



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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

SEP 25 2013

ACTION MEMORANDUM

SUBJECT: Request for a Change of Scope for Time-Critical Removal Action at the Southeastern Wood Preserving Site, Madison County, Canton, MS

FROM: Kevin Eichinger, On-Scene Coordinator *(initials) 9/25/13*
Emergency Response and Removal Branch

THRU: James W. Webster, Chief *9/25/13*
Emergency Response and Removal Branch

TO: Franklin E. Hill, Director
Superfund Division

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of a Change of Scope for the Southeastern Wood Preserving (SWP) Site (the Site) Removal Action located in Canton, Madison County, Mississippi. The Site continues to pose a threat to public health, welfare and the environment that meets the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) Section 300.415(b) criteria for removal actions and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Section 104(c) emergency exemption from the \$2 million and twelve-month statutory limitations. Initial removal activities commenced under an Emergency Action Memorandum approved in May 1986. In August 1989, a twelve-month Statutory Limit and Ceiling Increase Action Memorandum was approved followed by another Ceiling Increase and \$2 million Exemption Action Memorandum approved in 1990. Additional Ceiling Increase Action Memorandums were approved and signed on September 15, 1993, July 20, 2009, and May 4, 2010. The Site was listed on the National Priorities List (NPL) in May 2012.

A change in scope is required in order to address dioxin and benzo(a)pyrene soil contamination at 12 residential and commercial properties adjacent to the Site. The project ceiling for this change in scope, if approved, will be \$1,576,662, of which \$1,030,357 will be funded through the Regional Removal Allowance. The total ceiling for the Site will remain at \$8,903,709.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID: MSD000828558
Site ID #: 041L
Removal Category: Time-Critical Removal

A. Site Description

1. Removal Site Evaluation

The Region 4 Superfund Remedial program conducted the Phase 1 Remedial Investigation Feasibility Study between November 6, 2012 and April 1, 2013, which included sampling of surface and subsurface soils from residential and commercial properties adjacent to the SWP Site.

In order to evaluate if any of the private properties adjacent to the SWP Site are impacted by Site contaminants, surface and subsurface soil samples were collected from 45 locations (SWP201-SWP245). At each location, a five-point composite surface soil sample was collected for chemical analysis from zero to six inches and subsurface samples were to be collected from six to twelve inches below ground surface, in an approximate 50 × 50 foot grid.

Of the 45 properties sampled, ten exceeded the Regional Removal Management Levels (RML) for dioxins and benzo(a)pyrene in residential soils, and two commercial properties exceeded the Regional RMLs for dioxins and benzo(a)pyrene in industrial soils. The contamination was found at a depth of zero to six inches. See Table 1 for a summary of these sample results.

Table 1: Summary of Results for Properties Exceeding the Regional Removal Management Levels

Address	Heptachlorodibenzodioxin	Dioxin Toxic Equivalent (TEQ)	Benzo(a)pyrene	Benzo(a)pyrene TEQ
Residential Regional Removal Management Levels	9,400 ng/kg	150 ng/kg	1,500 µg/kg	1,500 µg/kg
340 Miller Street	52,000 ng/kg	600 ng/kg		
525 Barfield Street	42,000 ng/kg	460 ng/kg		
535 Barfield Street	78,000 ng/kg	1,000 ng/kg	3,800 µg/kg	5,491 µg/kg
543 Barfield Street	57,000 ng/kg	500 ng/kg		
549 Barfield Street	22,000 ng/kg	230 ng/kg		
553 Barfield Street	56,000 ng/kg	470 ng/kg	2,700 µg/kg	4,704 µg/kg

557 Barfield Street	59,000 ng/kg	500 ng/kg		
561 Barfield Street	10,000 ng/kg			
563 Barfield Street	20,000 ng/kg	200 ng/kg		
605 Barfield Street	23,000 ng/kg	240 ng/kg		
Industrial Regional Removal Management Levels	50,000 ng/kg	2,300 ng/kg	24,000 µg/kg	24,000 µg/kg
388 Miller Street	52,000 ng/kg			
Parcel #093D-19A-279/02.00 - S/S Covington Drive	54,000 ng/kg			

2. Physical Location

The Site is a former wood preservation facility, which operated from 1928 until approximately 1984. The Site is approximately 45 acres and is located in a predominantly commercial/residential area just east of downtown Canton, Madison County, Mississippi. Batchelor Creek and Canadian National Railroad border the Site to the north. The City of Canton's drinking water well field is located just south of the Site. An abandoned industrial area lies to the east and a residential area borders the Site to the south and to the west.

There are ten residential and two industrial properties of concern. The properties are spread throughout a 17-acre area of Northeast Canton, Mississippi. The properties are located south of the SWP Site, across Covington Drive, between Miller Street to the West, Parker Street (Barfield Street) to the East and North of Barfield Street. One property of concern is located near the intersection of Yandell Avenue and Miller Street. One additional property of concern is located near the intersection of Miller Street and Covington Drive.

In addition to these 12 properties, six properties that have not been sampled to date may need to be included in any potential action due to the proximity to other contaminated properties. Access was not granted to these properties at the time of the sampling events.

3. Site Characteristics

The former SWP Site is located along Covington Drive in a predominantly agricultural and residential area. The SWP Site covers approximately 45 acres of land. Current Site features include a scale house presently being used by a wood chipping operation that leases property on the eastern portion of the Site; a silo which housed wood chips used for boiler fuel currently being used for storage; and a large stockpile of contaminated soil and waste. The City of Canton owns active and inactive municipal drinking water wells north, south, east, and west of the Site. The Site is currently owned by Madison County Industrial Development Authority.

The wood treating process involved debarking of Southern Yellow Pine timbers and placing them in retort cylinders for drying and pressure treatment using creosote and pentachlorophenol as preservatives.

The residential properties consist of small lots with houses and outbuildings. A number of the residential properties have vegetable gardens. A few lots are sparsely vegetated, and exposed surface soil is present; playground equipment is also present. Vacant lots are not fenced, and there is also evidence of exposed surface soil and children playing in these areas.

Figures showing the Site Location and Layout and Sampling figures are included in Attachment 2.

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

Benzo(a)pyrene and dioxins are hazardous substances as defined by CERCLA 101 (14) and listed in Title 40 of the Code of Federal Regulations (CFR), Section 302.4. The Environmental Protection Agency's Technical Services Section (TSS) has reviewed the residential sampling results and determined there is a threat to public health and the environment resulting from the elevated benzo(a)pyrene and dioxin contamination present at the Site. This contamination is persistent and has been released to the yards of at least 12 properties throughout the Center Terrace Community of the City of Canton.

5. National Priorities List (NPL) Status

The Preliminary Assessment and Site Inspecting (PA/SI) was completed on July 17, 2009. The Site was proposed to the NPL in March 2011. The Site was listed on the NPL on May 15, 2012. The RI/FS, including a Human Health Risk Assessment, is underway with phase 1 completed in May 2013.

6. Maps, pictures, and other graphic representations

Maps and figures are found in Attachment 2 of this Action Memorandum.

B. Other Actions to Date

1. Previous Actions

During the 1970s, the facility received several notices of violation and fines from the Mississippi Pollution Control Commission (currently the Mississippi Bureau of Pollution Control [MBPC]) for gross contamination of the process area; releases of hazardous substances to Batchelor Creek; and inadequate treatment of process wastewater before it was discharged into the city sewage treatment facility. Before 1977, the facility reportedly discharged wastewater directly into Batchelor Creek, which flowed through a city park, a residential area, and to downtown Canton before it entered Bear Creek. When operations ceased, the property had large areas of contamination in the treatment and storage areas, as well as piles of contaminated soil, creosote sludge storage tanks, and three unlined wastewater surface impoundments.

In September 1985, the MBPC conducted a preliminary assessment of the SWP Site. The MBPC observed several piles of creosote-contaminated soil and recommended that a Site

Investigation was needed. In December 1985, MBPC conducted a Site Inspection (SI). Their investigation included collection of one soil sample from the process area, two collocated surface water and sediment samples from Batchelor Creek upstream of the Site, and two collocated surface water and sediment samples from Batchelor Creek downstream of the Site. The soil sample revealed concentrations of semi-volatiles organic compounds (SVOC). No contaminants were detected in surface water upstream of the Site, and downstream of the Site the surface water contained detectable concentrations of SVOCs.

As a result of the MBPC SI, the EPA initiated an emergency response action at the SWP Site in 1986 to stabilize three unlined surface impoundments that contained creosote sludge and water. The impoundments were excavated and sludge and soil stabilized with lime kiln dust. Approximately 8,000 cubic yards of stabilized waste were stockpiled on the Site. In 1988, oily waste was observed leaching into the creek. The EPA removed contaminated soil observed leaching into the creek, installed a geofabric liner in the bed of the creek, and lined the banks with riprap to prevent further erosion.

Between 1991 and 1994, the EPA treated the on-site stockpile using on-site biotreatment, but the treated waste failed to reach the land disposal restriction (LDR) standards for wood preserving waste. This partially treated waste was placed within an on-site containment cell. In 1994, the Mississippi Department of Environmental Quality (MDEQ) prepared a SI prioritization report using existing sample data and updated targets to include private residential wells and fisheries in Batchelor Creek, Bear Creek, and the Big Black River. In 1997, the Site did not meet the NPL threshold, and the EPA assigned a No Further Remedial Action Planned (NFRAP) status. In 2002, the EPA Region 4 NPL coordinator reevaluated the 1998 score and included dioxin contamination and soil exposure pathways in a new score, but the Site still fell below the NPL threshold.

In October 2002, the MDEQ provided the EPA with the results of an investigation of Batchelor Creek, during which polynuclear aromatic hydrocarbons (PAHs) (creosote-component compounds) were detected. On February 26, 2003, in response to the MDEQ concerns, a site reconnaissance was conducted by the EPA and MDEQ. Based on this visit, the EPA concluded that the surface water pathway was of concern and agreed that contamination was present in Batchelor Creek. The EPA also concluded that the soil exposure pathway was of some concern; however, because of the low number of targets (population on residential properties), the soil exposure pathway would not significantly add to the overall Site score. As a result, the EPA maintained the Site's NFRAP status. In 2006, the MDEQ discovered new historical information. An aerial photograph taken in 1965 revealed the approximate location of a PCP treatment area on the east end of the SWP property. MDEQ also found an old legal property description which indicated a larger Site "footprint." With the addition of this new information and the recent population growth in Canton, the EPA agreed that further investigation of the Site was warranted.

In 2007, EPA's Science and Ecosystem Support Division (SESD) personnel advanced soil borings along the northern border of the Site, between the soil stockpile, the former lagoons, and Batchelor Creek to evaluate whether pathways for free-phase creosote to enter Batchelor Creek exist and, if so, where they enter the creek. Visible and odorous

impacts (believed to be creosote) to the soil were observed in several of the borings adjacent to and west of the soil stockpile. In addition, free-phase creosote was observed in at least one boring located adjacent to the soil stockpile. SESD concluded that the presence of free-phase creosote in the subsurface soil at the Site indicated a potential for creosote to flow into Batchelor Creek.

The EPA conducted an Expanded Site Investigation (ESI) in September 2008 to determine if the SWP Site should be added to the NPL. Surface and subsurface soil samples collected during the ESI from source areas contained benzo(a)anthracene, benzo(a)pyrene (BaP), benzo(b)fluoranthene, benzo(k)fluoranthene, PCP, and other contaminants. Analytical results for the ground water sample collected on the Site indicated the presence of benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene, and other contaminants at elevated concentrations. Analytical results for sediment samples collected from Batchelor Creek indicated the presence of benzo-(a)anthracene, BaP, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and other constituents at elevated concentrations.

In response to the ESI, in August 2009, Region 4 Superfund Emergency Response and Removal Branch (ERRB) removed contaminated soil and sediment from the bottom and south bank of Batchelor Creek, temporarily stockpiling this material on-site. The material was later transported and disposed of in a landfill. The creek was backfilled and lined with a geotextile liner and riprap. Approximately two to three feet of clay and clean topsoil were placed and graded over much of the Site including the Batchelor Creek Stockpile Area and areas historically used during the wood treating operations. A slurry wall was installed along the south bank of Batchelor Creek between February and March 2010. The wall extends approximately 1,500 feet along the creek bank. It is three feet wide, and extends to a depth of 30 feet.

In May 2010, response actions continued at SWP. Additional soil was excavated from the banks of Batchelor Creek. All soil that was excavated during this response action and the August 2009 action was transported to an off-site landfill for final disposal.

The Region 4 Superfund Remedial program conducted the Phase 1 Remedial Investigation Feasibility Study between October 24, 2013, and April 1, 2013, which included sampling of surface and subsurface soils from residential and commercial properties adjacent to the SWP Site.

2. Current Actions

The Superfund Remedial Program is currently conducting the Remedial Investigation Feasibility Study and Human Health Risk Assessment.

C. State and Local Authorities' Role

1. State and Local Actions to Date

The EPA continues to coordinate activities with MDEQ.

2. Potential for Continued State and Local Response

It is not anticipated that MDEQ will perform any further response activities at the Site. The Emergency Response and Removal Branch (ERRB) will continue to coordinate with state and local agencies during the removal activities.

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

A. Threats to Public Health or Welfare

Benzo(a)pyrene and dioxins are hazardous substances as defined by CERCLA 101 (14) and listed in Title 40 of the Code of Federal Regulations (CFR), Section 302.4. The EPA's TSS has reviewed the EPA residential sampling results and the EPA Removal Site Evaluation and determined there is a threat to public health and the environment resulting from the elevated benzo(a)pyrene and dioxin contamination present at the Site. This contamination is persistent and has been released to the yards of at least 12 properties of the Center Terrace Community of the City of Canton.

The Benzo(a)pyrene and dioxin contamination present poses the following threats to public health or welfare as listed in Section 300.415 (b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP):

- 1. Section 300.415 (b)(2)(i) *Actual or potential exposure to nearby human populations, or the food chain from hazardous substances, pollutants or contaminants;*** The elevated benzo(a)pyrene and dioxin contamination presents a high probability of exposure to persons who live in the community. The contamination is found at ground surface. The Site consists of residential properties that are unsecured. There are children in this community who play in multiple yards. A number of the yards also have vegetable gardens. The hazardous substances in the soil pose a direct contact threat to the surrounding population. Benzo(a)pyrene and dioxins are classified as probable human carcinogens and have been shown to have mutagenic, reproductive and developmental health effects.
- 2. Section 300.415 (b)(2)(iv) *High levels of hazardous substances or pollutants or contaminants in the soils largely at or near the surface, that may migrate;*** The analytical results of soil samples collected by the EPA show benzo(a)pyrene and dioxins in the top few inches of soil. Exposures occur when residents conduct routine activity such as cutting the grass. Some of the yards are very thinly grassed and the lawn mowers produce visible emissions of dust/dirt that blow onto neighboring yards or in the street. The benzo(a)pyrene and dioxin contamination found in these yards migrated there from the former creosote and pentachlorophenol wood treating facility several hundred feet away. Other than the roads, there is little protection to prevent further migration.
- 3. Section 300.415 (b)(2)(v) *Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;*** Drought conditions may contribute to the potential for air-borne migration of surface soils. Wind action during

dry conditions can lead to migration of fine-grained particles from contaminated surface soil. This dust can be ingested and brought into the homes.

4. **Section 300.415 (b)(2)(vii) *The availability of other appropriate federal or state response mechanisms to respond to the release***; There are no other federal agencies available to respond. The State of Mississippi has requested the EPA's assistance with the removal action at this City of Canton Community and has indicated it lacks the resources necessary to deal with the threat. MDEQ has indicated that the State lacks available funds to implement a cleanup at the Site in a timely manner. If the EPA Region 4 does not respond to this release, no other federal agency, state or local government has the capacity to respond in a time-critical manner.

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

A twelve-month exemption based on the CERCLA section 104 (c) emergency exemption was approved in the August 18, 1989, Action Memorandum. A \$2 million exemption based on the CERCLA section 104(c) consistency exemption was approved in the July 5, 1990, Action Memorandum. The EPA Regional Administrator requested Headquarters review and approval of the July 5, 1990, Action Memorandum to clarify the appropriate use of the consistency exemption at the non-NPL site. The EPA headquarters approved the consistency exemption request in a memorandum dated August 9, 1990, (attached). This Site has since been listed on the NPL.

This Site presents a threat to public health and welfare and the environment, which can currently only be mitigated by the completion of the removal action. Conditions at the Site continue to meet the criteria listed in CERCLA 104(c) for the emergency and consistency exemptions from the statutory limits of 12 months and \$2 million and are sufficient to warrant a removal action based upon those factors listed under Section 300.415(b)(2) of the NCP.

A. Emergency Exemption

1. 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. Analytical results from waste samples collected from residential and commercial properties adjacent to the SWP Site contain numerous hazardous substances related to benzo(a)pyrene, dioxin and pentachlorophenol. Benzo(a)pyrene and dioxin exposure can result in skin rashes, effect kidney and liver function and have mutagenic and development health effects, and the EPA has determined

benzo(a)pyrene and dioxin are probable human carcinogens. The contamination in the yards was found at ground surface, and the public may be exposed while mowing their grass, working in vegetable gardens, eating vegetables grown on the property, walking on exposed soil, handling outdoor pets or when children are playing the yards. The EPA is currently demobilized from the Site, and the Agency for Toxic Substances and Disease Registry (ATSDR) has issued interim guidelines to the residents to reduce exposure. Guidelines include leaving shoes outside, limiting outside activities, thoroughly washing vegetable and pets and frequent hand washing.

2. Continued response actions are immediately required to prevent, limit, or mitigate an emergency:

The large volume and high levels of hazardous substances contained in residential soils present an immediate need for continued response actions. Removal of the contaminated soil and restoration with clean soils will eliminate the exposure risk from benzo(a)pyrene and dioxins to the current and future homeowners, residents and occupants.

3. Assistance will not otherwise be provided on a timely basis:

Neither the State nor local governments have sufficient resources currently available to them to undertake the proposed actions. There are no viable potentially responsible parties, and the EPA remedial program estimates in excess of two years before any remedial cleanup actions could occur at the Site.

B. Consistency Exemption

1. Continued response actions are otherwise appropriate and consistent with the remedial action to be taken:

The proposed removal actions would be consistent, or at a minimum not foreclose, any future remedial action. Removal of the contaminated soil will not interfere with any likely remedial alternative to address soil and surface water contamination.

Removal of the contaminated soil will decrease the threats to human health and the environment which is consistent with remedial objectives. The Superfund Remedial program requested ERRB to evaluate the residential yards and concurs with the proposed removal actions.

