



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

AUG 24 2009

Mr. Jerry Banks
Mississippi Dept. of Environmental Quality
P.O. Box 2261
Jackson, MS 39225

Dear Mr. Banks:

We are pleased to provide a copy of the Action Memorandum for the Southern Pine Wood Preserving Site located in Wiggins, Stone County, Mississippi. If you have any questions or comments concerning this document, please contact the On-Scene Coordinator at the following address:

Stephen Ball
U.S. Environmental Protection Agency
ERRB
61 Forsyth Street
Atlanta, Georgia 30303

Sincerely,

A handwritten signature in black ink, appearing to read "A. SHH", written over a large, stylized flourish.

A. Shane Hitchcock, Chief
Emergency Response & Removal Branch

Enclosure

cc: Debbie Jourdan
Dawn Taylor
Jim McGuire
Stephen Ball
Kerri Sanders
Timothy Neal



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ACTION MEMORANDUM

SUBJECT: Request for Approval of Removal Action, Including Exemption from the 12-Month Statutory Limit and \$2 Million Ceiling at the Southern Pine Wood Preserving Site, Wiggins, Stone County, Mississippi

FROM: Stephen M. Ball
On-Scene Coordinator 

THRU: Shane Hitchcock, Chief
Emergency Response and Removal Branch 

TO: Franklin E. Hill, Director
Superfund Division

I. PURPOSE

The purpose of this Action Memorandum pursuant to Section 104 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) is to request and document approval of a time-critical removal action and exemption to the statutory \$2 million and 12-month time limits imposed by section 104(c)(1) of CERCLA for the Southern Pine Wood Preserving Site (the Site) located in Wiggins, Stone County, Mississippi.

The site poses a threat to public health and the environment that meets the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) section 300.415(b)(2) criteria for removal actions. This removal action is anticipated to be fund lead with a total estimated project ceiling of \$3,372,000 of which an estimated \$2,500,000 comes from the Regional Removal Allowance.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

Site ID Number: A4YM
Type: Time-Critical Removal
CERCLIS No.: MSD008208886

1. Removal Site Evaluation

Southern Pine Wood Preserving is a 5.5-acre site located at 1418 College Avenue in Wiggins, Mississippi. It is located in a residential area, and the

property is zoned residential. The nearest residence is located within 200 feet of the site. The majority of the site is heavily vegetated with pine trees. Surface water from the site flows primarily south and southwest to Fourmile Creek, which flows into Red Creek. Red Creek is located 3.5 miles south of the site.

Operations at Southern Pine included impregnating wood products with creosote and pentachlorophenol (PCP). Operations began in 1960 and ceased in 1984. In 1984, the Mississippi Commission of Natural Resources (MSCNR) issued an order to close out the surface impoundments on site, which previously received wastewater from the wood treatment process. It is assumed that all treatment vessels, tanks and other structures associated with the site were dismantled and removed from the site at that time. A dilapidated wooden structure, possibly used as an office, is all that remains on site from the wood preserving operation.

The Mississippi Department of Environmental Quality (MSDEQ) referred the site to the Environmental Protection Agency (EPA) in November 2008. EPA subsequently conducted a Removal Site Evaluation (RSE) to determine if a removal action was warranted. The assessment scope included surface and subsurface soil sampling, local interviews, and the identification of various environmental and physical hazards at the site.

The RSE revealed significant amounts of source material containing PCP and Polychlorinated Aromatic Hydrocarbons (PAH). Dioxins were also detected in a limited amount of site soils. The maximum detected concentration of PCP was 660 ppm with an RAL for PCP at 297 ppm. The maximum detected concentration of PAHs (risk evaluated as Benzo(a)pyrene (BaP) Equivalents) was 216 parts per million (ppm). The RAL for BaP Equivalents is 1.50 ppm. The maximum detected concentration of Dioxins (risk evaluated as 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8 TCDD) toxicity equivalent quotients (TEQs)) was 60 parts per billion (ppb) with an RAL of 1 ppb. However, there were only two RAL exceedances of Dioxins (one surface and one subsurface in the same soil boring) above RALs, limiting the Dioxin contamination to a small area.

