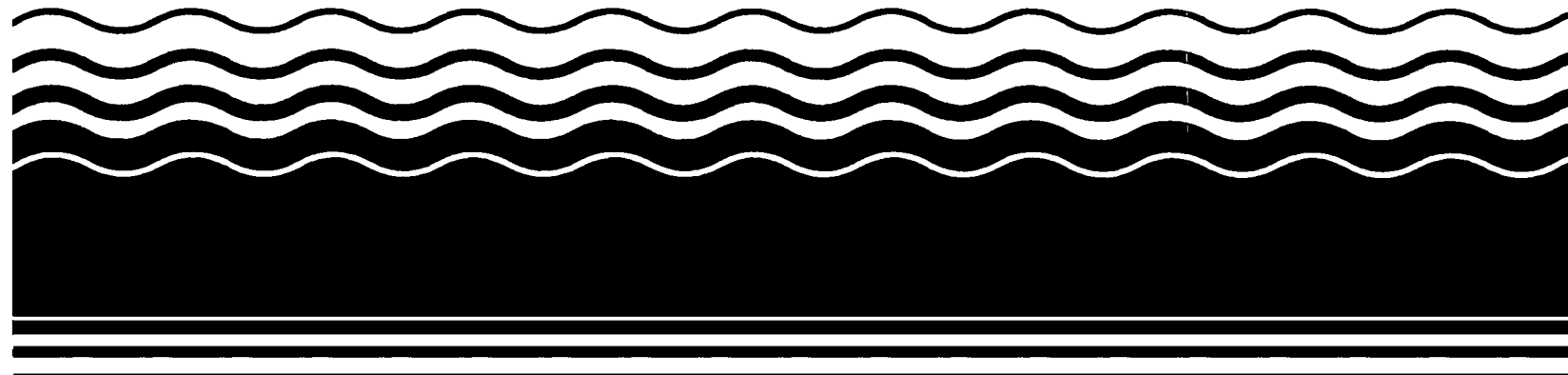




# **Superfund Record of Decision:**

## **Kem-Pest Laboratories, MO**



<b>REPORT DOCUMENTATION PAGE</b>		<b>1. REPORT NO.</b> EPA/ROD/R07-93/072	<b>2</b>	<b>3. Recipient's Accession No.</b>
<b>4. Title and Subtitle</b> SUPERFUND RECORD OF DECISION Kem-Pest Laboratories (Amendment), MO Second Remedial Action - Final				<b>5. Report Date</b> 02/05/93
<b>7. Author(s)</b>				<b>6</b>
<b>9. Performing Organization Name and Address</b>				<b>8. Performing Organization Rept. No.</b>
				<b>10. Project Task/Work Unit No.</b>
				<b>11. Contract(C) or Grant(G) No.</b> (C) (G)
<b>12. Sponsoring Organization Name and Address</b> U.S. Environmental Protection Agency 401 M Street, S.W. Washington, D.C. 20460				<b>13. Type of Report &amp; Period Covered</b> 800/800
<b>15. Supplementary Notes</b> PB94-964305				<b>14.</b>
<b>16. Abstract (Limit: 200 words)</b>  The 6-acre Kem-Pest Laboratories site is a former pesticide production facility located in Cape Girardeau County, Missouri. Land use in the area is predominantly rural, with residences, an industrial storage tank facility, agricultural fields, and the Mississippi River located near the site. Site features include a concrete block building that housed a pesticide formulation operation and currently holds approximately 11,200 gallons of contaminated water in its basement; six storage tanks for solvents and oil; a lagoon used for the disposal of sewage and plant waste; and an unconfined, underground aquifer system. From 1965 to 1977, Kem-Pest Laboratories formulated various pesticide products, including liquid pesticides, granular insecticides and herbicides, and pesticide dust, onsite. Waste from pesticides production included aldrin, dieldrin, endrin, and heptachlor and was disposed of in the onsite lagoon. No production or disposal activities have occurred onsite since 1977, and the lagoon was backfilled with clay by the owner in 1981. Based on Federal assessments and investigations conducted in 1981, it was determined that the lagoon and the formulation building were the most significant sources of site contamination. Ground water contamination has resulted from the migration of contaminants from the soil within the lagoon; and ground water also may have acted as a flushing mechanism  (See Attached Page)				
<b>17. Document Analysis</b>				
<b>a. Descriptors</b> Record of Decision - Kem-Pest Laboratories (Amendment), MO Second Remedial Action - Final Contaminated Medium: debris Key Contaminants: organics (pesticides)				
<b>b. Identifiers/Open-Ended Terms</b>				
<b>c. COSATI Field/Group</b>				
<b>18. Availability Statement</b>			<b>19. Security Class (This Report)</b> None	<b>21. No. of Pages</b> 12
			<b>20. Security Class (This Page)</b> None	<b>22. Price</b>