The proposed actions are appropriate to avoid a foreseeable threat and prevent further migration of the contaminants. The removal of the surface soil contamination will eliminate the near-term threat of direct contact with the hazardous substances in the residential soils.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The EPA proposed actions include the following:

- a) Survey properties to establish current grade and property boundary locations;
- b) Inventory existing plants, grasses, and outbuildings on each property;
- c) Excavate contaminated surficial soils at the Site until benzo(a)pyrene and dioxin levels are less than the site specific preliminary remedial goals, or the groundwater level is reached, or a maximum depth of two feet below ground surface is reached;
- d) Backfill with clean soil, shape to original contours, and lightly compact;
- e) Replace/repair any damaged concrete, piping, fencing, outbuildings, etc.;
- f) Provide temporary on-site storage of contaminated soils generated during removal and decontamination activities, pending further waste characterization and profiling/treatment/reuse/recycling;
- g) Conduct in-situ/ex-situ screening and/or collect samples for laboratory analysis as necessary;
- h) Perform on-site treatment of characteristically hazardous waste, if appropriate;
- i) Investigate staging contaminated soil in the existing waste containment cell for further action by the Remedial Program;
- j) Arrange for off-site transportation and disposal/treatment of contaminated soil according to applicable regulations as necessary;
- k) Maintain site security and limit access during implementation of the removal action;
- l) Conduct all removal actions pursuant to an EPA approved Health and Safety Plan;
- m) Relocate residents if necessary; and
- n) Re-establish vegetation.

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 would be consistent with any remedial action.

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

This proposed action is time-critical and does not require an EE/CA.

4. Applicable or Relevant and Appropriate Requirements (ARARs)

In accordance with the NCP at 40 CFR § 300.415(j), on-site removal actions conducted under CERCLA are required to attain applicable or relevant and appropriate requirements (ARARs) to the extent practicable considering the exigencies of the situation or provide grounds for invoking a CERCLA waiver under Section 121(d)(4). In determining whether compliance with ARARs is practicable, the lead agency may consider appropriate factors, including (1) the urgency of the situation; and (2) scope of the removal action to be conducted. Additionally, under 40 CFR § 300.405(g)(3), other advisories, criteria, or guidance may also be considered (so-called To-Be-Considered or TBC) when conducting the removal action.

Under CERCLA Section 121(e)(1), federal, state or local permits are not required for the portion of any removal or remedial action conducted entirely on-site as defined in 40 CFR §300.5. See also 40 CFR §300.400(e)(1) & (2). On-site means the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action. On-site response actions must comply, to the extent practicable, with substantive but not administrative requirements of ARARs. Off-site activities such as transportation and disposal of wastes are required to comply with all applicable requirements, including the administrative portions.

As provided in CERCLA Section 121 (d)(3) and the Off-site Rule at 40 CFR §300.440 *et seq.* the off-site transfer of any hazardous substance, pollutant, or contaminant generated during the response action will be sent to a treatment, storage, or disposal facility that is in compliance with applicable federal and state laws and has been approved by the EPA for acceptance of CERCLA waste.

A letter was sent to the State of Mississippi on August 12, 2013, requesting identification of any State ARARs for the EPA's consideration prior to initiation of the on-site response action activities. Initial communications are taking place with the State to identify ARARs. Depending upon results of further investigation of the Site, additional ARARs may be applicable. The EPA On-Scene Coordinator is in communication with the State to develop an approach consistent with all ARARs as practicable.

5. Project schedule

Upon approval of this Action Memorandum and funding for this proposed removal action, initial removal activities will begin within one month. This removal action will take approximately 20 weeks of on-site work to complete, plus additional time to establish vegetation dependent upon weather conditions.

C. Estimated Costs

The current Site Ceiling, approved with a Ceiling Increase Action Memorandum on May 4, 2010, has sufficient capacity to address this action with reallocation of funds from the Contingency and USCG/GST line items to the ERRS and START line items.

	Current Ceiling	Remaining Ceiling Balance	Change to Ceiling	Project Ceiling	Proposed Reallocated Ceiling
Extramural Costs					
<u>Regional Allowance Costs</u>					
ERRS	\$7,705,291	\$850,000	+\$180,357	\$1,030,357	\$7,885,648
<u>Non-Regional Allowance Costs</u>					
START	\$100,800	\$52,662	+\$244,338	\$297,000	\$345,138
USCG/GST	\$50,000	\$50,000	-\$50,000	\$0.00	\$0.00
<u>Subtotal, Extramural Costs:</u>	<u>\$7,856,091</u>	<u>\$952,662</u>	<u>+\$374,695</u>	<u>\$1,327,357</u>	<u>\$8,230,786</u>
Contingency	\$1,047,618	\$624,000	-374,695	\$249,305	\$672,923
TOTAL, REMOVAL ACTION PROJECT CEILING:	\$8,903,709	\$1,576,662	\$0.00	\$1,576,662	\$8,903,709

Note: CERCLA Section 104(b) investigatory costs are not included in the estimate because they do not count against the removal action project ceiling.

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

If this response action is significantly delayed or not taken, the potential for disturbances that result in additional release will continue, increasing the potential for migration of dioxins and benzo(a)pyrene contaminated soil and increasing the possibility of exposure to the public and the environment.

VIII. OUTSTANDING POLICY ISSUES

No outstanding policy issues have been identified at this time.

IX. ENFORCEMENT

Enforcement activities have been initiated and are ongoing. It is expected that this Site will be conducted as a fund-lead removal action. See Attachment 1, "Enforcement Addendum" for more detail.

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 using the following formula:

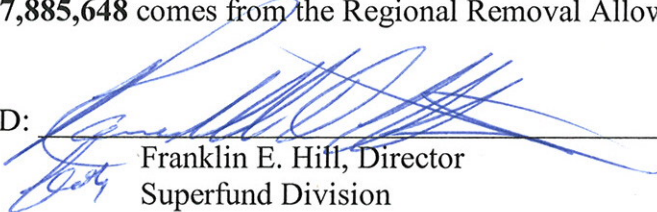
$(\text{Total Extramural Costs} + \text{Total Intramural Costs}) + (40.97\% (\text{Total Extramural Costs} + \text{Total Intramural Costs})) = \text{Estimated EPA Costs, or } (\$8,903,709 + \$917,972) + ((40.97\% * ((\$8,903,709 + \$917,972))) = \$13,845,624^1$

X. RECOMMENDATION

This decision document represents the selected removal action for the Southeastern Wood Preserving Site in Canton, Madison County, Mississippi, developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based on the administrative record for the Site.

Conditions at the Site continue to meet the NCP Section 300.415(b) criteria for a removal action and the CERCLA Section 104(c) emergency exemption from the \$2 million and twelve-month statutory limitations. I recommend your approval of the proposed project ceiling increase and change in scope to continue the removal response. The total project ceiling, if approved, will be **\$8,903,709** of which an estimated **\$7,885,648** comes from the Regional Removal Allowance.

APPROVED: _____


Franklin E. Hill, Director
Superfund Division

DATE: _____

9/25/15

DISAPPROVED: _____

Franklin E. Hill, Director
Superfund Division

DATE: _____

Attachments:

1. Enforcement Addendum
2. Figures
3. Technical Services Section Site Specific Risk Memorandum
4. Previous Action Memorandums
 - a. May 4, 2010, Ceiling Increase Action Memorandum
 - b. July 20, 2009, Ceiling Increase Action Memorandum
 - c. September 15, 1993, Ceiling Increase Action Memorandum
 - d. July 5, 1990, Ceiling Increase and \$2 million Exemption Action Memorandums
 - e. August 18, 1989, twelve-month Statutory Limit Exemption and Ceiling Increase Action Memorandum
 - f. May 28, 1986, Action Memorandum

¹ Direct 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 a 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.

ATTACHMENT 1
ENFORCEMENT CONFIDENTIAL ADDENDUM

ATTACHMENT 2
FIGURES

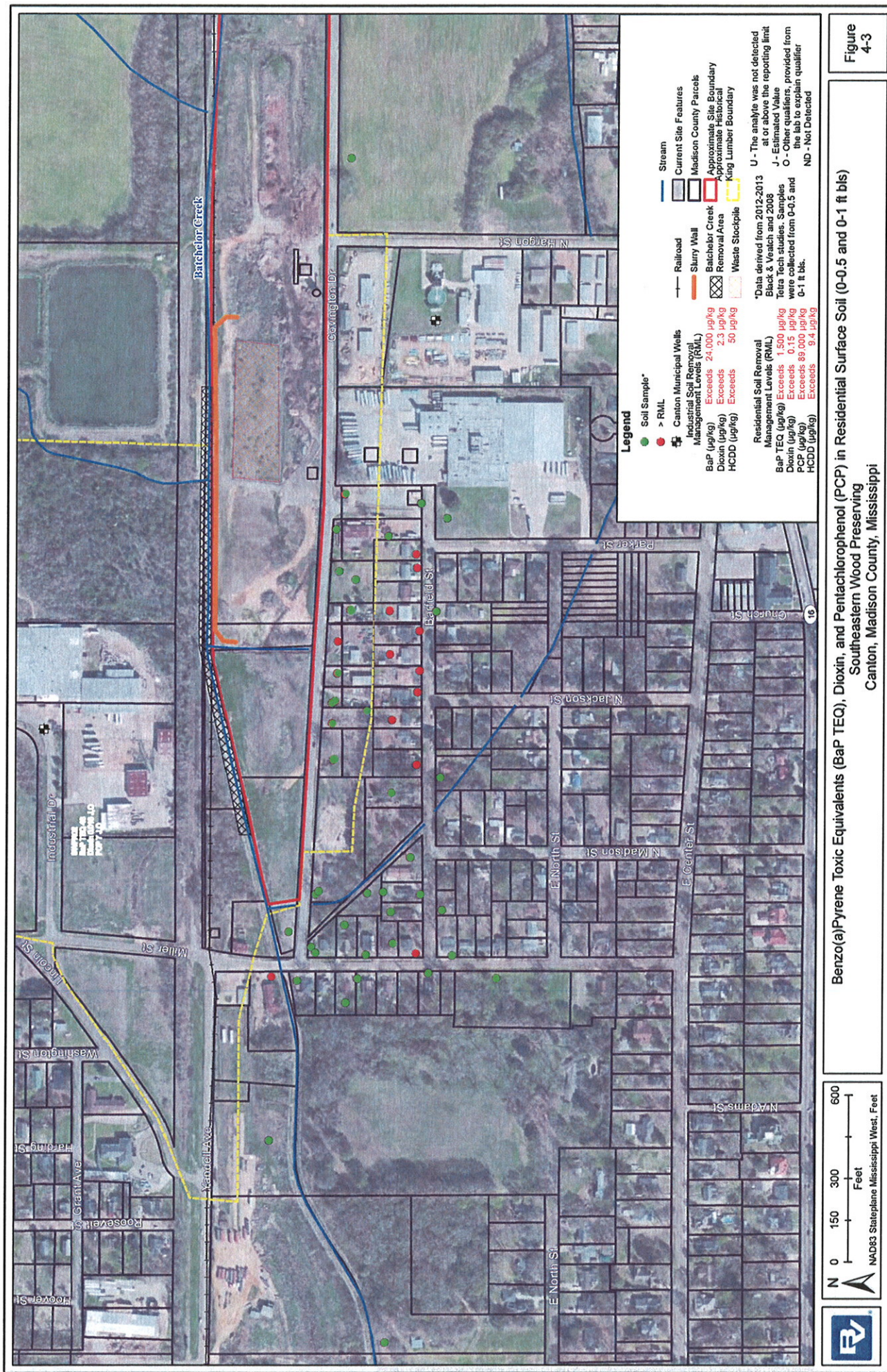


Figure 4-3

ATTACHMENT 3
TECHNICAL SERVICES SECTION HUMAN HEALTH
RISK MEMORANDUM

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



REGION 4

61 Forsyth Street, S.W.
Atlanta, Georgia 30303

MEMORANDUM

September 5, 2013

SUBJECT: Consideration of Removal Action
Southeastern Wood Superfund Site, Canton, MS

FROM: Kevin Koporec, Toxicologist
Technical Support Section
Superfund Support Branch

Handwritten signature of Kevin Koporec in black ink.

THROUGH: Glenn Adams, Chief
Technical Support Section
Superfund Support Branch

Handwritten initials "TAF" and a signature in black ink.

TO: Kevin Eichinger, OSC
Emergency Response & Removal Branch

Per your request, I am relaying to you our recommended EPA Region 4 Removal Management Levels (RMLs) for the identified soil contaminants at the Southeastern Wood Preserving Superfund site in Canton, Mississippi.

These RMLs (based on an excess cancer risk of 1×10^{-4} or a noncancer hazard quotient [HQ] of 3) are designed to be used as "triggers" to help determine the need for time-critical removal actions. Although the RMLs are derived based on potential health risks, exceedance of an RML by itself does not necessarily imply that health effects will occur. This is due to the conservative (i.e., health protective) nature of both the exposure assumptions and toxicity values used by EPA. If you decide to conduct a removal action on parcels exceeding these RMLs, concentrations based on a cancer risk of 1×10^{-4} (the RML), 1×10^{-5} , or 1×10^{-6} , or a HQ of 1, can be used as final cleanup levels. I have also included these values for each of the chemicals below.

I understand there may be some different land uses (and therefore different receptors) for different parcels within the area of interest. I would recommend that the effective removal level would be based on how the property is being used now regardless of how it may be zoned, e.g., if it is actually used for industrial/commercial purposes, remediate to the less stringent industrial level. If a property is industrial/commercial, but includes a child care facility, the residential-based values would be recommended. You as the risk manager can select the final removal

level(s), at your discretion, based on other factors in addition to potential health risks. The selected cleanup level and its basis should be passed on to the remedial project team in case the long term use of the given parcel may potentially be different.

RESIDENTIAL SOIL

Dioxin (values apply to TCDD-TEQ) in residential soil.

Removal Management Level (RML): 150 ng/kg (HQ = 3)

Potential risk based cleanup levels: 50 ng/kg (HQ = 1 & cancer risk = 1×10^{-5}); 5 ng/kg (cancer risk = 1×10^{-6})

Benzo[a]pyrene in residential soil.

RML: 1500 ug/kg (cancer risk = 1×10^{-4})

Potential risk based cleanup levels: 150 ug/kg (cancer risk = 1×10^{-5}); 15 ug/kg (cancer risk = 1×10^{-6})

Hexachlorodibenzo-p-dioxin (HCDD) in residential soil.

RML: 9400 ng/kg (cancer risk = 1×10^{-4})

Potential risk based cleanup levels: 940 ng/kg (cancer risk = 1×10^{-5}); 94 ng/kg (cancer risk = 1×10^{-6})

INDUSTRIAL/COMMERCIAL SOIL

For this scenario, the worker is assumed to be a combined indoor/outdoor worker (soil ingestion rate = 75 mg/day) (EPA 1991). Thus these calculated RMLs are site-specific (differing from the generic RMLs listed on the EPA website).

Dioxin (values apply to TCDD-TEQ) in Industrial soil.

RML: 2300 ng/kg (HQ = 3 & cancer risk = 1×10^{-4})

Potential risk based cleanup levels: 750 ng/kg (HQ = 1 & cancer risk = 3×10^{-5}); 230 ng/kg (cancer risk = 1×10^{-5}); 23 ng/kg (cancer risk = 1×10^{-6});

Benzo[a]pyrene in Industrial soil.

RML: 24,000 ug/kg [24 mg/kg] (cancer risk = 1×10^{-4})

Potential risk based cleanup levels: 2400 ug/kg (cancer risk = 1×10^{-5}); 240 ug/kg (cancer risk = 1×10^{-6})

Hexachlorodibenzo-p-dioxin (HCDD) in Industrial soil.

RML: 50 ug/kg [50,000 ng/kg] (cancer risk = 1×10^{-4})

Potential risk based cleanup levels: 5 ug/kg [5,000 ng/kg] (cancer risk = 1×10^{-5}); 0.5 ug/kg [500 ng/kg] (cancer risk = 1×10^{-6})

References:

EPA 1991. *Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual, Supplemental Guidance*, "Standard Default Exposure Factors", Interim Final, OSWER Directive 9285.6-03, March 25, 1991.

EPA 2013. Regional Screening Levels for Chemical Contaminants at Superfund Sites [http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm], includes on-line calculator, updated May 2013.

Feel free to contact me if you need further assistance on risk assessment issues.

ATTACHMENT 4
PREVIOUS ACTION MEMORANDUM



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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

MAY 4 2010

SITE: SE Wood Pres.
BREAK: 2.9
OTHER: _____

ACTION MEMORANDUM

SUBJECT: Request for a Removal Action Ceiling Increase at Southeastern Wood Preserving Site, Canton, Madison County, Mississippi

FROM: Steve Spurlin, On-Scene Coordinator
Emergency Response and Removal Branch

THRU: Shane Hitchcock, Chief
Emergency Response and Removal Branch

TO: Franklin E. Hill, Director
Superfund Division

SITE ID: 041L

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval for a ceiling increase for the removal action herein described for Southeastern Wood Preserving (the Site), located in Canton, Madison County, Mississippi. An exemption to the 12-month statutory limit was approved on August 18, 1989 (attached) and an exemption to the \$2 million statutory limit was approved on July 5, 1990 (attached). The Site continues to pose a threat to public health and the environment that meets the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) Section 300.415(b) criteria for removal actions and the Section V criteria for an Exemption from Statutory Limits.

A ceiling increase is necessary to continue removal actions at the Site in order to abate the release or threat of release of hazardous substances from the Site into the environment.

As a result of Site conditions, immediate removal actions pursuant to Section 104 of the Comprehensive Environmental Response, Conservation and Liability Act (CERCLA) as amended by U.S.C. Section 9604, are needed at this Site. The total project ceiling for the herein described will be \$3,744,000 of which an estimated \$3,100,000 comes from the Regional Removal Allowance. The total new project ceiling inclusive of recent and historic removal actions costs for the Site will be \$8,903,709.



10677679

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II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID: MSD000828558
Type: Time-Critical

A. Site Description

1. Removal Site Evaluation

In a Site Investigation conducted by the Mississippi Department of Environmental Quality (MDEQ) in 1985, Polynucleated Aromatic Hydrocarbon (PAH) compounds associated with creosote were found in Batchelor Creek sediments at significant levels.

In June 1986 in response to the release of hazardous substances and in order to prevent pentachlorophenol and creosote contamination found in the process area and three unlined surface impoundments that were overflowing, the Environmental Protection Agency (EPA) initiated an emergency response. Additional removal actions were conducted intermittently over the period from 1986 to 1993.