Delineation efforts during the RSE suggest that a large portion of the site contains PAHs and PCP at concentrations above EPA Region 4 RALs. Combined with a depth range of contamination between 1 and 4 feet below ground surface (bgs), an estimated 15,000 cubic yards of soil are laden with PAHs and PCP above RALs.

2. Physical Location/Site Characteristics

The Southern Pine Wood Preserving Site is located in the town of Wiggins, Mississippi just east of US Highway 49. The site is approximately 5.5

acres in size and is currently zoned residential. The approximate elevation of the site is 220 feet above mean sea level based on topographic contours taken from the U.S.G.S. 7.5 Minute Wiggins Quadrangle Map. Groundwater is encountered within six to eight feet below ground surface at the site. The geographic coordinates are 30 degrees 51' 31" N latitude and 89 degrees 09' 13" W longitude.

3. Site Characteristics

The majority of the site is heavily vegetated with pine trees. Surface water runoff occurs primarily as sheet flow south and southwest. The sheet flow empties into Fourmile Creek, which flows from north to south on the western side of the site. Fourmile Creek then flows into Red Creek approximately 3.5 miles south of the site. The nearest residence adjoins the site boundary on the western side. There are several residences within a quarter of a mile to the east, south, west and north. According to the City of Wiggins Water Department, residents in the immediate vicinity of the site are connected to the public water distribution system.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

A release of hazardous substances, PCP, PAHs, and Dioxins has occurred at the site and contaminated surface and subsurface soils and groundwater. The concentrations of these releases exceed EPA Region 4 RALs and may pose a threat to public health. The potential for continued release of these hazardous substances over time is likely due to its proximity to the surface and the shallow groundwater table. These contaminants will likely migrate onto adjoining residential properties if no action is taken.

MSDEQ has provided limited analytical data from sediment samples collected in Fourmile Creek, however, available data demonstrates that off site migration of the contaminants is occurring. One sediment sample is above PAH RALs and approaching PCP RALs. Other sediments have detections of the PAHs and PCP, but they have not exceeded RALs. These sediments may pose the potential for release to downstream communities and serve as evidence that contamination is migrating off site.

PCP, PAHs, and Dioxins are hazardous substances, listed in Title 40 of the Code of Federal Regulations (CFR) Section 302.4, as referred to in Section 101 (14) of CERCLA as amended. Hazardous substances at the site will continue to pose a threat to public health, welfare and the environment, if not mitigated.

5. NPL status

This Site is not on the National Priorities List (NPL). Site assessment activities are ongoing.

6. Maps, pictures, and other graphic representations

Maps, pictures and other graphics are attached.

B. Other Actions to Date

1. Previous Actions

The MSCNR issued Southern Pine an administrative order to submit a work plan to address the disposal of water in the surface impoundment and any obviously contaminated soils associated with the impoundment at the site in February 1984. A closure plan was subsequently prepared and implemented in December 1984. In February 1987, the MSCNR determined that the surface impoundment had been clean-closed and that it was no longer subject to the hazardous waste regulatory program. In March 1987, EPA questioned the clean-closure and issued a Complaint and Compliance Order in November 1989. The court ruled in favor of EPA, however Southern Pine appealed the ruling and based on the appeal, the court ruled in favor of Southern Pine. Finally, in August 2007, the MSDEQ collected soil/sediment samples to determine if past practices had affected the surface water migration pathway. Based on that assessment, MSDEQ referred the site to EPA Region 4's Emergency Response and Removal Branch (ERRB) in November 2008.

2. Current Actions

There are no on going removal activities at the site. ERRB has conducted assessment actions leading to the hereby proposed actions.

C. State and Local Authorities' Role

1. State and Local Actions to Date

In November 2008, MSDEQ conducted a reassessment of the site and subsequently referred it to EPA for further investigation. EPA coordinated the RSE activities with MSDEQ. Further coordination will continue during all future actions.