Abstract (Continued)

for contaminants in the subsurface soil. A 1989 ROD addressed the contaminated surface soil in the lagoon, surface soil in the lagoon area and near the formulation building, and sediment in drainage channels onsite and offsite, as OU1. A 1990 ROD addressed pesticide contamination in the formulation building and ground water, as OU2. This ROD amends the 1990 selected remedy for decontamination and offsite incineration of the formulation building debris, but does not affect the original selected remedy for ground water and institutional controls. New information has indicated that decontamination of surface and subsurface porous cinder block construction would be technically infeasible because saturation of the building cinder block construction allows for infusion of contaminants into the block. Also, EPA determined that the roof of the formulation building has deteriorated to the point that it would have to be rebuilt, rather than just decontaminated and preserved. The primary contaminants of concern affecting the debris are organics, including pesticides.

The amended remedial action for this site includes demolishing the formulation building, followed by offsite disposal of the contaminated debris in a RCRA-approved landfill. The estimated present worth cost for this remedial action is \$1,230,000.

PERFORMANCE STANDARDS OR GOALS:

Not provided.

DECLARATION  
RECORD OF DECISION AMENDMENT  
KEM-PEST LABORATORIES SITE  
GROUND WATER AND FORMULATION BUILDING

SITE NAME AND LOCATION

Kem Pest Laboratories  
Cape Girardeau County, Cape Girardeau Missouri

STATEMENT OF BASIS AND PURPOSE

This decision document, together with a Record of Decision (ROD) dated December 31, 1990, represents the selected remedial action for addressing contaminants in the Ground Water and Formulation Building Operable Unit (Operable Unit #2 or OU #2) at the Kem-Pest Laboratories site, Cape Girardeau County, Missouri, developed in accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and to the extent practicable, the National Contingency Plan (NCP).

This decision is based on contents of the administrative record file for the Kem-Pest Laboratories site, Ground Water and Formulation Building Operable Unit.

The United States Environmental Protection Agency (EPA) is the lead agency for the site, and the Missouri Department of Natural Resources (MDNR) Hazardous Waste Program has been designated the support agency. This ROD amendment is being issued by the EPA. The State of Missouri concurs on the amended selected remedy.

DESCRIPTION OF THE AMENDED SELECTED REMEDY

The primary reason for amending the 1990 ROD is that new information has indicated that decontamination of the formulation building is technically infeasible. This selected amended remedy does not change the 1990 ROD with respect to the required ground water monitoring and the institutional controls.

The major components of the selected remedy, as now amended, include:

Ground Water

- No remedial action. Monitoring will be conducted to verify that no unacceptable exposures to risks posed by conditions at the site occur in the future.
- Wells to be monitored include existing monitoring wells, an additional monitoring well to be installed during remedial design and private drinking water wells located off of the site.

Formulation Building

- Demolition of the formulation building with off-site disposal of the demolition debris materials.
- Institutional controls that limit future use of the property to commercial or industrial activities.

STATUTORY DETERMINATIONS

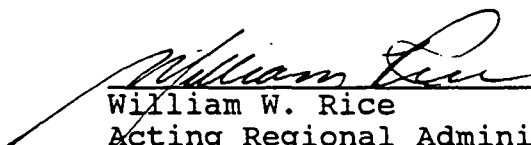
Ground Water

No new statutory determinations.

Formulation Building

The selected amended remedy is protective of human health and the environment, complies with applicable or relevant and appropriate federal and state requirements, and is cost-effective. This remedy utilizes permanent solutions and alternative treatment technologies (or resource recovery) technologies to the maximum extent practicable. This remedy does not satisfy the preference for remedies that employ treatment that permanently and significantly reduces the volume, toxicity, or mobility of hazardous wastes as a principal element.

Because this remedy will result in hazardous substances remaining on the site above health-based levels, a review will be conducted within five years after commencement of remedial action to ensure that the remedy continues to provide adequate protection of human health and the environment.

  
\_\_\_\_\_  
William W. Rice  
Acting Regional Administrator  
U.S. EPA, Region VII  
2/5/93  
Date

DECISION SUMMARY  
RECORD OF DECISION AMENDMENT  
KEM-PEST LABORATORIES SITE  
GROUND WATER AND FORMULATION BUILDING

I. LOCATION AND DESCRIPTION

The Kem-Pest Laboratories Site is located in Cape Girardeau County, Missouri, approximately three miles northeast of the city of Cape Girardeau, Missouri. The site consists of approximately 6 acres.