Free-phase creosote material has been observed both in surface waters and along the bed of Batchelor Creek. MDEQ representatives have described creosote material leaching from the stream banks at the Site in recent years. In an attempt to delineate the source of creosote and its migration pathway into Batchelor Creek, the Emergency Response and Removal Branch (ERRB) has conducted two sampling events. The first sampling event was conducted during the week of September 17, 2007. On-Scene Coordinators (OSC) Hughes and Negron along with the EPA Science and Ecosystem Support Division (SESD) mobilized to the Site to ascertain if and/or where pathways for free-phase contamination to enter the stream existed. Soil boring work to support this determination was conducted by SESD personnel. During February 2008, EPA and Superfund Technical Assessment and Response Team (START) personnel traveled to the Site to collect samples from site areas and creek sediments in order to determine the presence of hazardous substances. On September 22, 2008, EPA along with the Emergency Response Team (ERT) and START mobilized to the Site to expand the scope of the initial sampling event to include boring investigations in the vicinity of the former lagoon areas. In November 2008, EPA Region 4 OSC Hughes along with ERT mobilized to the Site to expand the scope of the investigation by collecting soil boring samples from the bottom of Batchelor Creek.

As a result of these sampling events, EPA has identified sediments in Batchelor Creek as the primary source of surface water contamination. EPA has also determined that creosote continues to seep and migrate through subsurface soils towards Batchelor Creek from multiple areas of the Site. EPA has observed and documented the presence of creosote in surface waters, sediments, and soil in Batchelor Creek.

2. Physical Location

The Site is located in a predominantly commercial/residential area just east of downtown Canton, Madison County, Mississippi (Lat. 32°37'04.44 N Long. 90°01'04.56 W). The Site is bound by Covington Road to the south, Miller Street to the west and Hargon Street to the east. Batchelor Creek and Illinois Central Gulf Railroad border the Site to the north. Batchelor Creek meanders on the edge of the City of Canton and borders a recreational park south of the Site. A map of the Site boundaries is attached.

3. Site Characteristics

The Southeastern Wood Preserving Site is an abandoned wood preservation plant facility which operated from 1928 until it filed for bankruptcy in early 1979. The Site covers approximately 20 acres and is located in a predominantly commercial/residential area just east of downtown Canton, Madison County, Mississippi. Batchelor Creek and Illinois Central Gulf Railroad border the Site to the north. The railroad is no longer operational. The City of Canton's drinking water well field is located just south of the Site. An abandoned industrial area lies to the east and a residential area borders the Site to the west. A landscaping materials business operates on the east side of the Site, and a residential area borders the Site west of Miller Street. Multiple businesses are located along the southern border of the Site and their employee parking lots are in close proximity to the Site. The Site is abandoned and un-secured allowing pedestrians and vandals access to the property. The Site is located on a highly traveled corridor and within walking distance of several homes.

The production process involved debarking of the Southern Yellow Pine timbers and placing them in retort cylinders for drying and pressure treatment using creosote and pentachlorophenol as preservatives. Prior to 1977 and the Clean Water Act, the facility reportedly discharged approximately 50,000 gallons of wastewater directly into Batchelor Creek. In May of 1977, the company was hooked into the City of Canton sewage system. The wastewaters were to be pre-treated prior to discharge into the city lagoons. On several occasions the city ordered the facility to cease discharge due to failure to adequately treat the wastewaters.

Batchelor Creek flows through a city park approximately one mile downstream from the Site, passes through a residential area and then continues through downtown Canton before leading into the Big Black River approximately 10-12 miles downstream. There is evidence of fishing and recreational usage in the Big Black River.

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

EPA has determined that a release of a hazardous substance as defined by Section 101(14) of CERCLA has occurred at the Site. The facility used creosote to preserve wood. Creosote contains polycyclic aromatic hydrocarbons (PAH), phenols and cresols, substances that are known to cause harmful health effects. EPA has determined that creosote is probably a

human carcinogen.

Creosote is a mixture of many chemicals of which the PAHs, phenols, and creosols are the most harmful. During the operation of the facility creosote was released to unlined lagoons which periodically overflowed and discharged creosote. The lagoons are suspected to be one source of the creosote contamination found in surface and subsurface soils as well as in sediments and soils that line the bottom of Batchelor Creek.

5. NPL Status

A Remedial Expanded Site Inspection (ESI) was completed in July 2009 and documented the presence of creosote contamination (polynuclear aromatic hydrocarbons) in site soils, sediment and groundwater. A Hazard Ranking System (HRS) Package is being prepared for the Site in order to list the Site on the National Priorities List (NPL). EPA anticipates listing the Site in the federal register for potential inclusion on the NPL in September 2010.

6. Maps, Pictures and other Graphic Representations

See attachments.

B. Other Actions to Date

1. Previous Actions

The Site has a long history of EPA involvement. The Emergency Response and Removal Branch (ERRB) of the EPA initiated an emergency response in early 1986 in order to stabilize three unlined surface impoundments that were overflowing on-site. Each impoundment contained creosote sludge and waters. The response action consisted of pumping 30,000 gallons of water from flooded areas of the Site, treating it, and discharging it into Batchelor Creek. Subsequent to this response, it was evident that the Site would be referred to ERRB for a removal action.

The initial Action Memorandum was signed in May 1986. It requested that Site activities be addressed and funded in two phases. The scope of the first phase consisted of excavating and stockpiling hazardous waste on-site. The contaminated soils and sludges in the vicinity of the former lagoons were stabilized with lime kiln dust, placed in a stockpile and fenced. The second phase of the action was to consist of on-site treatment or off-site disposal of the material, but this action was delayed for several years.

In 1988 the Soil Conservation Service (SCS) contacted EPA after observing oily waste leaching into the creek from the Southeastern Wood Preserving Site. SCS had designed a soil erosion prevention plan that called for excavating and widening Batchelor Creek. Through an Interagency Agreement, SCS contributed \$190,000 towards the excavation work. The creek was widened according to the plan and a geofabric liner was placed in the bed of the creek. The bed

and the banks were then covered with rip rap in order to prevent erosion.

An exemption from the 12-month statutory limit and ceiling increase was approved in August of 1989 in order to address the second phase of the removal action. A composite sample from the waste pile indicated a PAH concentration of 5,016 parts per million (ppm) and a phenol concentration of 62 ppm. The 8,000 cubic yard on-site stockpile was to be treated through bioremediation land farming techniques. A ceiling increase and \$2 million exemption was approved in July 1990 once proposals were received. The RCRA Land Ban treatment standards and air emission standards required a slurry phase treatment due to the health based risk associated with the Site's surrounding residential/commercial areas. The removal action required the treatment of the contaminated soil to the K001 waste code Land Disposal Requirements (LDR) standards. The contractor proposed to utilize a batch bioremediation process consisting of screening, mixing with water, slurrying in two parallel biological slurry reactors, and final treatment and drying in a double lined land treatment unit (LTU).

In 1992, an Amendment to Removal Action Memoranda Requesting a Treatability Variance was approved. After several failed attempts to reach the K001 LDR Standards with the bioremediation technique, it became apparent that a treatability variance would be necessary. The clean-up levels for phenanthrene and pyrene were adjusted without compromising the goals of the removal action by maintaining concentration of total PAHs below 100 ppm. The treated soils were placed in a specified area of the Site, capped with clean soils, and the area was fenced.

On February 26, 2003, representatives from EPA and MDEQ met at the Site for a reconnaissance. It was noted that the treated soil cell area had subsided.

On June 6, 2007, OSC Hughes visited the Site to perform a Removal Site Evaluation after the Site was referred to ERRB from MDEQ. The OSC met the state representative on-site in order to characterize the layout of the Site and address the needs to fully perform the Removal Site Evaluation. During the Site inspection, the temperature had mobilized the creosote present in the bed of Batchelor Creek enabling observation of releases downstream.

On September 18, 2007, OSCs Hughes and Negrón met with representatives from EPA's SESD in order to perform several borings in the area between the stockpile, the former lagoon, and the creek.

On August 25, 2009, EPA and Emergency and Rapid Response Services (ERRS) personnel mobilized to the Site to initiate the time critical removal action outlined in the July 20, 2009 Action Memorandum. Excavation of Batchelor Creek was initiated followed by the installation of a slurry wall. Approximately 38,000 cubic yards from Batchelor Creek have been stockpiled on-site. The stockpile was sampled March 11, 2010, and analyzed for the parameters required for characterization and off-site disposal.

EPA and its contractors demobilized from the Site the week of March 15, 2010. Activities completed included, but were not limited to, excavation of 2,000 feet of Batchelor

Creek, construction of a 1,300-foot slurry wall to prevent migration of Site contaminants to Batchelor Creek, and stockpiling of the contaminated soils generated by the creek and slurry wall excavations.

2. Current Actions

There are no on-going removal activities at the Site. The contaminated soil stockpile remains at the Site.

C. State and Local Authorities Roles

1. State and Local Actions to Date

The MDEQ has assisted ERRB in conducting sampling and providing background information. On March 12, 2010, EPA communicated with MDEQ regarding a proposed approach for characterizing the soil stockpile. MDEQ concurred, as did EPA RCRA, that the creosote waste material excavated from the creek was likely generated from multiple sources (i.e., direct runoff, groundwater infiltration, soil erosion, etc.); therefore, the waste did not meet the definition of the two RCRA listed waste codes for creosote. The waste will be classified based on analytical results for the parameters associated with determination of a characteristically hazardous waste as specified in 40 CFR Part 261 Subpart C.

2. Potential for continued State/Local Response

No state or local agency has indicated a capability to fund the necessary removal actions in a time critical manner.

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

A. Threats to Public Health or Welfare

Waste related contaminants from past facility operations are CERCLA hazardous substances. The hazardous substances, if released from the Site, have the capability of presenting a potential hazard to the general public and the environment. The threat comes primarily from human exposure to these hazardous substances contained in the waste stockpile (e.g., trespassers, fugitive dust, contaminant migration from erosion). Direct contact, ingestion, and inhalation of these hazardous substances are the primary pathways of exposure. Continued release of these hazardous substances may cause potential chronic health effects to persons living nearby and trespassers.

The EPA Region 4 ERRB has determined that a release threat, as defined by Section 101 of CERCLA, exists at the Site. The following NCP Section 300.415(b)(2) factors are being met

for this removal action:

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." Analytical results for waste samples of the stockpiled material verified the presence of numerous hazardous substances including, but not limited to, fluorine, phenanthrene, fluoranthene, pyrene, and benzo(a)pyrene at concentrations of 14,000 ug/kg, 53,000 ug/kg, 30,000 ug/kg, 29,000 ug/kg, and 4,600 ug/kg, respectively.

Batchelor Creek flows through a city park, a residential area, and downtown Canton before it enters Bear Creek. The State of Mississippi has received complaints of children suffering from creosote burns who had been playing in Batchelor Creek near the city park.

Fishing for consumption occurs on Batchelor Creek north of its intersection with Frey's Lane, downstream of the Site property. Fish that are typically caught for consumption include brim, bass, and catfish. During the EPA RSE conducted in February 2008 and the EPA ESI conducted in September 2008, creosote was observed in Batchelor Creek adjacent to and downstream from the Site. MDEQ personnel have observed creosote emanating from the property into Batchelor Creek, as well as along the 15-mile surface water target distance limit (TDL) as far as the Big Black River, approximately 12.5 miles downstream of the Site.

Section 300.415 (b)(2)(ii): "Actual or potential contamination of drinking waster supplies or sensitive ecosystems." The City of Canton well fields are located approximately 100 feet south of the facility. As evidenced in the borings, there is a potential for the contaminants to migrate through the fractures in the Yazoo Clay into the groundwater aquifer. There are also 12 private drinking wells within 3 miles of the Site at a much shallower well depth than the municipal wells. The heavier constituents found in creosote compounds have the potential to travel along the confining layer and into the screening level of these private wells.

Section 300.415 (b)(2)(iv): "High levels of hazardous substances or pollutants or contaminants in soils largely at or near surface that may migrate." The waste stockpile, with an estimated volume of 38,000 cubic yards, is uncovered. No long term erosion control or containment measures are implemented to prevent soil erosion and runoff from the stockpile into nearby Batchelor Creek. Analytical results for waste samples of the stockpiled material verified the presence of numerous hazardous substances including, but not limited to, fluorine, phenanthrene, fluoranthene, pyrene, and benzo(a)pyrene at concentrations of 14,000 ug/kg, 53,000 ug/kg, 30,000 ug/kg, 29,000 ug/kg, and 4,600 ug/kg, respectively. If the waste soils contaminated at these high levels are washed into the creek, it can be easily carried downstream during heavy creek flow resulting in potential deposition of contamination onto potential high exposure areas like residential properties or parks.

Section 300.415 (b)(2)(v): "Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released." Creosote releases into surface waters has been observed and documented by MDEQ and EPA. Rain events and the increased water flow in Batchelor Creek may further the downstream migration of creosote contamination. Warmer

temperatures also increase the mobility of the heavier phases of creosote related compounds through the subsurface.

Section 300.415 (b)(2)(vii): "The availability of other appropriate federal or state response mechanisms to respond to the release." There is currently no federal or state mechanism available to initiate a clean-up of this Site in the near future.

B. Threats to the Environment

Uncontrolled releases of the hazardous substances at the Site may pose a threat to the environment. Uncontrolled releases of hazardous substances from the stockpile, transported via surface water pathway during major rain events may pose a threat to aquatic species in Batchelor Creek and the downstream tributaries. Sample results for the stockpile, which consists of former creek sediments, show levels of hazardous substances exceed EPA ecological sediment screening values.

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." Analytical results for waste samples of the stockpiled material verified the presence of numerous hazardous substances including, but not limited to, fluorine, phenanthrene, fluoranthene, pyrene, and benzo(a)pyrene at concentrations of 14,000 ug/kg, 53,000 ug/kg, 30,000 ug/kg, 29,000 ug/kg, and 4,600 ug/kg, respectively. A comparison of the concentrations for the hazardous substances in the stockpile against the EPA sediment screening values, used to determine whether unacceptable risks are posed to ecological receptors from chemical stressors, indicated twelve hazardous substances exceed the sediment screening values.

Section 300.415 (b)(2)(iv): "High levels of hazardous substances or pollutants or contaminants in soils largely at or near surface that may migrate." The waste stockpile, with an estimated volume of 38,000 cubic yards, is uncovered. No long term erosion control or containment measures are implemented to prevent soil erosion and runoff from the stockpile into nearby Batchelor Creek. Analytical results for waste samples of the stockpiled material verified the presence of numerous hazardous substances including, but not limited to, fluorine, phenanthrene, fluoranthene, pyrene, and benzo(a)pyrene at concentrations of 14,000 ug/kg, 53,000 ug/kg, 30,000 ug/kg, 29,000 ug/kg, and 4,600 ug/kg, respectively. If the waste soils contaminated at these high levels is washed into the creek, the contaminants can become entrained in the sediments posing unacceptable risks to ecological receptors.

IV. ENDANGERMENT DETERMINATION

The actual or threatened release of hazardous substances and/or pollutants or contaminants from this Site into the environment, if not controlled by implementing the proposed response action described in this Action Memorandum, will continue to present an imminent and substantial endangerment to public health or welfare or the environment.

V. EXEMPTION FROM STATUTORY LIMITS

A 12-month exemption based on the CERCLA section 104 (c) emergency exemption was approved in the August 18, 1989 Action Memorandum. A \$2 million exemption based on the CERCLA section 104(c) consistency exemption was approved in the July 5, 1990 Action Memorandum. The EPA Regional Administrator requested Headquarters review and approval of the July 5, 1990 Action Memorandum to clarify the appropriate use of the consistency exemption at the non-NPL site. EPA headquarters approved the consistency exemption request in a memorandum dated August 9, 1990 (attached). This Site presents a threat to public health and welfare to the environment which can currently only be mitigated by the completion of the removal action. Conditions at the Site continue to meet the criteria listed in CERCLA 104(c) for the emergency and consistency exemptions from the statutory limits of 12 months and \$2 million and are sufficient to warrant a removal action based upon those factors listed under Section 300.415(b)(2) of the NCP.

A. Emergency Exemption

1. 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. Analytical results from waste samples collected from the stockpiled material contain numerous hazardous substances related to creosote. Hazardous substances include, but are not limited to, fluorine, phenanthrene, fluoranthene, pyrene, and benzo(a)pyrene at concentrations of 14,000 ug/kg, 53,000 ug/kg, 30,000 ug/kg, 29,000 ug/kg, and 4,600 ug/kg, respectively. Creosote exposure can result in skin rashes, effect kidney and liver function, and EPA has determined creosote is a probable human carcinogen. The large waste stockpile is currently uncovered. As the project timeline moves into the warmer summer months, the soils containing high levels of creosote related compounds will become dry and easily airborne. Fugitive dust migrating off-site to nearby residential and business areas increases the potential impact to public health.

EPA has taken efforts to secure the Site; however, the property is large and can be accessed. During the excavation and stockpiling actions, numerous parties stopped at the Site to inquire if they could remove some of the stockpiled waste to use as fill material. EPA is currently demobilized from the Site and concerned that parties may trespass onto the property to remove stockpiled material resulting in direct exposure in addition to potentially transporting the waste to areas off-site where additional prolonged exposure could occur.

2. Continued response actions are immediately required to prevent, limit, or mitigate an emergency:

The large volume and high levels of hazardous substances contained in the

exposed stockpile present an immediate need for continued response actions. No long term erosion control or containment measures are implemented to prevent soil erosion and runoff from the stockpile into nearby Batchelor Creek. Analytical results for waste samples of the stockpiled material verified the presence of numerous hazardous substances including, but not limited to, fluorine, phenanthrene, fluoranthene, pyrene, and benzo(a)pyrene at concentrations of 14,000 ug/kg, 53,000 ug/kg, 30,000 ug/kg, 29,000 ug/kg, and 4,600 ug/kg, respectively. If the waste soils contaminated at high levels is washed into the creek, the contaminants can become entrained in the sediments posing immediate impacts to ecological receptors. Additionally, the soils may pose attraction to local children, who may play on the pile unaware of the potential exposure to hazardous substances. Erosion measures need to be completed in the creek to minimize additional creosote migration into the creek which is prone to heavy flooding.

3. Assistance will not otherwise be provided on a timely basis:

Neither the State nor local governments have sufficient resources currently available to them to undertake the proposed actions. There are no viable potentially responsible parties, and the EPA remedial program estimates in excess of two years before any remedial cleanup actions could occur at the Site.

B. Consistency Exemption

1. Continued response actions are otherwise appropriate and consistent with the remedial action to be taken:

The proposed removal actions contained in this would be consistent, or at a minimum not foreclose, any future remedial action. Removal of the stockpiled waste and completion of the creek erosion control will not interfere with any likely remedial alternatives to address soil and groundwater contamination. Removal of the waste and installation of the erosion measures will remove a source threat to groundwater and the creek and prevent increased potential for threats to human health and the environment which is consistent with remedial objectives.