2. Potential for Continued State and Local Response

The MSDEQ has referred the site to EPA because they do not have sufficient funds to implement this action in a timely manner. EPA will continue to coordinate with MSDEQ during the removal activities.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

PCP, PAHs and Dioxins are hazardous substances, listed in Title 40 of the Code of Federal Regulations (CFR) Section 302.4 as referred to in Section 101 (14) of CERCLA, as amended. PCP, PAH and Dioxin contaminated soils at the site pose a significant threat to public health. The threat comes primarily from potential human exposure to these hazardous substances. Direct contact, inhalation and ingestion of these hazardous substances are the primary pathways of exposure. Continued release of these hazardous substances may cause chronic health effects to persons living nearby.

Site conditions meet the requirements for initiating a time-critical removal action according to criteria listed in Section 300.415 (b)(2) of the NCP:

Section 300.415 (b)(2)(i): “*Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.*” PCP, PAHs and Dioxins exist on site, in surface soils, at concentrations above EPA Region 4 RALs. There is risk of potential exposure to nearby residential communities via direct contact, inhalation and ingestion. The closest home to the site is directly adjacent and to the west of the site. The distance from the house to the site property boundary is approximately 200 feet. Children from the closest house as well as the surrounding communities may play on the site property as it is currently wooded. The site is not secure, and there is a dirt road leading into the site. Recreational activity is expected to occur on site. Trespassers and hunters have the potential to be exposed via direct contact, inhalation and ingestion.

Animal populations including burrowing animals whose habitats exist on or around the site could be exposed to the contaminants via direct contact, inhalation and ingestion. Contaminants are also migrating off site into Fourmile Creek exposing native fish with a potential to bioaccumulate.

Section 300.415 (b)(2)(iv): “*High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate.*” PCP, PAHs and Dioxins exist on site, in surface soils, at concentrations above EPA Region 4 RALs. There is significant risk of off site migration of contaminants at concentrations above RALs. Off site migration is occurring via runoff to the west into Fourmile Creek. Limited data shows PAHs at concentrations above RALs in Fourmile Creek sediments. Migration onto nearby residential properties is expected to occur if mitigation actions are not taken. The closest residence is located 200 feet to the west of the site.

Fourmile Creek discharges to Red Creek 3.5 miles downstream, which is considered a fishery. Also, recreational activities such as swimming and canoeing are most likely to occur on Red Creek. Air migration risk through airborne dust particles is also a concern due to the proximity of the closest residence at 200 feet.

Section 300.415 (b)(2)(v): “ Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.” PCP, PAHs and Dioxins exist on site, in surface soils, at concentrations above EPA Region 4 RALs. It is likely that contamination will migrate to adjacent properties due to normal rainfall events if no removal action is taken. Limited data already indicates contaminants are migrating off site into Fourmile Creek due to normal rainfall events.

Section 300.415 (b)(2)(vii): Availability of other appropriate federal or state response mechanisms to respond to release.” The MSDEQ has insufficient funds to conduct a time-critical removal action at this site. No other government entity has the ability to conduct the necessary removal actions at the site.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare or the environment.

V. EXEMPTION FROM STATUTORY LIMITS

This removal action is requesting an exemption to the 12-month and \$2 million statutory limit imposed by Section 104(c) of CERCLA. The site conditions meet the Emergency Exemption criteria.

- i. **There is an immediate risk to public health or welfare or the environment:** The site represents an ongoing release to the environment of CERCLA hazardous substances. The uncontrolled conditions of the site allow trespassers to come into direct contact with contaminated soils. In addition, contaminants continue to migrate off site into Fourmile Creek and potentially onto nearby residential properties.
- ii. **Continued response actions are immediately required to prevent, limit, or mitigate an emergency:** Weather conditions continue to expose and aid in the migration of hazardous substances present at the site. If not addressed, PCP, PAHs and Dioxins could come to be located on the adjacent residential property as well as nearby residential properties, greatly increasing the risk of exposure to sensitive populations such as children and the elderly. In addition, there is limited analytical data that suggest the contaminants are migrating into Fourmile Creek. Left unaddressed, contaminants could migrate further downstream, thus exposing additional human and animal populations.
- iii. **Assistance will not otherwise be provided on a timely basis:** Neither the state nor the county governments have access to nor resources to

acquire the proper disposal equipment and services required for a site of this magnitude.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