The Kem-Pest Laboratories facility was constructed in 1964. From 1965 to 1977, various pesticide products including liquid pesticides, granular insecticides and herbicides and pesticide dust were formulated in the building located at the site. Wastes generated were disposed of in an on-site lagoon. Production and disposal ceased in 1977. The lagoon was backfilled with clay in 1981.

The cleanup of the site was divided into two distinct phases, or operable units. Operable Unit #1 addressed cleanup of soils and sediment at the site. This phase of on-site clean up commenced in March 1992 and was completed in May 1992. Operable Unit #2 addresses the ground water and formulation building, the subject of this ROD amendment.

Greater detail concerning the site characteristics and the remedial alternatives may be found in the administrative record for the site.

II. COMMUNITY RELATIONS

The United States Environmental Protection Agency (EPA) is issuing this ROD Amendment to meet public participation provisions mandated under Section 117(a) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and Section 300.435 (c)(2)(II) of the National Contingency Plan (NCP).

The Proposed Plan for this ROD Amendment was made available to the public in the administrative record file located at the Cape Girardeau Public Library and the EPA Region VII Office, Kansas City, Kansas. A public notice was published in The Southeast Missourian on October 21, 1992, announcing the start of the public comment period, the date of a public meeting, and the availability of the administrative record file at the library.

Fact sheets were also mailed to area residents, local officials, and the media announcing the availability of the project documents, the public comment period, and the public meeting.

On November 12, 1992, a public meeting was held in Cape Girardeau, Missouri. At the meeting, representatives from EPA and MDNR were available to answer questions regarding site conditions and the proposed ROD amendment.

On November 20, 1992, the site property owner requested an extension of the public comment period. In January, a public notice was published in The Southeast Missourian, indicating that the administrative record had been supplemented and was available for review and that the public comment period on the Proposed Plan was extended to January 29, 1993.

A response to comments received during the public comment period and extension is provided in the Responsiveness Summary section of this ROD Amendment.

### III. REASONS FOR ISSUING THE ROD AMENDMENT

Since the issuance of the ROD for OU #2 on December 31, 1990, new information has indicated that decontamination of surface and subsurface porous cinder block construction as found in the formulation building, and as outlined in the ROD for OU #2, would be technically infeasible. Saturation of the building cinder block construction allows for infusion of contaminants into the block. Also, EPA determined that the roof of the formulation building has deteriorated to the point that it would have to be rebuilt, rather than just decontaminated and preserved. In addition, since the issuance of the ROD for OU #2, the regulatory deadline for land disposal of contaminated construction debris was extended to May 8, 1993, which would enable the cost-effective implementation of the selected amended remedy.

This ROD Amendment addresses changes only with respect to the formulation building, and does not change the 1990 ROD with respect to the ground water and with respect to institutional controls for the property.

### IV. DESCRIPTION OF THE ORIGINAL AND AMENDED REMEDIES

The originally selected remedy in the 1990 ROD for OU #2 required the decontamination of the formulation building and ground water monitoring. Specifically, the original remedy required decontamination of the formulation building by surface layer removal and off-site incineration of decontamination debris at a RCRA-authorized disposal facility. Institutional controls to limit future land use of the site were also required. The 1990 ROD for OU #2 also considered, but did not select, the amended remedy now selected by EPA.

The selected amended remedy for OU #2 retains the same elements for ground water and institutional controls as in the original remedy. However, with respect to the formulation building, the selected amended remedy requires demolition of the building and off-site land disposal of the debris in compliance with the Resource Conservation and Recovery Act (RCRA) Subtitle C requirements.

### V. COMPARATIVE ANALYSIS OF THE ORIGINAL AND AMENDED REMEDIES

In comparing the original remedy with the selected amended remedy, EPA has determined that the original and selected amended remedies are equivalent with respect to the criteria of overall

protection of human health and the environment and compliance with state and federal requirements. This is consistent with the comparisons made in the 1990 ROD for OU #2, in which both alternatives met those criteria.

The current estimate of the cost of the selected amended remedy is \$1.23 million, which is greater than the \$640,000 amount reflected in the Proposed Plan for this ROD amendment. The explanation for this difference is contained in Section VII, Documentation of Significant Changes, of this Decision Summary.

Although the cost estimate for the selected amended remedy has risen, it is not substantially different from the slightly higher \$1.25 million estimate for the original remedy, and EPA has determined that the selected amended remedy is cost effective. The selected amended remedy also has the benefits, unlike the original remedy, of being implementable and reducing or eliminating future exposure threats to human health and the environment.