The proposed actions are appropriate to avoid a foreseeable threat and prevent further migration of the contaminants. The removal of the waste will eliminate the near-term threat of direct contact with the hazardous substances in the stockpile material and will prevent migration of the material into Batchelor Creek and the groundwater.

VI. PROPOSED ACTION AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed Action Description

This action will involve: 1) the transport and disposal of stockpiled creosote contaminated soils (estimated 38,000 cubic yards) to an EPA approved Subtitle D landfill; 2) complete installation of erosion control along excavated portion of Batchelor Creek and; 3) grade and seed disturbed areas upon completion of load out to provide erosion and dust control.

2. Contribution to Remedial Performance

Based on available information, the proposed action would greatly reduce the threat of direct exposure to humans and the environment. Furthermore, the proposed action would contribute to remedial performance by reducing the quantity of contamination and potential for contaminant migration into additional areas where future remedial actions may not otherwise be necessary. The Site was evaluated multiple times by EPA and MDEQ site assessment staff between 1990 and 2002. In 2006, MDEQ discovered new historical information researching the Site at the State Archives. The new information indicated a larger site "footprint" than earlier known, encompassing or adjoining six residential properties. In addition, creosote contamination in the form of globules, sheen and odors were visible in Batchelor Creek. EPA began a Removal Assessment in 2007 which continued into 2008, while a Remedial Expanded Site Inspection (ESI) was also initiated. The ESI was completed in July 2009 and documented the presence of creosote contamination (polynuclear aromatic hydrocarbons) in site soils, sediment and groundwater. An HRS Package is being prepared for the Site in order to list the Site on the National Priorities List (NPL). ERRB is working with the Remedial Branch to maximize remedial performance. EPA anticipates listing the Site in the federal register for potential inclusion on the NPL in September 2010.

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

An EE/CA is not applicable to this project due to the time-critical nature of the proposed action.

4. Applicant or Relevant and Appropriate Requirements (ARARs)

On-site removal activities conducted under CERCLA are required to attain ARARs to the extent practicable considering the exigencies of the situation. All waste transferred off-site will follow the CERCLA Off-site Rule. A letter was sent to MDEQ requesting identification of ARARs.

5. Project Schedule

The response action would be initiated in May 2010 and completed by August 2010. Implementation of the proposed action should be completed in approximately 120 days.

B. Estimated Costs

Extramural Costs:

<u>Regional Allowance Cost:</u>	<u>Current</u>	<u>Increase</u>	<u>New Totals:</u>
ERRS	\$2,290,909	\$3,100,000	\$5,390,909
<u>Non-Regional Allowance Costs:</u>			
ERT/REAC	\$ 0		\$ 0
START	\$ 100,800		\$ 100,800
USCG/GST	\$ 30,000	\$ 20,000	\$ 50,000
<u>Subtotal, Extramural Cost:</u>	\$2,421,709	\$3,120,000	\$5,541,709
Extramural Cost Contingency (20%) .	\$ 0	\$ 624,000	\$ 624,000
Previous Action Ceiling	\$2,738,000		\$2,738,000
Total Site Ceiling: (Previous and proposed actions)	\$5,159,709		\$8,903,709

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

If action is significantly delayed or not taken, there will be a continued release into the environment increasing the possibility of exposure to the public and to the environment. The large waste stockpile is not currently covered to prevent fugitive dust emissions or erosion. Transport of dust particulate contaminated with hazardous substances from the stockpile can pose increased threat of exposure to the surrounding public. The stockpile is staged near Batchelor Creek, and contaminated soil washed from the stockpile could enter the creek impacting previously excavated areas and migrating further downstream to pose a threat of expanding the extent of contaminated sediments and soils downstream.

VIII. OUTSTANDING POLICY ISSUES

None

IX. ENFORCEMENT

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: $(\$8,891,709 + 100,000) + (41.85\% \times \$8,991,709) = \$12,754,739$.¹

X. RECOMMENDATION

This decision document represents the selected removal action for the Southeastern Wood Preserving Site, Canton, Madison County, Mississippi, developed in accordance with CERCLA, as amended, and not inconsistent with the NCP. This decision is based on available information contained 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 CERCLA Section 104(c) consistency and emergency exemptions from the 12-month and \$2 million limitation. I recommend your approval of the Action Memorandum to allow continuation of the removal response. The total project ceiling will be \$8,903,709, of which an estimated \$5,390,909 comes from the Regional Removal Allowance.

APPROVAL: _____


Franklin E. Hill, Director
Superfund Division

DATE: _____

5/4/10

DISAPPROVAL: _____

Franklin E. Hill, Director
Superfund Division

DATE: _____

¹ Direct 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.

Attachments:

Action Memorandum for 12-Month Exemption & Ceiling Increase Dated August 18, 1989

Action Memorandum for \$2 Million Exemption and Ceiling Increase Dated July 5, 1990

Site Diagram

Action Memorandum for Removal Action Dated July 20, 2009

Enforcement Addendum



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

JUL 20 2009

ACTION MEMORANDUM

SUBJECT: Request for Approval for a Removal Action at the Southeastern Wood Preserving Site, Canton, Madison County, Mississippi

FROM: José A. Negrón
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 is to request and document approval for a ceiling increase for the removal action herein described for the Southeastern Wood Preserving Site (the Site) in Canton, Madison County, Mississippi.

As a result of Site conditions, immediate removal actions pursuant to Section 104 of the Comprehensive Environmental Response, Conservation and Liability Act (CERCLA) as amended by U.S.C. Section 9604, are needed at this Site. The total project ceiling for the herein described will be \$2,421,709, of which an estimated \$1,917,291 comes from the Regional Removal Allowance. The total new ceiling for the Site will be \$5,159,709.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

SITE ID: 041L
CERCLIS ID: MSD000828558
Type: Time-Critical

1. Removal Site Evaluation

In a Site Investigation conducted by the Mississippi Department of Environmental Quality (MDEQ) in 1985, Polynucleated Aromatic Hydrocarbon

(PAH) compounds associated with creosote were found in Bachelor Creek sediments at significant levels.

In response to the release of hazardous substances and in order to prevent PCP and creosote contamination found in the process area and three unlined surface impoundments that were overflowing, in June 1986 the Environmental Protection Agency (EPA) initiated an emergency response. Removal actions were completed on February 15, 1995, and are documented in action memos dated May 28, 1986; December 3, 1986; August 18, 1989; July 5, 1990; August 9, 1990; February 5, 1992; September 15, 1993 and September 27, 1993.

Recently, free-phase creosote material has been observed both in surface waters and along the bed of Bachelor's Creek. MDEQ representatives have described creosote material leaching from the stream banks at the site in recent years. On February 26, 2009, representatives from EPA and MDEQ met at the Site to conduct a walk through and observe site conditions. During the walk through State of Mississippi officials pointed out that treated pile had sunken over the years. EPA observed and documented the presence of creosote in surface waters, sediments and soil in Bachelor Creek.

In an attempt to delineate the source of creosote and its migration pathway into Bachelor Creek, the Emergency Response and Removal Branch (ERRB) has conducted two sampling events. The first sampling event was conducted during the week of September 17, 2007. On-Scene Coordinators (OSC) Hughes and Negron along with SESD mobilized to the Site to ascertain if and/or where pathways for free-phase contamination to enter the stream exist. Soil boring work to support this determination was conducted by SESD personnel. During February 2008 EPA and START personnel traveled to the Site to collect samples from the on-site waste pile and creek sediments in order to determine the presence of hazardous substances. On September 22, 2008, EPA along with ERT and START mobilized to the Site to expand the scope of the initial sampling event to include boring investigations in the vicinity of the former lagoon areas. In November 2008, EPA Region 4 OSC Hughes along with ERT mobilized to the Site to expand the scope of the investigation by collecting soil boring samples from the bottom of Bachelor Creek.

As a result of these sampling events EPA has identified sediments in Bachelor Creek as the primary source of surface water contamination. EPA has also determined that creosote continues to seep and migrate from the Site's former wood treating lagoons into Bachelor creek. This underground pathway appears to be slow, but nevertheless quite important. EPA has also determined that creosote contamination is migrating along Bachelor Creek, and it now extends for approximately 1,500 meters downstream of the Site.

2. Physical Location

The Site is located in a predominantly commercial/residential area just east of downtown Canton, Madison County, Mississippi (Lat. 32°37'04.44 N Long. 90°01'04.56 W). The Site is bound by Covington Road to the south, Miller Street to the west and Hargon Street to the east. Bachelor Creek and Illinois Central Gulf Railroad border the Site to the north. Bachelor Creek meanders on the edge of the City of Canton and borders a recreational park south of the Site.

3. Site Characteristics

The Southeastern Wood Preserving Site is an abandoned wood preservation plant which operated from 1928 until it filed for bankruptcy in early 1979. The Site covers approximately 20 acres. An abandoned industrial area lies to the east and a residential area borders the Site west of Miller Street. The Site is abandoned and un-secured allowing pedestrians and vandals access to the property. The Site is located on a highly traveled corridor and within walking distance of several homes. The City of Canton drinking water well field lies just south of the Site.

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

EPA has determined that a release of a hazardous substance as defined by Section 101(14) of CERCLA continues to occur at the Site and, therefore; conditions continue to meet consistency exemption (July 5, 1990 Action Memorandum). The facility used creosote to preserve wood. Creosote contains polycyclic aromatic hydrocarbons (PAH) phenols and cresols, substances that are known to cause harmful health effects. EPA has determined that creosote is probably a human carcinogen.

Creosote is a mixture of many chemicals of which the polycyclic aromatic hydrocarbons, phenols and cresols are the most harmful. Creosote at the Site was released to unlined lagoons during facility operations, and from there it has migrated. At this Site, creosote has been found in surface and subsurface soils as well as in sediments and soils that line the bottom of Bachelor Creek. Based on available information and results from the borings, the volume of contaminated sediments is estimated at approximately 6,500 cubic yards.

5. NPL Status

This Site has been proposed for listing on the NPL.

6. Maps, Pictures and other Graphic Representations

See attachments.

B. Other Actions to Date

1. Previous Actions

In order to stabilize three unlined surface impoundments that were overflowing on-site, the Emergency Response and Removal Branch (ERRB) of the EPA initiated an emergency response in early 1986. Each impoundment contained creosote sludge and waters. The response action consisted of pumping 30,000 gallons of water from flooded areas of the Site, treating it, and discharging it into Bachelor Creek. Subsequent to this response, it was evident that the Site would be referred to ERRB for a removal action.

The initial Action Memo was signed in May 1986. It requested that Site activities be addressed and funded in two phases. The scope of the first phase consisted of excavating and stockpiling hazardous waste on-site. The contaminated soils and sludges in the vicinity of the former lagoons were stabilized with lime kiln dust, placed in a stockpile and fenced. The second phase of the action, which was delayed until 1989, consisted of on-site treatment of the contaminated materials.

In 1988 the Soil Conservation Service (SCS) contacted EPA after observing oily waste leaching into the Creek from the Southeastern Wood Preserving Site. SCS had designed a soil erosion prevention plan that called for excavating and widening Bachelor Creek. Through an Interagency Agreement, SCS contributed \$190,000 towards the excavation work. The Creek was widened according to Plan and a geo-fabric liner was placed in the bed of the Creek. The bed and the banks were then covered with rip rap in order to prevent erosion.

In order to address the second phase of the removal action, an exemption from the 12-month statutory limit and ceiling increase was approved in August of 1989. A composite sample from the waste pile indicated a PAH concentration of 5,016 parts per million (ppm) and a phenol concentration of 62 ppm. The 8,000 cubic yard on-site stockpile was to be treated through bioremediation land farming techniques. A ceiling increase and \$2 million exemption was approved in 1990 once proposals were received (attached). Due to health-based risks associated with the Site's surrounding residential/commercial areas, the RCRA Land Ban treatment standards and air emission standards required a slurry phase treatment.

The removal action required the treatment of the contaminated soil to the K001 waste code Land Disposal Requirements (LDR) standards. The contractor proposed to utilize a batch bioremediation process consisting of screening, mixing with water, slurrying in two parallel biological slurry reactors (BSR), and final

treatment and drying in a double lined land treatment unit (LTU). After several failed attempts to reach the K001 LDR Standards with the bioremediation technique, it became apparent that a treatability variance would be necessary. In 1992, an amendment to the removal action memoranda requesting a treatability variance was approved. The clean-up levels for phenanthrene and pyrene were adjusted without compromising the removal action goal of maintaining total PAHs below a concentration of 100 ppm.

In 1999 a settlement agreement for the recovery of past response costs incurred by EPA to address response actions at the Site was entered between EPA and Madison County Mississippi Economic Development Authority, the current owner of the property.

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 Roles

1. State and Local Actions to Date

The MDEQ has assisted ERRB in conducting samples and providing background information.

2. Potential for continued State/Local Response

No State or local agency has indicated a capability to fund the necessary removal actions in a time critical manner.

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

A. Threats to Public Health or Welfare

The EPA Region 4 ERRB has determined that a release threat, as defined by Section 101 of CERCLA, exists at the Site. The following NCP Section 300.415(b)(2) is being met for this removal action:

(i) "Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or contaminants." A stockpile of creosote contaminated material remains on-site. Although the stockpiled material is surrounded by a fence the main gate is unlocked and access is unrestricted. The presence of creosote

in the creek causes an actual exposure potential to nearby human populations, animals and the food chain. The residential area bordering the Site places people in the vicinity of the creek, which is fully accessible at all points. The possibility for contaminants to migrate downstream increases the potential for exposure due to the presence of a recreational park less than 1 mile downstream. Animals, and subsequently the food chain, are being exposed to the contaminants in the creek.

(ii) *"Actual or potential contamination of drinking water supplies or sensitive ecosystems."* The City of Canton well fields are located approximately 100 feet south of the facility. As evidenced in the borings, there is a potential for the contaminants to migrate through the fractures in the Yazoo Clay into the groundwater aquifer. There are also 12 private drinking wells within 3 miles of the Site at a much shallower well depth than the municipal wells. The DNAPL has the potential to travel along the confining layer and into the screening level of these private wells.

(iv) *"High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate."* As the creosote contaminated material stockpiled on-site are not covered, and there are no water management mechanisms in place to contain and/or direct runoff, the material migrates onto Bachelor Creek.

(v) *"Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released."* Creosote releases into surface waters has been observed and documented by the MSDEQ and EPA. Rain events and the increased water flow in Bachelor Creek may further the migration of creosote contamination in the creek downstream. Warmer temperatures also increase the mobility of the DNAPL through the subsurface.

(vii) *"The availability of other appropriate federal or state response mechanisms to respond to the release."* There is currently no federal or state mechanism available to initiate a clean-up of this Site in the short near future. The Southeastern Wood Preserving Site has been proposed for listing in the NPL, but there is no assurance that the Site will be listed and if listed when funds would be available to initiate an action.

(viii) *"Other situations or factors that may pose threats to public health or welfare of the United States or the environment."* Due to soil surface contamination and the existence of mobile creosote in the creek there is a threat of human exposure by direct contact, inhalation and/or ingestion by persons entering Bachelor Creek for recreational purposes.

B. Threats to the Environment

Site assessments conducted by EPA have established the release of hazardous substances into the environment throughout the Site. High levels of creosote, a hazardous substance, a pollutant and a contaminant have been detected in soil and sediment samples

collected from Bachelor Creek. Creosote continues to migrate downstream along Bachelor Creek.

IV. ENDANGERMENT DETERMINATION

The actual or threatened release of hazardous substances and/or pollutants or contaminants from this Site into the environment, if not controlled by implementing the proposed response action described in this Action Memoranda, will continue to present an imminent and substantial endangerment to public health or welfare or the environment.

V. PROPOSED ACTION AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed Action Description

This action will involve: 1) the removal by excavation of contaminated soils from Bachelor Creek; 2) contaminated soils would be stockpiled and treated on-site to render the creosote immobile, and either used on-site as capping material or staged for disposal at an approved landfill and; 3) a trench and slurry wall will be placed along the northern bank of Bachelor Creek to contain and prevent re-contamination of the creek.

2. Contribution to Remedial Performance

Based on available information, the proposed action would greatly reduce the threat of direct exposure to humans and wildlife. Furthermore, the proposed action would contribute to remedial performance by limiting the extent of contamination. ERRB is working with the Remedial Branch to maximize remedial performance.

3. Description of Alternative Technologies

In consultation with the remedial program the option of using treated materials to cap the area covered by the former wood treating facility is being considered. If the material is not acceptable for capping, the material will be disposed at an approved landfill.

4. EE/CA

An EE/CA is not applicable to this project due to the time-critical nature of the proposed action.

5. Applicant or Relevant and Appropriate Requirements (ARARs)

No ARARS have been identified at this time. A letter requesting ARARs has been sent to the State of Mississippi.

6. Project Schedule

The response action would be initiated in August 2009 and completed by December 2009. Implementation of the proposed action should be completed in approximately 120 days.

B. Estimated Costs

REMOVAL PROJECT CEILING ESTIMATE

EXTRAMURAL COSTS:	Proposed <u>Ceiling</u>
REGIONAL REMOVAL ALLOWANCE COSTS	
ERRS CLEANUP CONTRACTOR	\$1,917,291
ERT/REAC	\$ 0
NON-REGIONAL ALLOWANCE COSTS	
START	\$ 100,800
Subtotal, Extramural Costs	\$ 2,018,091
Extramural Cost Contingency (20%)	\$ 403,618
Total, Extramural Costs	\$2,421,709
Previous Action Ceiling	\$2,738,000
Total Site Ceiling (previous and proposed actions)	\$5,159,709

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

If the recommended action is not taken or delayed, the threats to human health and the environment will continue to exist. The extent of contamination may expand as contaminated sediments and soils migrate further downstream in Bachelor Creek.

VII. OUTSTANDING POLICY ISSUES

None

VIII. ENFORCEMENT

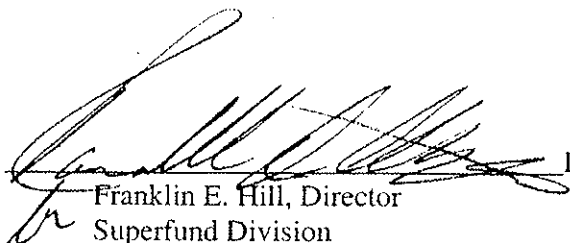
The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be: \$3,460,194 (\$2,421,709+\$25,000) + (41.85% of \$2,421,709).

