

CEMVS-PM-R

Version

Final

Original's Location

Central Files

Document Format

Paper

Confidential File?

☐

Comments

Include in which AR(s)?

☒ North County

☐ Madison

☐ Downtown

☐ Iowa

ETL

1.7

SAIC number

Filed in Volume

1

Bechtel ID





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# Administrative Record for the Formerly Utilized Sites Remedial Action Program (FUSRAP) North St. Louis County Sites

St. Louis County, Missouri

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**US Army Corps  
of Engineers**  
St. Louis District®

Volume 1.7i  
Site Management –  
Federal, State, Local technical records

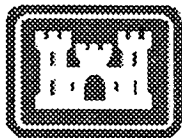
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# Administrative Record for the Formerly Utilized Sites Remedial Action Program (FUSRAP) North St. Louis County Sites

St. Louis County, Missouri

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**US Army Corps  
of Engineers**  
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Volume 1.10a  
Site Management –  
Reference Documents