EPA has also determined that the selected amended remedy is implementable, while the original remedy is not. Demolition of the building is a proven technology, and the construction schedule is such that the selected amended remedy can be implemented within the timeframe of the regulatory extension for land disposal of the contaminated construction debris. On the other hand, decontamination, in EPA experience with similarly contaminated structures, has proven technically infeasible due to the infusion of contaminants into the cinder block construction materials.

With respect to short-term effectiveness, the original remedy and the selected amended remedy present similar site risks and take approximately the same time to implement.

With respect to long-term effectiveness, the selected amended remedy is preferred because it reduces or eliminates the threat to human health and the environment at the site from releases from the formulation building by demolishing the building and removing all debris off-site. Under the original remedy the building could not feasibly be decontaminated, and any preservation of the building for future use would require sealing the building surfaces with a coating to prevent dermal contact, with the risk of future releases should the seal be broken.

With respect to the reduction of toxicity, mobility, or volume through treatment, the selected amended remedy does not employ treatment. As discussed in the 1990 ROD for OU #2, the original remedy is the only alternative considered which employs such treatment.

With respect to the modifying criteria of state acceptance, the State of Missouri concurs with the selected amended remedy.

Finally, with respect to community acceptance, the response to comments received during the public comment period and extension is provided in the Responsiveness Summary, which is a part of this ROD Amendment.



The selected amended remedy presents the better balance of tradeoffs, with respect to cost, implementability, long-term effectiveness and permanence. The statutory preference for reduction of toxicity, mobility or volume through treatment is not met. However in the tradeoff and balancing of all nine criteria, the selected amended remedy is EPA's preferred alternative, in particular since it constitutes an implementable remedy that provides for long-term effectiveness and permanence.

## VI. STATUTORY DETERMINATIONS

### Ground Water

The 1990 ROD determined no remedial action was necessary for ground water. Since the selected amended remedy and the original remedy are alike with respect to groundwater, no new statutory determinations are made herein.

### Formulation Building

The EPA has determined, and the State of Missouri concurs, that the selected amended remedy herein satisfies the statutory requirements specified in CERCLA Section 121, which establishes the statutory requirements and preferences for remedial actions. These specify that, when complete, the selected remedy must protect human health and the environment, comply with applicable or relevant and appropriate federal and state requirements, be cost-effective, and utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. In addition, the statute includes a preference for remedies that employ treatment that permanently and significantly reduces the volume, toxicity, or mobility of hazardous wastes as a principal element.

### Protection of Human Health and the Environment

The 1990 ROD considered the remedial alternative of demolition and off-site disposal, which is the selected amended remedy herein, and determined that it was protective of human health and the environment.

### Attainment of Applicable, or Relevant and Appropriate Requirements (ARARs)

The 1990 ROD considered the remedial alternative of demolition and off-site disposal, which is the selected amended remedy herein, and determined that it met all ARARs applicable to the site.

### Cost-Effectiveness

The selected amended remedy is cost effective.

### Utilization of Permanent Solutions and Alternative Treatment Technologies to the Maximum Extent Practicable

The selected amended remedy reduces or eliminates the threat to human health and the environment at the site from releases

from the formulation building by demolishing the building and removing all debris off-site.

Preference for Treatment as a Principal Element

The selected amended remedy does not meet the preference of treatment as a principal element.

VII. DOCUMENTATION OF SIGNIFICANT CHANGES

The current estimate of the cost of the selected amended remedy, \$1.23 million, is greater than the \$640,000 amount published in the Proposed Plan for this ROD amendment.

Since the publication of the Proposed Plan and the extension of the public comment period to January 29, 1993, the issuance of this ROD Amendment has occurred later than anticipated by EPA. Construction activities for the selected amended remedy cannot proceed prior to issuance of the ROD Amendment, and construction activities must be substantially completed by the May 8, 1993 RCRA Land Ban deadline for disposal of the debris from demolition of the formulation building. As a result of a construction start later than anticipated, the construction and off-site disposal schedule had to be compressed, resulting in higher costs. Such costs include higher labor costs, different phasing of work tasks to comply with the deadline, higher equipment costs, and other changes to complete the work in an expedited manner. The current cost estimate is included in the administrative record for the site.

For estimated costs similar to the \$1.25 million estimate for the original remedy, the selected amended remedy is cost effective and has the benefits, unlike the original remedy, of being implementable and reducing or eliminating future exposure risks at the site.