IX. RECOMMENDATION

This decision document represents the selected removal action for the Southeastern Wood Preserve Site in Canton, Madison County, Mississippi developed according to CERCLA, as amended, and not inconsistent with the NCP. This decision is based on available information contained on the Administrative Record for the Site.

Conditions at the Site meet the NCP Section 300.415(b)(2) criteria for a removal and the CERCLA Section 104(c) consistency exemption; I recommend your approval of the proposed removal action. The project ceiling for the above response will be \$2,421,709, of which an estimated \$1,917,291 comes from the Regional Removal Allowance. The new total project ceiling for all responses conducted at this site will be \$5,159,709.

APPROVED:


Franklin E. Hill, Director
Superfund Division

DATE:

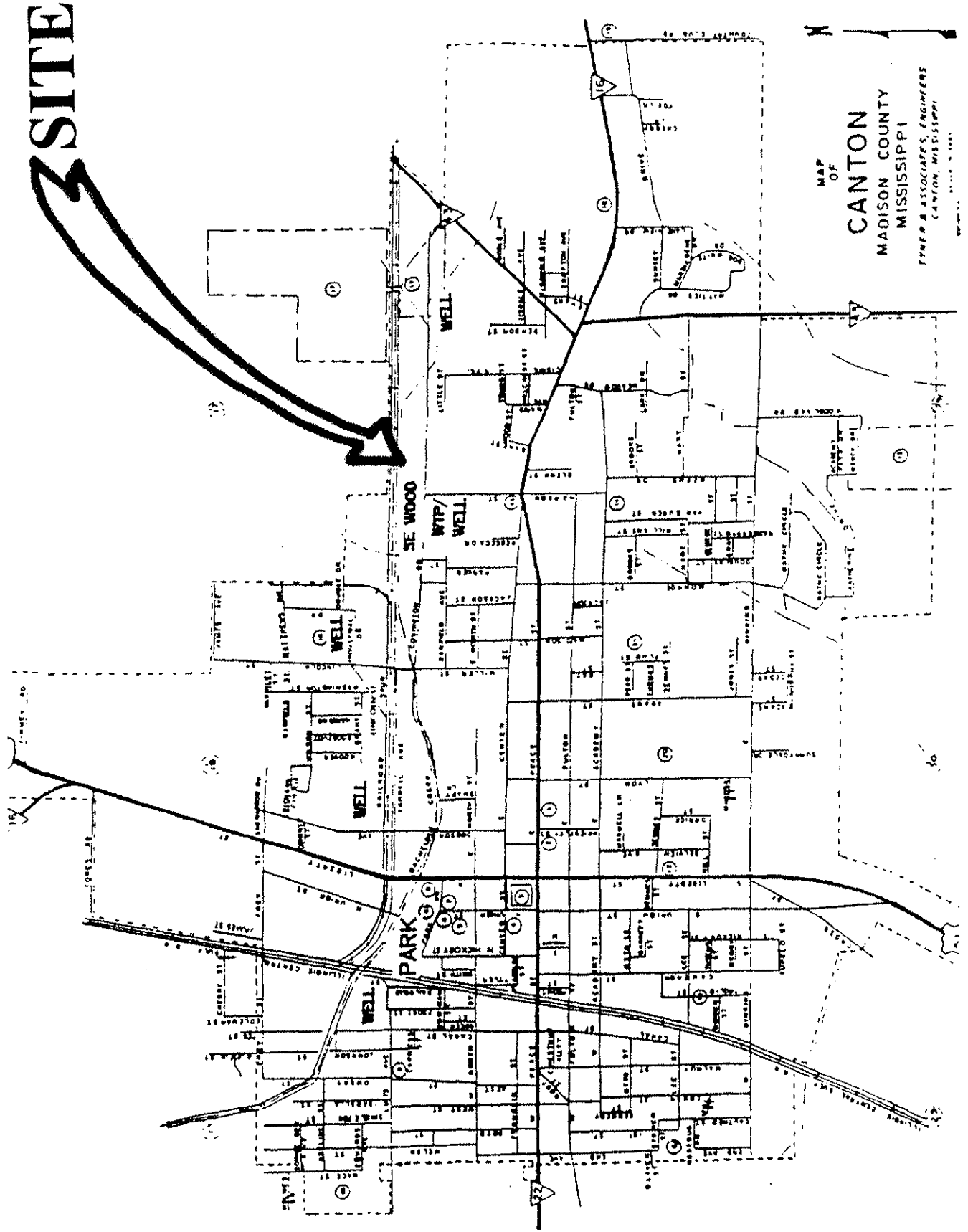
7/20/09

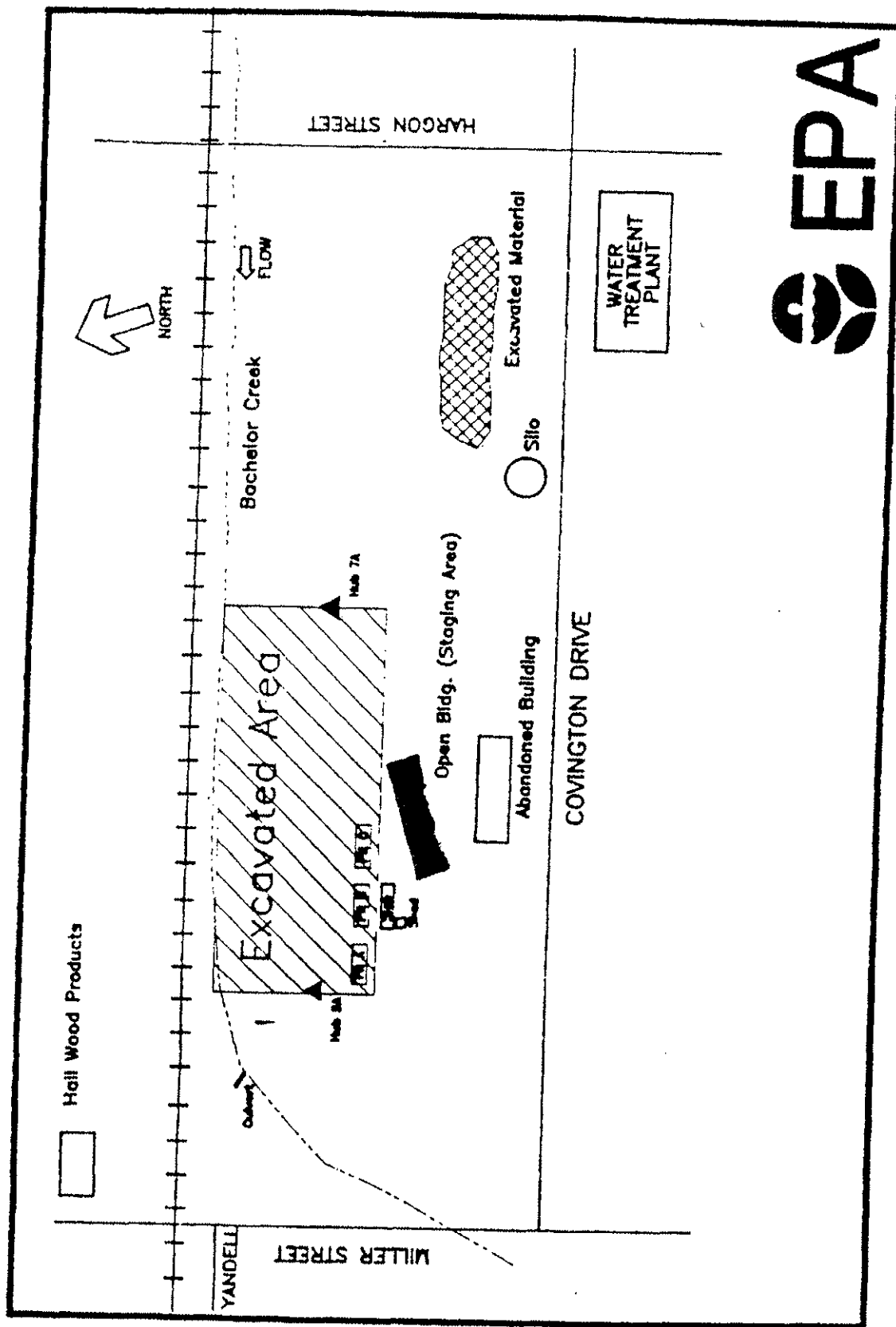
DISAPPROVED:

DATE:

Franklin E. Hill, Director
Superfund Division

City of Canton, Madison County, Mississippi





Site Diagram of Southeastern Wood Preserving



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

#81981

SEP 27 1993

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: Region IV Request for a Ceiling Increase for the
Southeastern Wood Preserving Site, Canton, MS --
ADDENDUM

FROM: Henry L. Longest II, Director *HL*
Office of Emergency and Remedial Response

TO: Richard J. Guimond
Assistant Surgeon General, USPHS
Acting Assistant Administrator

PURPOSE

The attached Action Memorandum is a request from the Region IV Acting Regional Administrator for a ceiling increase for removal actions at the Southeastern Wood Preserving Site, Canton, MS. The purpose of this memorandum is to clarify the discussion of the Land Disposal Restriction (LDR) ARAR. No other changes have been made to the Region IV request. If approved, the total project ceiling will be increased from \$2,738,000 to \$3,642,000. A 12-month exemption was approved for this Site on 8/21/89 and a \$2M exemption was approved on 8/17/90.

DISCUSSION

The last paragraph of the Federal ARARs discussion in the Region IV request (page 7) is amended to read: **"Attainment of the LDR treatment standards is not practicable in this case.** The LDR treatment standards were developed for process generated waste, not contaminated soil and debris from waste site cleanup. The only proven technology capable of meeting the LDR treatment standards is incineration which is both cost prohibitive and **opposed by** nearby residents as well as state and local officials. The **response** proposed herein, 90% removal of PAHs through biotreatment followed by **containment** in a disposal cell, will abate the immediate threat. **The response will eliminate the direct contact threat and will mitigate the long-term threat of ground water contamination by controlling the source.** In this case, attainment of the LDR treatment standards is outside the scope of the removal as cleanup to that level is not necessary to stabilize the site."



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RECOMMENDATION

I recommend that you approve the Region IV request. Removal work has been initiated at this site and your approval will allow the completion of removal actions. The conditions at this site meet the NCP Section 300.415(b)(2) criteria for a removal action. This action will be funded from Region IV's FY '93 removal budget. Please indicate your decision by signing below.

Approved: Walter W. Kavalich

Date: 9/28/93

Disapproved: _____

Date: _____

Attachment



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

ACTION MEMORANDUM

DATE: SEP 15 1993

SUBJECT: Request for a Removal Action Ceiling Increase for the
Southeastern Wood Preserving Site in Canton, Madison
County, Mississippi
Site ID# 1L

FROM: Patrick M. Tobin *Patrick M Tobin*
Acting Regional Administrator
Region IV

TO: Richard J. Guimond
Acting Assistant Administrator
Office of Solid Waste and Emergency Response

THRU: Henry L. Longest
Director
Office of Emergency and Remedial Response

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of a Ceiling Increase of \$904,000. This request is made to continue the time-critical removal action at the Southeastern Wood Preserving Site (the Site) in Canton, Madison County, Mississippi. An exemption from the \$2 Million Statutory Limit was approved on August 17, 1990. This increase is necessary to construct a disposal cell. Treated soil from the slurry-phase bioreactor will be placed in the disposal cell. The additional funding request will increase the total site ceiling to \$3,642,000 with a total of \$614,000 allotted for the Emergency Response Cleanup Services (ERCS) contractor and \$2,182,806 for the site-specific bioremediation contractor.

II. SITE CONDITIONS AND BACKGROUND

A. Background

The Southeastern Wood Preserving Site is an abandoned woodtreating facility which was operated by two owners between 1928 and 1979. Operations ceased in 1979 and the Site was abandoned. The primary activity at the Site between 1928 and 1979 was treatment of wood products with creosote and pentachlorophenol (PCP) formulations. Based on sampling results, creosote was used far more than PCP. In the latter years of operation, wastewater from the treatment operations was collected in wastewater treatment lagoons.

The Site covers ten acres in an area of residential and commercial development near downtown Canton, Mississippi. Bachelor Creek and the Illinois Central Gulf Railroad border the Site to the north, the City of Canton's drinking water well field borders the Site to the south, an industrial plant borders the Site to the east, and a residential area borders the site to the west. For more detailed information on site history and site setting see Attachment 1 - Previous Action Memoranda.

The site was evaluated under the original Hazard Ranking System in 1989, but did not qualify for the NPL. The Site Assessment Section will re-evaluate the Site according to the revised HRS following this removal action.

B. Removal Actions to Date

In June of 1986, EPA Region IV initiated an emergency removal action at the Site to address the three wastewater treatment lagoons which had overflowed and were threatening to spread contamination off-site. The scope of this removal included the treatment of 30,000 gallons of contaminated water and the excavation of 8,000 cubic yards of bottom sediment sludge from the lagoons. The lagoons were then backfilled with clean soil and the bottom sediment sludge was solidified with drying agent (kiln dust) and placed in a temporary stockpile. This initial phase cost approximately \$150,000 and was intended only as a temporary measure to stabilize the Site. Final treatment and/or disposal of the contaminated soil was delayed due to funding constraints.

The Soil Conservation Service (SCS) contacted EPA in December of 1988 regarding a plan to modify the channel of Bachelor Creek which borders the Site. EPA sampled the stream bank adjacent to the Site and found polynuclear aromatic hydrocarbons (PAHs), the constituents of creosote, at concentrations ranging from 199 to 856 milligrams per kilogram (mg/kg). Because of EPA's expertise in the excavation and handling of contaminated soil, EPA agreed to undertake that portion of the channel modification project

where the stream bank formed the boundary of the Site. Under an Inter-Agency Agreement, SCS agreed to reimburse EPA for 100% of the cost of the project relating to reinforcing the bottom and sides of the creek (riprap and geotextile liner) and 50% of all other costs up to a total SCS obligation of \$190,000. A Ceiling Increase and 12 Month Exemption was approved on August 21, 1989 authorizing this work.

The Bachelor Creek channel modification project began in September of 1989 and was completed on December 22, 1989. The soil excavated from the creek bank was staged in two piles, one containing visibly contaminated soil and the other containing all other soil. At the end of the project the visibly contaminated soil (less than 100 cubic yards) was added to the existing 8,000 cubic yard stockpile to await treatment. The remaining soil was sampled and found to contain 149 mg/kg PAHs. Because this concentration was less than the 1,000 mg/kg removal action level established by EPA in conjunction with ATSDR, these soils were spread on site.

The final phase of the removal action at the Site involves the treatment of the 8,000 cubic yards of stockpiled soil. Analytical data for this soil ranges from 5,000 to 10,000 mg/kg PAHs and 50 to 100 mg/kg PCP. In an effort to minimize cost, EPA decided on a site-specific, fixed price procurement for the treatment of the soil. A treatment technology was not specified in the Request for Proposals (RFP), but the RFP did have technical specifications including a requirement to meet the Land Disposal Restrictions (LDR) treatment standards for K001 hazardous waste. The technically qualified bidder with the lowest price, OHM Remediation Services, Inc. (OHM), was awarded the contract on September 26, 1990 for a total contract price of \$1,682,806. OHM proposed slurry-phase biotreatment as the treatment technology. A \$2 Million Exemption Action Memorandum approved on August 17, 1990 increased the total site ceiling to \$2,738,000. This increase was necessary to fund the site-specific contract.

C. Site Conditions

This ceiling increase request is necessary to fund a change to the biotreatment contract. Once OHM began treating soil it quickly became apparent that the biotreatment system could not achieve the LDR treatment standards. OHM admitted that they had not conducted a treatability study prior to bidding on the project, so they had no way to determine whether the technology could meet the specifications. Both EPA and OHM surveyed the literature and found that the LDR treatment standards had never been met with slurry biotreatment, even on pilot scale. OHM expressed willingness to continue with the project as long as EPA agreed to at least consider modifications to the contract.

The EPA Contracting Officer (CO) took the position that EPA shared some responsibility for the problem because, by accepting OHM's technical proposal, EPA had given tacit approval of OHM's technical approach. The CO maintained that if EPA terminated the contract and OHM sued, there was a good chance that EPA would be required to pay the full contract price. Given these arguments, the decision was made to continue the project. OHM made some modifications to the slurry biotreatment system based on work they were doing in their lab and then ran a series of batches through the system. These batches were closely monitored and sampled extensively. The following information was developed from the sampling of the "test" batches:

- (1) An average of 90% reduction in total PAHs and 65% in carcinogenic PAHs
- (2) The average concentration of total PAHs in the treated soil was 548 mg/kg and the range was from 410 mg/kg to 990 mg/kg.
- (3) The average concentration of carcinogenic PAHs (in benzo(a)pyrene equivalency units) in the treated soil was 140 mg/kg and the range was from 84 mg/kg to 228 mg/kg.
- (4) PAH degradation was plotted as a function of time. This showed that greater than 95% of the PAH removal took place in the first five days of treatment.

Based on the results from the "test batches", changes to the fixed price contract are being negotiated at the present time. These changes include (1) changing the soil treatment performance specifications from the K001 LDR Standards to 950 mg/kg total PAHs and 180 mg/kg carcinogenic PAHs in benzo(a)pyrene equivalency units, (2) specifying a minimum treatment time of seven days, and (3) constructing a disposal cell for disposal of the treated soil and the over-sized debris. The disposal cell is necessary to prevent direct contact exposure with the treated soil because ATSDR has evaluated the risk posed by the treated soil and found it to exceed the acceptable risk for an industrial use scenario.

The Region originally planned to dispose of the bio-treated soils either on-site or in an off-site subtitle D facility. This ceiling increase will provide funds for the construction of an on-site cell because the bio-treatment was unable to achieve clean-up levels that would not pose a threat by direct contact.

No additional charges will be incurred by EPA for the biotreatment of the remaining soil (approximately 5,300 cubic yards). The costs associated with the construction of the disposal cell, \$498,944, will be added to the original contract price because it was not included in the original scope of work. This ceiling increase is necessary to fund this additional work.

D. State and Local Authorities' Role

The Mississippi Department of Environmental Quality is not actively involved in the removal action at the Site. Neither the state nor local governments have funds available to clean up the Site.

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

The contaminated soil in the stockpile at the Site represents a significant threat to public health and welfare, as well as the environment. This threat was well documented in the \$2 Million Exemption Request Action Memorandum which is in Attachment 1, Previous Action Memoranda.

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, or welfare, or the environment.

V. EXEMPTION FROM STATUTORY LIMITS

The removal action for this Site was exempted from the \$2 Million Statutory Limit in an Action Memorandum signed by the Assistant Administrator on August 17, 1990. This removal action was exempted from the 12 Month Statutory Limit in an Action Memorandum signed by the Waste Management Division Director on August 21, 1989.