EPA's proposed actions at the site are as follows:

- a. Clearing and grubbing of vegetation on the site.
- b. Delineation of contaminants in areas previously inaccessible.
- c. Excavation and off site disposal of contaminated soils.
- d. Backfill excavation with clean soils.
- e. Seed and restore site vegetative cover.
- f. Refer site back to MSDEQ following completion of response actions as no post removal site controls are anticipated as part of this response.

2. Contribution to remedial performance

The proposed removal action is warranted to address the threats discussed in Section III, which meet the NCP Section 300.415 (b)(2) removal criteria. The removal action contemplated in this Action Memorandum will be consistent with any future remedial action.

3. Description of alternative technologies

No alternative technologies have been determined at this time.

3. Environmental Evaluation/ Cost Analysis (EE/CA)

This is a time-critical removal action, and an EE/CA is not required.

4. Applicable or relevant and appropriate requirements (ARARs)

In accordance with Section 300.415(j) of the NCP, on site removal actions conducted under CERCLA are required to attain ARARs to the extent practicable, considering the exigencies of the situation. While administrative requirements

need not be met for on site ARARs, substantive requirements will be met to the extent practicable for both applicable and/or relevant and appropriate requirements. Practicability is based on an evaluation of the degree of urgency and the scope of the removal action. Off site removal activities need only comply with all applicable federal and state laws, unless there is an emergency. All waste transferred off site will follow the CERCLA Off-Site Rule. A letter to MSDEQ requesting state ARARs identification was sent on July 13, 2009.

5. Project schedule

Response actions at the site will begin upon approval of this Action Memorandum. The removal is expected to take over 12 months to implement due to the high volume of contaminated soil present at the site.

B. Estimated Costs

Extramural Costs:

<u>Regional Allowance Cost:</u>	<u>Total</u>
ERRS	\$2,500,000
<u>Non-Regional Allowance Cost:</u>	
START	\$310,000
<u>Subtotal, Extramural Costs:</u>	\$2,810,000
<u>Contingency (20%)</u>	\$562,000
<u>TOTAL SITE BUDGET</u>	\$3,372,000

VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If this response action is significantly delayed or not taken, there will be a continued threat of release of PCP, PAH and Dioxin laden soils into the environment by weather erosion, increasing the possibility of exposure to the public, groundwater and environment.

VIII. OUTSTANDING POLICY ISSUES

No outstanding policy issues have been determined at this time.

IX. ENFORCEMENT

ERRB anticipates that this will be a fund lead response. The On-Scene Coordinator will continue to coordinate with the CERCLA Office of Environmental Accountability on enforcement strategy. See attached Enforcement Addendum for detailed enforcement strategy information. The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$4,808,182¹. [(\$3,372,000 + \$25,000) + (41.85% of 3,372,000)]

X. RECOMMENDATION

This decision document represents the proposed removal action for the Southern Pine Wood Preserving Site in Wiggins, Stone County, Mississippi. This document was developed in accordance with CERCLA as amended, and not inconsistent with the NCP. The document is based on the administrative record for the site.

Conditions at the site continue to meet the NCP Section 300.415 (b) (2) criteria for a removal action and the criteria for an emergency exemption 300.415(b)(5)(i). This removal action is anticipated to be fund lead with a total estimated project ceiling of \$3,372,000 of which an estimated \$2,500,000 comes from the Regional Removal Allowance. I recommend your approval of this Action Memorandum.

APPROVED:


Franklin E. Hill, Director
Superfund Division

DATE:

8/13/09

DISAPPROVED: _____

Franklin E. Hill, Director
Superfund Division

DATE: _____

Attachments:

Enforcement Addendum

¹Direct costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of the removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.