The \$2 Million Exemption was granted on the basis of the consistency waiver exemption criteria in CERCLA 104(c), as amended by SARA, and described in OSWER Directive 9360.0-12A.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed Action Description

At the present time approximately 5,300 cubic yards of creosote contaminated soil require treatment in the slurry-phase biotreatment system. The soil (which has already been screened to remove over-sized debris) is first mixed with water. The soil-water slurry passes through a shale-shaker and cyclone desander which removes all particles greater than 80 microns.

The slurry (15 - 20% solids) is then pumped into 180,000 gallon tanks where the biological degradation of PAHs takes place. Oxygen is supplied to the reactors through diffusers located on the bottom of the tank. The slurry is mixed with a floating mixer to keep the particles in suspension. Temperature, pH, and nutrients are monitored while a batch is being treated. When sampling and analysis demonstrates that a batch has met the contract specifications for total PAHs and carcinogenic PAHs, the batch will be dumped in the drying bed. The slurry is gravity dewatered in the drying bed, a bermed cell with a synthetic liner. After all of the soil has been treated, all of the over-sized debris which could not be treated in the slurry reactors will be placed in a separate area of the drying bed. Then the drying bed will be capped with one foot of compacted clay with a permeability no greater than 1×10^{-8} cm/sec.

2. Contribution to remedial performance

The removal action proposed herein will contribute to the performance of a long-term groundwater cleanup because the potential source of contamination (contaminated soil) is being removed. The biotreatment will reduce the toxicity of the waste and the disposal cell will reduce the mobility.

3. Description of alternative technologies

Because the contaminated soil is a listed hazardous waste under the Resource Conservation and Recovery Act, it is being treated prior to land disposal. The treatment technology, slurry-phase bioremediation takes advantage of the ability of naturally occurring micro-organisms to metabolize PAHs and transform them into environmentally inert by-products. This project is the first full-scale implementation of the slurry-phase bioremediation technology in the United States.

4. EE/CA

No EE/CA was performed at this Site because appropriate response involves a time critical removal action.

5. Applicable or relevant and appropriate requirements (ARARs)

Federal

RCRA Land Disposal Restrictions - based on a waste characterization, the soil at the Site is a listed hazardous waste under the K001 waste code (40 CFR Section 261.32). EPA has promulgated treatment standards for K001 based on six common constituents of K001 waste. The constituents and their corresponding treatment standard (in mg/kg) are as follows:

Naphthalene	1.5
Pentachlorophenol	7.4
Phenanthrene	1.5
Pyrene	1.5
Toluene	28
Xylenes	33
Lead	.51

A Treatability Variance from the LDRs was approved on February 14, 1992 during a hiatus from treatment. The Treatability Variance established a treatment range to replace the treatment standards for the seven regulated constituents for soil and debris contaminated with K001 waste. Once full-scale treatment was restarted it became apparent that the treatment technology could not achieve the 90% minimum treatment efficiency established in the Treatability Variance. Specifically, only one constituent, naphthalene, consistently met the 90% limit. The others (phenanthrene, pyrene, and pentachlorophenol) failed to achieve the minimum treatment efficiency (toluene, xylenes and lead are not present in the contaminated soil at significant concentrations). The Treatability Variance Request Memorandum is included in Attachment 1 - Previous Action Memoranda.

A waiver from the LDR ARAR will be requested because attainment of the LDR treatment standards is not practicable in this case. The LDR treatment standards were developed for process generated waste, not contaminated soil and debris from waste site cleanups. The only proven technology capable of meeting the LDR standards is incineration which is both cost prohibitive and extremely unpopular among nearby residents as well as state and local officials. The remedy proposed herein, 90% removal of PAHs through biotreatment followed by placement in a disposal cell, will abate the immediate threat.

State

The State of Mississippi required (not a promulgated standard) air modelling to demonstrate that airborne emissions of PAHs from the bioreactors and other on-site activities would not pose a threat to nearby residents. OHM has complied with this requirement.

6. Project schedule

The biotreatment phase of the project will be complete by December of 1993, as long as the anticipated maximum batch time of 14 days is maintained. Work on the disposal cell is anticipated to take two to three months, so the final completion is planned for March or April of 1994.

B. Estimated Costs

Extramural Costs:	<u>Current Ceiling</u>	<u>Proposed Increase</u>	<u>Proposed Ceiling</u>
Regional Allowance			
ERCS	\$614,000	-	\$614,000
Site Specific	1,682,806	500,000	2,182,806
Non-Regional Allowance			
TAT	160,000	100,000	260,000
ERT	36,000	20,000	56,000
Subtotal	\$2,492,806	\$620,000	\$3,112,806
Contingency	87,194	200,000	287,194
Total, Extramural	\$2,580,000	\$820,000	\$3,400,000
Intramural Cost:			
Direct	65,000	30,000	95,000
Indirect	93,000	54,000	147,000
Total, Intramural	\$158,000	\$84,000	\$242,000
TOTAL SITE BUDGET	\$2,738,000	\$904,000	\$3,642,000

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

If removal activity is significantly delayed or not taken, the threats documented herein will continue to exist and may worsen.

VIII. OUTSTANDING POLICY ISSUES

There are no other policy issues associated with this site.

IX. ENFORCEMENT

The enforcement status has not changed. See Attachment 1 - Previous Action Memoranda for additional information.

X. RECOMMENDATION

This decision document represents the selected removal action for the Southeastern Wood Preserving Site in Canton, Madison County, Mississippi; developed in accordance with CERCLA as amended, and not inconsistent with the NCP. This decision is based on the administrative record for the Site.

Conditions at the Site meet the NCP section 300.415(b)(2) criteria for a removal and I recommend your approval of the proposed ceiling increase. The total project ceiling if approved will be \$3,642,000. Of this, an estimated \$2,796,806 comes from Regional removal allowances.

Approval: Walter W. Kaulig for Date: 9/28/93

Disapproval: _____ Date: _____

Richard J. Guimond
Acting Assistant Administrator
Office of Solid Waste and Emergency Response

Attachment

Attachment 1
Previous Action Memoranda



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

29

0055

2/15/88

Site: _____

Break: 29

Other: _____

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

APR 9 1990

MEMORANDUM

SUBJECT: Region IV's Request for Exemption from the \$2M Statutory Limit at the Southeastern Wood Preserving Site, Canton, Mississippi -- **ADDENDUM**

FROM: Steven D. Luftig, Director
Emergency Response Division

Stephen D. Luftig

TO: Don R. Clay, Assistant Administrator

THRU: Henry L. Longest II, Director
Office of Emergency and Remedial Response

Jim Fields for H.L.

Purpose: Attached is a request from the Region IV Regional Administrator for an exemption from the \$2 million statutory limit and an increase to the current project ceiling to continue removal actions at the Southeastern Wood Preserving site. If approved, the total project ceiling will be raised from \$1,880,000 to \$2,738,000, of which \$1,600,000 will be to cover costs for a site-specific contract to conduct bioremediation of creosote contaminated wastes which are stockpiled on-site. An addendum to Region IV's July 5, 1990 request is necessary to clarify the appropriate use of the consistency exemption at this non-NPL site.

Discussion: Region IV bases their exemption request at this non-NPL site on consistency exemption criteria. The consistency exemption may be used if "continued response action is otherwise appropriate and consistent with the remedial action to be taken." Guidance on the implementation of the consistency exemption states that it will be used primarily at sites listed on the National Priorities List (NPL). However, there may be limited circumstances when use of this exemption will be appropriate for non-NPL sites. These instances are expected to occur rarely, and will be determined by the Assistant Administrator for Solid Waste and Emergency Response, on a case-by-case basis (OSWER Directive 9360.0-12A). The criteria to be considered in making that determination will generally include:

003 5 1 13 1 1

2000

- a) the magnitude of the contamination and the threat to human health and the environment;
- b) the status of negotiations with potentially responsible parties;
- c) the opportunity for widespread technology transfer; and
- d) whether the site is likely to be proposed for the NPL.

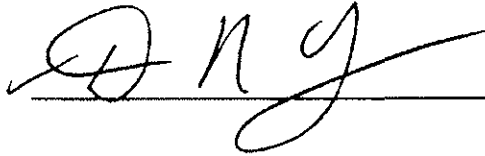
The Southeastern Wood Preserving site may be considered as one of the "limited circumstances" under which the program would grant a consistency waiver at a non-NPL site for the following reasons:

- a) As documented in the attached Region IV Action Memorandum, the approximately 8,000 cubic yards of creosote contaminated wastes stockpiled on-site present an immediate threat of direct human contact and of migration to ground water/drinking water. Contamination levels at the site warrant concern for the shallow aquifers underlying Canton, Mississippi. A municipal drinking water well-field lies within 100 feet of the site. Furthermore, runoff from the site discharges directly in Bachelor Creek, which one mile downstream forms part of a recreational park where children swim.
- b) After an extensive PRP search and aggressive enforcement activities, the Region has determined that no viable party is available to conduct the action.
- c) The proposed action will utilize a site-specific contract for treatment of creosote contaminated soils. Even though biological treatment was expected to be the most cost effective treatment method, contractors were encouraged to propose any technology that could meet the treatment standards. As a result of the initial responses, it appears that slurry phase bioremediation will be the most cost-effective technology that meets the necessary treatment standards. By utilizing this contracting method Region IV will promote the continued development of appropriate innovative technology, while receiving the best possible price for the cleanup.
- d) EPA scored the Southeastern Wood Preserving site for the National Priority List (NPL) in 1989. The preliminary score was 21.9. Under the current Hazard Ranking System this site would not be proposed for the NPL. The site could possibly be proposed for the NPL once the new Hazard Ranking System is promulgated.

Additional considerations are that the primary reason an exemption to the \$2 million statutory limit is necessary at this site is to cover costs that are the result of Land Ban treatment standards promulgated under the Resource Conservation and Recovery Act. Furthermore, the consistency exemption has been similarly applied at the Scott Lumber non-NPL removal action in Alton, Missouri, where bioremediation technology is being used to treat creosote contaminated sludges and soils. This \$2 million exemption request was approved on 8/31/88.

Recommendation: I recommend that you approve Region IV's request for exemption from the \$2 million statutory limit on removal actions at this site. The conditions at the site meet the CERCLA 104(c) criteria for a statutory exemption based on consistency waiver criteria, as documented in the attached Region IV Action Memorandum. If approved, the total project ceiling for this removal will be \$2,738,000. Please indicate your decision by signing below:

Approved:



Date:

0/11/20

Disapproved:

Date:

Attachment



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

2.9

15464

ACTION MEMORANDUM

DATE: JUL 05 1990

SUBJECT: Request for \$2 Million Exemption and Ceiling Increase
at the Southeastern Wood Preserving Site, Canton,
Mississippi

FROM: Greer C. Tidwell *Greer C. Tidwell for*
Regional Administrator

TO: Don R. Clay
Assistant Administrator

THRU: Henry Longest II, Director
Office of Emergency and Remedial Response

ATTN.: Stephen D. Luftig, Director
Emergency Response Division

I. ISSUE:

The purpose of this Action Memorandum is to request an exemption from the \$2 Million statutory limit for ongoing removal action at Southeastern Wood Preserving Site, Canton, Mississippi, and to establish a new ceiling of \$2,738,000. Additional funds are required to alleviate the direct contact near term threat from the excavated waste on-site, prevent future contamination of ground water, and insure an efficient long-term response. Continued response actions cannot be undertaken unless an exemption is granted pursuant to Section 104 (c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA).

The current project ceiling is \$1,880,000. Only \$737,000 of these funds have been obligated to date. It is estimated that \$2,006,000 will be required to complete this project, of which \$1,600,000 will be for site specific bioremediation costs. This will raise the projected total costs to \$2,738,000.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

348 COURTLAND STREET
ATLANTA, GEORGIA 30363

ACTION MEMORANDUM

DATE: JUL 05 1990

SUBJECT: Request for \$2 Million Exemption and Ceiling Increase
at the Southeastern Wood Preserving Site, Canton,
Mississippi

FROM: Greer C. Tidwell /s/ Lee A. DeHihns, III
Regional Administrator Deputy Regional Administrator

TO: Don R. Clay
Assistant Administrator

THRU: Henry Longest II, Director
Office of Emergency and Remedial Response

ATTN.: Stephen D. Luftig, Director
Emergency Response Division

I. ISSUE:

The purpose of this Action Memorandum is to request an exemption from the \$2 Million statutory limit for ongoing removal action at Southeastern Wood Preserving Site, Canton, Mississippi, and to establish a new ceiling of \$2,738,000. Additional funds are required to alleviate the direct contact near term threat from the excavated waste on-site, prevent future contamination of ground water, and insure an efficient long-term response. Continued response actions cannot be undertaken unless an exemption is granted pursuant to Section 104 (c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA).

The current project ceiling is \$1,880,000. Only \$732,000 of these funds have been obligated to date. It is estimated that \$2,006,000 will be required to complete this project, of which \$1,600,000 will be for site specific bioremediation costs. This will raise the projected total costs to \$2,738,000.

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7/1/90

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ROGERS

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7/1/90

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LAIR

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7/1/90

4WD
TOBIN

[Signature]
7-3-90

4RA
TIDWELL

An exemption to the statutory limit may be granted if "continued response action is otherwise appropriate and consistent with the remedial action to be taken." This action is for biological treatment of the excavated wastes on site. This action would be consistent with any long-term remedial action in that it would mitigate the source of continued release through on-site treatment/disposal of creosote contaminated sludges and soils.

II. BACKGROUND

The Southeastern Wood Preserving Site (SE) is an abandoned wood preservation plant facility operated from 1928 until it filed for bankruptcy and was abandoned in early 1979. The site covers 10 acres and is located in a predominately commercial/residential area, in downtown Canton, Mississippi (population 12,000). Bachelor Creek and Illinois Central Gulf Railroad border the site to the north. The City of Canton's drinking water well field borders the south. An industrial plant borders the site to the east, and a residential area borders the site to the west. (Attachments 1 & 2.)

EPA initiated an emergency response action at SE, in June 1986, to stabilize three unlined surface impoundments that were overflowing on-site. Each impoundment contained creosote sludge and water. EPA contractors pumped 30,000 gallons of water from flooded areas of the site, treated it, and discharged it into Bachelor Creek.

The original action memo requested that this site be addressed and funded in two phases. The first phase was to stabilize the contaminated sludges and soils with lime kiln dust, and to contain them on-site. This initial removal action cost approximately \$150,000.

That initial removal action was not intended to be the final remedy. The second phase of the cleanup was to consist of either on-site treatment or off-site disposal of the stabilized sludges and soils. Volume of soil had to be assessed, disposal options evaluated, and site ranked for possible NPL listing.

EPA scored the Southeastern Wood Preserving site for the National Priority List (NPL) in 1989. The preliminary score was 21.9. It is anticipated that, once the new Hazard Ranking System (HRS) is promulgated, this site could be proposed for the NPL.

The Soil Conservation Service (SCS) contacted EPA in December, 1988. SCS had designed a soil erosion prevention plan that called for excavating and widening Bachelor Creek. While surveying the creek, SCS observed oily waste leaching into the creek from the Southeastern Wood Preserving Site. The SCS requested that EPA excavate that portion of Bachelor Creek adjacent to the site.

In April, 1989, EPA's Technical Assistant Team (TAT) sampled the soils to be excavated. The soils contained concentrations of polyaromatic hydrocarbons (PAH's) ranging from 199 to 856 mg/kg (ppm). The Region agreed to work with SCS and excavate contaminated soils in the area of Southeastern Wood Preserving. Through an Interagency Agreement, SCS contributed \$190,000 towards the excavation work.

An exemption from the twelve-month statutory limit and ceiling increase was approved on 8/21/89, with anticipated bioremediation costs of \$1,160,000. This estimate was based on EPA's previous experience with bioremediation landfarming at the Scott Lumber Site in Alton, Missouri. The Region proceeded with work authorized under this ceiling increase - excavation of Bachelor Creek and solicitation of site specific treatment proposals.

Proposals for on-site treatment were received May 24, 1990. The lowest bid that complied with EPA's statement of work was approximately \$1,400,000. The higher cost is attributed to more stringent RCRA Land Ban treatment standards and air emission than applied at the Scott Lumber Site. These more stringent standards apply here because of health based risk associated with the sites location in a commercial/residential area. These standards, in effect, require slurry phase treatment rather than landfarming. Two bidders proposed landfarming at \$700,000, but these proposals were rejected because they would not comply with treatment standards.

III. PRESENT SITUATION

EPA has completed excavation of Bachelor Creek adjacent to the site. This has resulted in the site being in a ten year floodplain instead of a five year floodplain.

EPA has solicited site specific requests for proposals to treat the 8,000 cubic yards of contaminated soil stockpiled on-site. Even though biological treatment was expected to be the most cost effective

remediation, contractors were encouraged to propose any technology that could meet the treatment standards. As a result of the initial responses, it is believed that the best and final offer for treatment of the wastes will be \$1,600,000.

IV. THREAT

A. Direct Contact Health Hazard

Creosote (a coal tar derivative) is a complex mixture of hydrocarbons consisting of approximately 85-96 percent polynuclear aromatic hydrocarbons (PAHs) and 5-15 percent phenolics. PAH and phenolic compounds, including volatile organic compounds, have been identified as the predominant contaminants on-site. The continued presence of contaminated materials presents the following threats to the public health and the environment:

1. Direct Contact with Soil On Site.
TAT obtained a composite sample of the waste pile in April, 1989. PAH concentrations were 5016 mg/kg (ppm) and phenol concentration was 62 mg/kg (ppm). This is above the ATSDR immediate threat level of 1000 ppm (Attachment 3). The site is in downtown Canton and access to the site is not restricted. There is a high probability of direct contact. Thus, the storage pile of contaminated soil poses a direct and immediate threat to public health and the environment.
2. Direct Contact with Soil/Sediment Off Site.
Concentrated levels of hazardous creosote are stored in an above ground pile which is located within the ten year floodplain. Each time the site floods, contaminated soil is washed into Bachelor Creek. Approximately one mile downstream from the site the stream becomes part of a recreational park where children play. The State has received complaints of children with creosote burns. These high concentrations of PAH and phenolics in wastes stored on site pose a direct contact threat as they erode into Bachelor Creek.
3. Threat of Migration to Ground Water/Drinking Water.
TAT has done plume modeling for the area. This modeling indicates that the threat for ground water contamination exists. The site is situated in the middle of the Yazoo formation outcrop. The Yazoo is defined by a relatively thin layer of marine clay approximately 26 feet thick.

Underlying the Yazoo is the Moodys Branch formation, a 28 foot thick bed of marl. Below the Moodys Branch is the upper contact of the Cockfield formation, a 150 foot thick bed of non-marine sandstone which comprises the shallowest aquifer for private wells in the Canton area. Regional faulting is recognized approximately two miles northeast of the site and tectonic uplift in the form of the Jackson Dome is found fifteen miles to the southwest.

In order for contaminants from the site to enter the Cockfield aquifer they must pass through the confining layers of the Yazoo and Moodys Branch formations. This would involve a breach in the integrity of their confining properties. With regional faulting and past tectonic activity in such close proximity to the site, the possibility of the confining layers being faulted sufficiently for contaminants to pass into the Cockfield aquifer is a real concern. In addition, the Yazoo and Moodys Branch are pocketed with thin lenses of cross bedded sands which would provide another avenue for the migration of contaminants into the Cockfield aquifer. Contamination levels at the site are high enough to warrant concern for the shallow aquifers underlying Canton, Mississippi. EPA has identified a municipal drinking water well field within 100 feet of the site and twelve private drinking water wells within a three mile radius of the site.

B. Environmental Release

Since 1986, when the stream bed was excavated, runoff from the waste pile has caused PAH concentrations in the stream to accumulate in the stream bed. TAT sampled the stream bed in March, 1989 and found PAH concentrations totalling 470 mg/kg (ppm).

The estimated volumes of stockpiled soil contaminated with PAHs, and phenolics are as follows:

8,000 cubic yards (12,000 tons)
5,012 ppm total PAHs

Surface water run-off from this site discharges directly into Bachelor Creek. This Creek flows through downtown Canton. Approximately one mile downstream from the site the stream becomes part of a recreational park where children swim.

With the municipal drinking water well field within 100 feet of the site and twelve private drinking water wells within a three mile radius of the site, there is potential for ground water contamination.

V. ENFORCEMENT STATUS

See Attachment 4, Enforcement Summary.

VI. STATUTORY CRITERIA

A. Response Actions are Otherwise Appropriate and Consistent with the Remedial Action To Be Taken

This site meets the consistency waiver exemption criterion in CERCLA 104(c), as amended by SARA, and described in OSWER Directive 9360.0-12A.

(i) Consistency:

The proposed removal action covered by this Action Memorandum is consistent with any future remedial action that could reasonably be expected to be taken at this site. The remedial action to be taken, in any scenario, would involve removal of direct contact threats and mitigation of the source of continued releases through treatment/disposal of the creosote contaminated sludges and soils. The proposed removal action is completely consistent with that goal.

(ii) Appropriateness:

The proposed removal action will eliminate the near-term threat of direct contact with hazardous materials posed by the waste pile on-site. It will prevent further migration of creosote wastes into Bachelor Creek and the ground water.

Also, it will ensure an efficient and timely response. Biological treatment will result in overall lower cleanup cost while enhancing protection of public health and environment.

B. Compliance with Resource Conservation and Recovery Act

1. (RCRA) Land Ban Restrictions.

Sediment sludges from the treatment of waste waters from wood preserving processes that use creosote and/or pentachlorophenol are listed

as RCRA K001 hazardous wastes. Under the RCRA Land Ban Regulations (40 C.F.R. Part 268), K001 wastes are first third wastes and must be pretreated prior to disposal in a landfill facility. The Land Ban regulations specify concentrations that the treatment technology must accomplish (Section 268.41 and Section 268.43). The site specific contract requires that treatment accomplish these concentrations. Data presently available indicates that the Land Ban standards will be met. Therefore, implementation of this removal action is consistent with RCRA Land Ban disposal requirements.

2. Minimum Technology for Land Disposal. EPA has promulgated treatment standards for K001. Therefore, there is not a Land Ban Soft Hammer provision requiring the waste be disposed of in a minimum technology landfill. The treated waste will be returned to the original area of contamination. Therefore, retrofitting of the disposal unit is not required, and this removal action is consistent with RCRA land disposal requirements.

VII. REGULATORY CRITERIA

Section 300.415(b)(2) of the National Contingency Plan (NCP) provides factors that shall be considered in determining the appropriateness of a removal action. The specific factors of Section 300.415(b)(2) that apply to this site are listed below. These factors are supported by the discussion of threat in this document.

- o Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations, animals, or food chain, Section 300.415(b)(2)(i);
- o Actual or potential contamination of drinking water supplies or sensitive ecosystems, Section 300.415(b)(ii);
- o High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate, Section 300.415(b)(2)(iv); and
- o Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released, Section 300.415(b)(2)(v).

VIII. SCOPE OF WORK

A. General

The proposed removal action is for on-site treatment of approximately 8,000 cubic yards. It is anticipated that the waste will be treated using slurry phase biological treatment.

B. Proposed Schedule

Requests for Proposals were solicited in March, 1990. Best and final offers are expected in July, 1990. Contract award is targeted for August, 1990. The contract allows twenty-four (24) months to complete treatment and demobilization.

IX. PROPOSED BUDGET

A. Summary of Project Costs

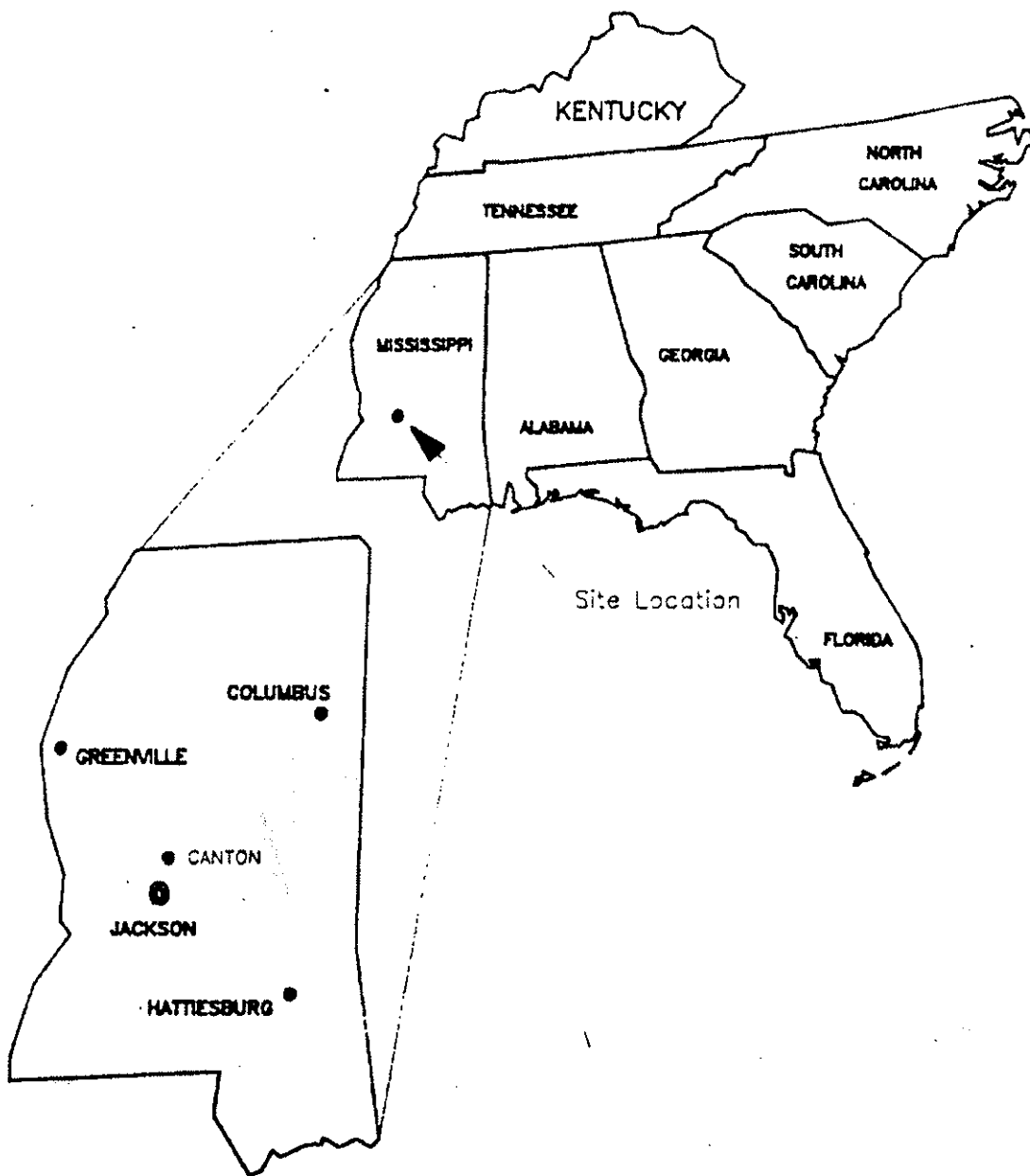
	<u>Current Ceiling</u>	<u>Proposed Ceiling</u>
1. Extramural Costs		
ERCS	\$ 480,000	\$ 584,000
Bioremediation	1,160,000	1,600,000
SUBTOTAL	1,640,000	\$2,344,000
2. Intramural Costs		
TAT	\$ 108,000	\$ 160,000
ERT	36,000	36,000
Direct	33,000	65,000
Indirect	69,000	93,000
SUBTOTAL	\$ 246,000	\$ 194,000
3. Contingency		\$ 200,000
TOTAL	\$1,880,000	\$2,738,000

X. ATTACHMENTS

1. Location Map
2. Site Drawings
3. ATSDR Memorandums
4. Enforcement Summary
5. PRP Response
6. Cost Estimate

- 11 -

ATTACHMENT 1
Location Maps

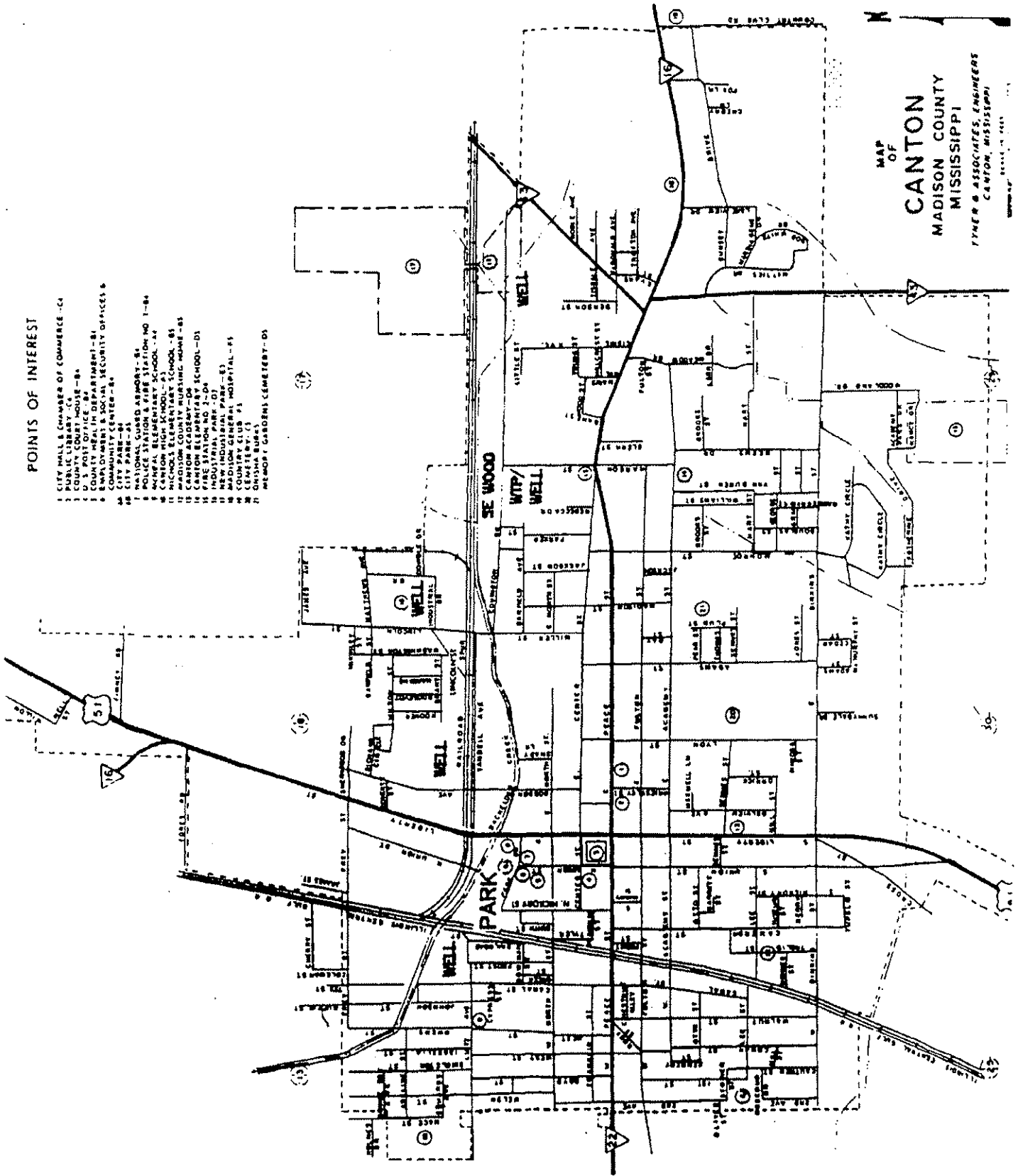


E.P.A. Region IV
Weston T.A.T. Activity Location
TDD #04-8903-20
SOUTHEASTERN WOOD PRESERVING
CANTON, MADISON COUNTY, MISSISSIPPI



POINTS OF INTEREST

- 1 CITY HALL & CHAMBER OF COMMERCE - C1
- 2 PUBLIC LIBRARY - C1
- 3 POST OFFICE - B1
- 4 U. S. POST OFFICE - B1
- 5 COUNTY HEALTH DEPARTMENT - B1
- 6 EMPLOYMENT & SOCIAL SECURITY OFFICES & COMMUNITY CENTER - B1
- 7 CITY PARK - B1
- 8 NATIONAL GUARD ARMORY - B1
- 9 PUBLIC ELEMENTARY SCHOOL - B1
- 10 CANTON HIGH SCHOOL - B1
- 11 NICHOLS ELEMENTARY SCHOOL - B1
- 12 CANTON COUNTRY CLUB - B1
- 13 CANTON ACADEMY - B1
- 14 CANTON ELEMENTARY SCHOOL - D1
- 15 FIRE STATION NO. 3 - D1
- 16 INDUSTRIAL PARK - E1
- 17 NEW INDUSTRIAL PARK - E1
- 18 MADISON GENERAL HOSPITAL - E1
- 19 COUNTRY CLUB - E1
- 20 CHURCH - E1
- 21 ORISHA BURN
- 22 MEMORIAL GARDENS CEMETERY - D1



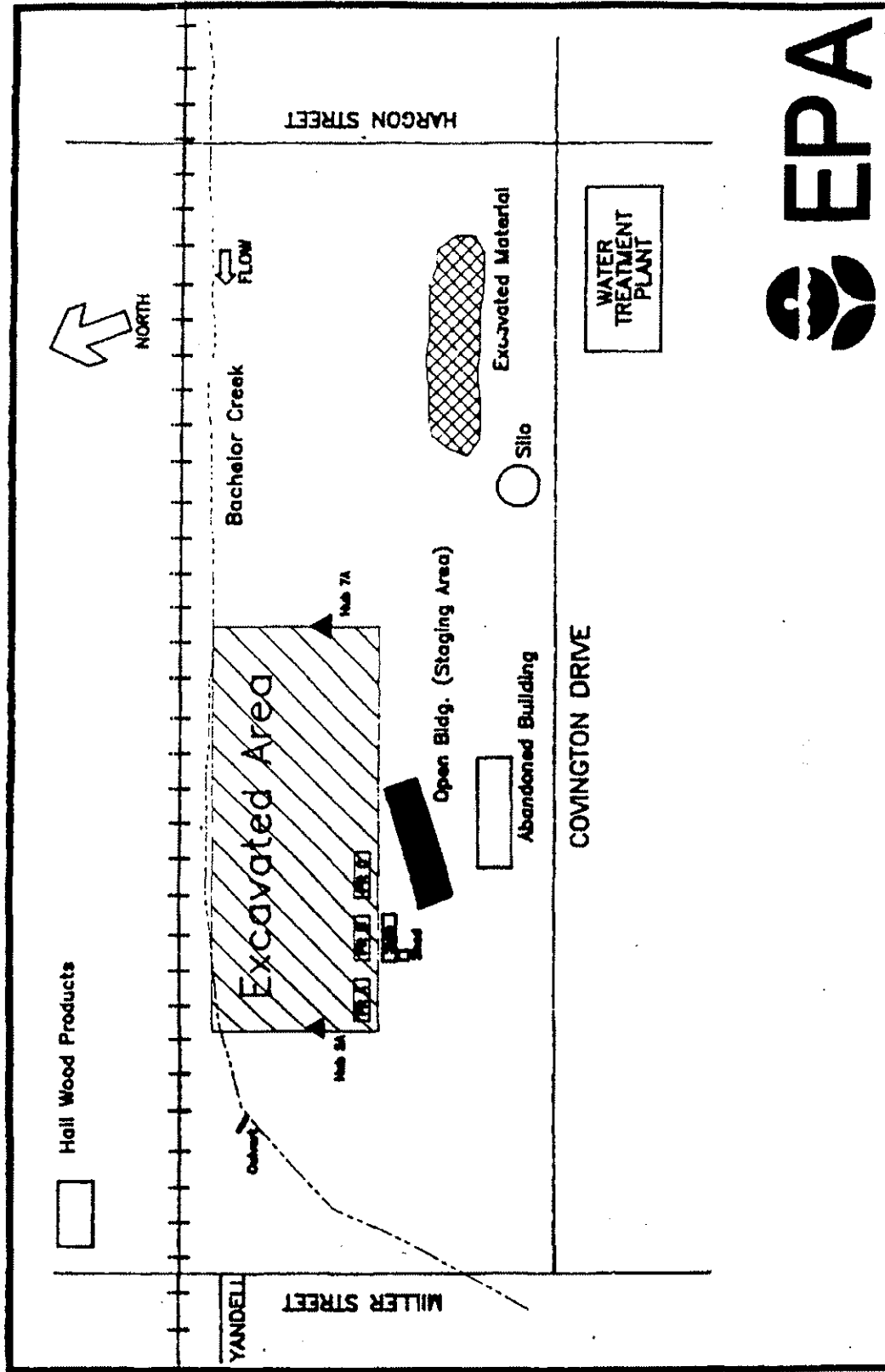
ATTACHMENT 2
Site Drawing

1. 100' x 100' lot
2. 100' x 100' lot
3. 100' x 100' lot
4. 100' x 100' lot
5. 100' x 100' lot
6. 100' x 100' lot
7. 100' x 100' lot
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9. 100' x 100' lot
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20. 100' x 100' lot
21. 100' x 100' lot
22. 100' x 100' lot
23. 100' x 100' lot



ROY F. WESTON Region IV TAT

SITE: Southeastern Wood Preserving

ACTIVITY DESCRIPTION: Site Diagram - Not To Scale

TDD NO.: 04-8903-20-2328

Canton, Madison County, Mississippi

DATE: 03 April 1989

ATTACHMENT 3

ATSDR Memorandums



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Agency for Toxic Substances
and Disease Registry

Memorandum

Date 6 July 1989

From ATSDR Regional Representative

Subject Southeastern Wood Preserving Site
Canton, MS

To Rita Ford

Thru:  Chuck Pietrosewicz
Senior ATSDR Regional Representative

As requested, we have reviewed the soil information for the above site. I have also consulted with Dr. Mark McClanahan of our Office of Health Assessment.

This site is an abandoned wood treating facility located in the city of Canton, MS. The site has reported levels of PAHs up to 5016 ppm in the soil. The site is reported to have no restrictions to public access. The site is also reported to be adjacent to the city well fields.

Based upon this information, we feel that this site may pose a potential health threat if persons are exposed through ingestion or dermally. Therefore we concur that some method of remediation should be conducted at this site to reduce or eliminate this exposure. We further concur with a clean-up level of 100 ppm based upon the pathways of ingestion or dermal contact. We also recommend that the drinking wells be periodically monitored for PAHs.

If you need any further assistance, please contact Chuck Pietrosewicz or myself.


Cody Jackson

cc: George Buynoski/OEA
Lee Tate/OHA
Mark McClanahan
File



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Agency for Toxic Substances
and Disease Registry

Memorandum

Date 15 August 1989

From ATSDR Regional Representative

Subject Southeastern Wood Preserving Site
Canton, MS

To Rita Ford

As per our discussion, we have re-evaluated this site based upon the new treatment approach proposed for this site. I have consulted with Dr. Mark McClanahan of our Office of Health Assessment.

This site is an abandoned wood treating facility located in the city of Canton, MS. The site has reported levels of PAHs up to 5016 ppm in the soil. The site is reported to have no restrictions to public access. The new treatment proposal is to treat all soils above 1000 ppm utilizing biological treatment and to bury those soils contaminated with PAHs between 100 and 1000 ppm to eliminate the direct contact and incidental ingestion pathways.

Based upon the information provided, we feel that this remediation approach of the site would remedy the potential health threat from ingestion or direct contact.

If you need any further assistance, please contact Chuck Pietrosewicz or myself.


Cody Jackson

cc: George Buynoski/OEA
Lee Tate/OHA
Mark McClanahan
File

ATTACHMENT 4

**Enforcement Summary
(Enforcement Sensitive)**

The Southeastern Wood Preserving site is an abandoned wood preserving facility operated from 1928 until 1979. The site covers ten (10) acres near downtown Canton, Madison County, Mississippi and is bordered by residential, industrial and commercial properties. The City's drinking water treatment plant and drinking water well field are located directly across the street.

The site was operated by two companies during its 52 years of active operation. Canton Treating Company operated the site from 1928 to 1965. In 1965, Dickson Treating Company purchased the site and operated the facility until it filed for bankruptcy in 1979.

The assets were held by bankruptcy court from 1979 until 1982 when Southeastern Wood Preserving Company purchased the site with a Small Business Administration loan. In 1984, Southeastern defaulted on its loan, never having operated the facility. At the foreclosure auction, White Pole and Timber company purchased the physical assets and the Industrial Development Authority of Madison County purchased the real property.

Investigations conducted by EPA civil investigators have been unsuccessful in locating previous corporate owners. Canton Treating Company was dissolved 02/22/84. Dickson Treating filed for bankruptcy in 1979 and was administratively dissolved for delinquent taxes. Southeastern Wood Preserving was dissolved 07/10/84.

The current owner, Industrial Development Authority of Madison County, was sent a Notice Letter on 05/01/86. The Development Authority responded to the Notice Letter on 05/19/86 and stated that it was unprepared financially to investigate or cleanup the site. A copy of that response is included as Attachment 5. A unilateral Administrative Order was issued to the Development Authority 05/28/86 requiring stabilization of the site. No response to this order is in the file.

Based on the above information, it was concluded that no viable party was available to conduct a removal. On 06/01/86, an Action Memorandum authorizing Phase I of the removal action was signed.

ATTACHMENT 5

PRP Response



INDUSTRIAL DEVELOPMENT AUTHORITY OF MADISON COUNTY

226 East Peace Street • P.O. Box 202
Canton, Mississippi 39046 • Telephone (601) 844-1564

MEMBERS OF THE AUTHORITY

JOHN WALLACE, President
BILL WOLCOTT, Vice President
THOMAS JOHNSON, Secretary
JOHN BROWN
JILLIEN DEAN
FRANK LEE
JIM BROWN

STAFF

BOB M. LEE, Executive Director
JOHN M. LEE, Assistant Director
JILL A. WATKINS, Secretary
FRANK LEE, Treasurer

May 19, 1986

Mr. Edward Hatcher
Emergency and Remedial Response Branch
U. S. Environmental Protection Agency
345 Courtland St., NE
Atlanta, GA 30365

RE: Southeastern Wood Preserving Site
Covington Ave.
Canton, MS

Dear Mr. Hatcher:

In reiteration of my telephone conversations with Larry Zimmerman on May 14 and with Jan Rogers on May 19 regarding Thomas W. Devine's letter about the above referenced site, the Industrial Development Authority of Madison County does currently own this property which lies between Canton Industrial Park #1 and Canton Industrial Park #2. The Industrial Development Authority of Madison County is a public agency created by the Madison County Board of Supervisors and the Mississippi State Legislature in 1979 to promote industrial park development and job creation in this high unemployment area of Mississippi. On these expressed purposes, our Authority purchased this property on August 20, 1984 at the foreclosure auction ordered by the U. S. Small Business Administration of Southeastern Wood Preserving, Inc.

A wood chip boiler was also purchased at the same time with the intent to parallel it with a solid waste boiler to be installed by the City of Canton so that steam and electricity could be generated for the industrial area at the same time waste was being incinerated.

The actual treatment plant was purchased at the same foreclosure auction by White Pole & Timber Company of Kennedy, Alabama. A year later, White Pole & Timber also bought the wood chip boiler after it was determined that the solid waste incineration operation would be too expensive for the City of Canton to undertake. Both the treatment and the boiler systems have since been substantially removed from the site by that firm's owner, Joe White.

M. Edward Hatcher

Page Two

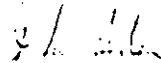
May 19, 1986

Our Industrial Development Authority is completely unprepared in ability or in tax funds, for such an investigation and possible cleanup. We are not insured against the release of hazardous wastes and substances as we have never envisioned becoming a manufacturer over and above our responsibility as the county's industry real estate development agency.

We welcome your agency's investigation of any possible danger this former creosote plant could be to the general public. If indeed there is determined to be a danger to the general public, we would request an environmental cleanup from your organization. Any of your employees and officials may have complete access to this property and any other of our other public industrial property which surrounds this site. As our public property is watched by city police and municipal utility employees, it would be advisable that you check with Canton City Hall before moving on the site.

You may contact me, or John Wallace, our volunteer president, or Sidney Runnels, Mayor of Canton, as you proceed further with your investigation.

Sincerely,



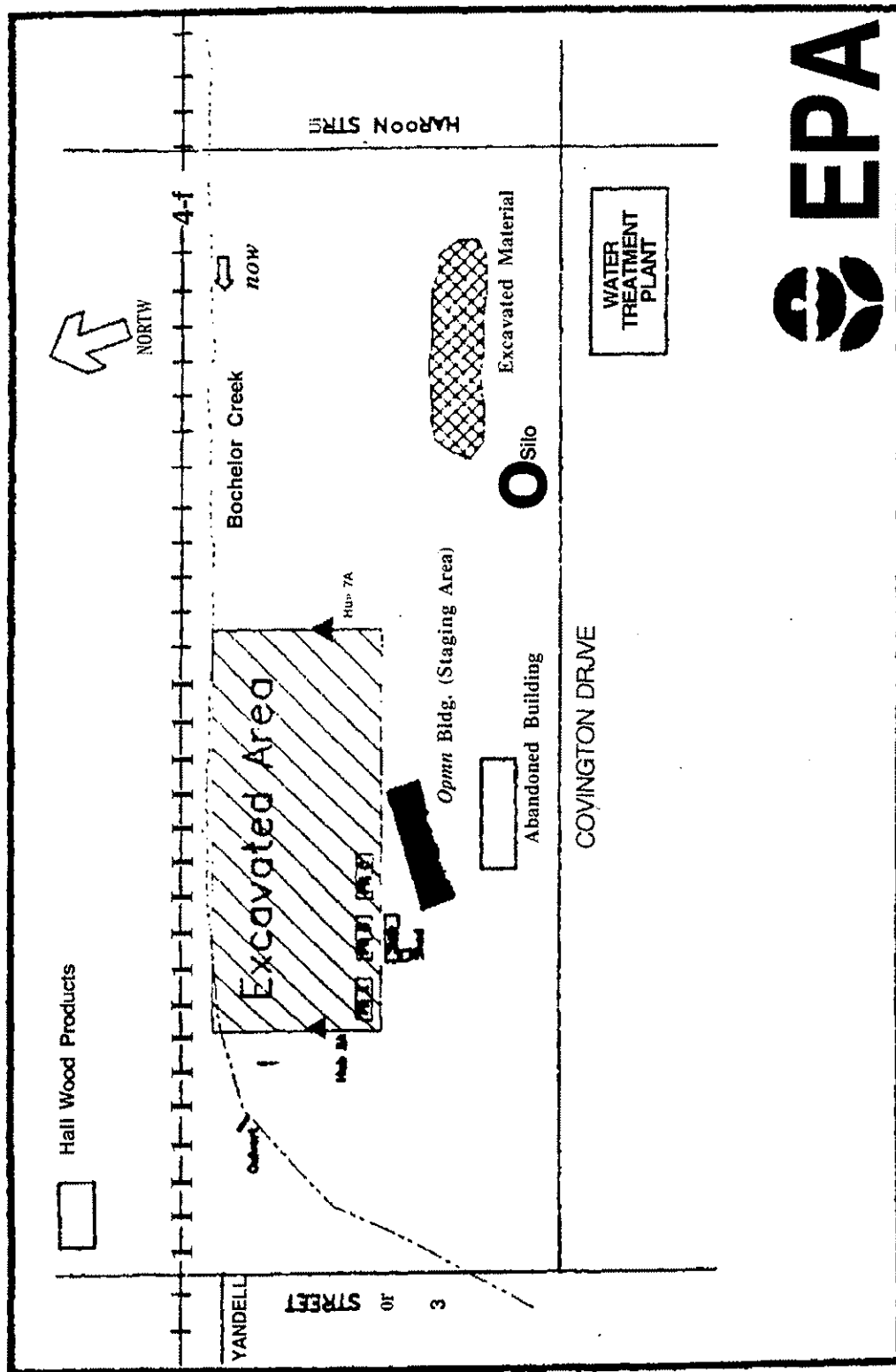
Duke Loden, CID
Executive Vice President

DL/mo

cc: Sidney Runnels, Canton Mayor
John Wallace, IDAMC President

ATTACHMENT 6
Cost Estimate
Southeastern Wood
Canton, MS

	<u>Expended to date</u>	<u>Future Costs</u>	<u>New Ceiling</u>
ERCS-Phase I	\$ 150,000	\$ 0	\$ 150,000
ERCS-SCS	190,000	0	190,000
ERCS-Phase II	244,000	0	244,000
TAT-Phase I	30,000	0	30,000
TAT-Phase II	50,000	0	50,000
TAT-bioremediation	0	80,000	80,000
ERT-bioremediation	0	36,000	36,000
EPA-Phase I	10,000	0	10,000
EPA-Phase II	24,000	0	24,000
EPA-bioremediation	0	31,000	31,000
EPA-indirect	34,000	59,000	93,000
Bioremediation	0	1,600,000	1,600,000
SUBTOTAL	\$ 732,000	\$1,806,000	\$2,538,000
Contingency			\$ 200,000
TOTAL			\$2,738,000



Site Diagram of Southeastern Wood Preserving



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET NE
ATLANTA GEORGIA 30365

29 0015
25615

Site:	_____
Break:	2.9
Other:	_____

ACTION MEMORANDUM

DATE: AUG 18 1989

SUBJECT: Request for 12 Month Extension and Ceiling Increase at the
Southeastern Wood Preserving Site, Canton, Mississippi

FROM: Rita Ford *Rita Ford*
On-Scene Coordinator

TO: Patrick M. Tobin, Director
Waste Management Division

I. ISSUE:

Funds are requested to complete actions which are necessary to alleviate the direct contact near term threat from the facility, prevent further contamination of ground water, and insure an efficient long-term response at the Southeastern Wood Preserving site, Canton, Mississippi. Continued response actions will exceed the 12 month statutory limit. Therefore, further actions cannot be undertaken unless an exemption is granted. It is estimated that an additional \$1,580,000 will be required to complete this project, of which \$1,490,000 is for extramural contractor costs. This ceiling increase will be completely funded by the removal program, and will raise the projected total costs to \$1,880,000. This action is for excavation of the adjacent creek which will prevent soil erosion and site flooding and for biological treatment of the remaining wastes on site. Those actions would be consistent with any proposed Record of Decision (ROD) if the site was proposed and listed on the National Priority List.

II. BACKGROUND

The Southeastern Wood Preserving Site (SE) is an abandoned wood preservation plant facility operated from 1928, until it filed for bankruptcy and was abandoned in early 1979. The site covers about 10 acres and is located in a predominately commercial/residential area, in downtown Canton, Mississippi (population 12,000). Bachelor Creek and Illinois Central Gulf Railroad border the site to the north. The City of Canton's drinking water well field borders the south. An industrial plant borders the site to the east, and a residential area borders the site to the west. (Attachments 1 & 2.)

EPA initiated an emergency response action at SE, in June 1986, to stabilize three unlined surface impoundments that were overflowing on-site. Each impoundment contained creosote sludge and water. EPA contractors pumped 30,000 gallons of water from flooded areas of the site, treated it, and discharged it into Bachelor Creek.

The original action memo requested that this site be addressed and funded in two phases. The first phase was to stabilize the contaminated sludges and soils with lime kiln dust to contain them on-site. This initial removal action cost approximately \$150,000.

That initial removal action was not intended to be the final remedy. At the time, a second phase of the cleanup was anticipated to consist of either on site treatment using alternative technology or off site disposal. Volume of soil had to be assessed, disposal options evaluated, and site ranked for possible NPL listing.

EPA scored the Southeastern Wood Preserving site for the National Priority List (NPL) in 1989. The preliminary score was 21.9. It is not expected that the site will be proposed for the NPL, thus no remedial follow up can be anticipated.

The Soil Conservation Service (SCS) contacted EPA in December, 1988. SCS has designed a soil erosion prevention plan that calls for excavating and widening Bachelor Creek. While surveying the creek, SCS observed oily waste leaching into the creek from the Southeastern Wood Preserving Site.

In April, 1989, EPA's Technical Assistant Team (TAT) sampled the soils to be excavated. The soils contained concentrations of polycyclic aromatic hydrocarbons (PAH's) ranging from 199 to 856 mg/kg (ppm). This concentration exceeds the removal standard suggested by ATSDR of 100 ppm (Attachment 3).

EPA determined that further soil removal would be required to alleviate the creosote discharge. In subsequent discussions with the SCS, it was requested that EPA excavate that portion of Bachelor Creek adjacent to the site because high concentrations of PAHs (199 to 856 ppm) in the creek sediment/soil require that soils be excavated as hazardous substances. This excavation involves approximately 12,000 cubic yards of soil.

Because treatment of that soil would cause removal costs to significantly exceed the \$2 million statutory limit, the Regional office contacted EPA headquarters. A draft request for \$2 million exemption was sent to the Emergency Response Division for consideration. The region was told that the exemption would probably not be approved because the site did not rank high enough to be proposed for the NPL. In accordance with EPA policy, approval of exemptions for non-NPL sites would be very limited.

Based on that feedback, it was decided that a more limited response action would be initiated to eliminate the direct contact hazard for soils with concentrations exceeding 100 ppm. Treatment using alternative technology would be used to eliminate the leachate and ground water contamination hazard for soils with concentrations exceeding 1000 ppm (Attachment 3). The estimated volumes of contaminated soil are:

Source	Volume	PAHs	Option
Waste Pile	12,000 yds	5016 ppm	Treatment
New Excavation	12,000 yds	521 ppm	On-Site Burial

In addition, EPA will reinforce the sides of Bachelor Creek as required for the Bachelor Creek Soil Erosion Control Project. The Soil Conservation Service has agreed to reimburse EPA for this work through an Interagency Agreement.

III. PRESENT SITUATION

The Soil Conservation Service has let contracts and has begun widening Bachelor Creek below the site. This portion of the project is scheduled to be completed this construction season which ends October 1 when the rainy season begins. Work in the creek cannot be conducted during the rainy season. Therefore, EPA needs to begin work on the Southeastern Wood Preserving portion of Bachelor Creek in September, 1989. An added benefit is that flood control will be provided during the next rainy season which will prevent washing of the waste pile into Bachelor Creek.

IV. THREAT

A. Direct Contact Health Hazard

Creosote (a coal tar derivative) is a complex mixture of hydrocarbons consisting of approximately 85-96 percent polynuclear aromatic hydrocarbons (PAHs) and 5-15 percent phenolics. PAH and phenolic compounds, including volatile organic compounds, have been identified as the predominant contaminants on-site. The continued presence of contaminated materials presents the following threats to the public health and the environment:

1. Direct Contact with Soil On Site.

TAT obtained a composite sample of the waste pile in April, 1989. PAH concentrations were 5016 mg/kg (ppm) and phenol concentration was 62 mg/kg (ppm). This is above the ATSDR immediate threat level of 100 ppm (Attachment 3). The site is in downtown Canton and access to the site is not restricted. Children have been seen playing at the site. There is a high probability of direct contact exposure to the local residents. This storage pile of contaminated soil poses a direct threat to public health and the environment.

2. Direct Contact with Soil/Sediment Off Site.

Concentrated levels of hazardous creosote are stored in an above ground pile which is located within the five year floodplain. Each time the site floods, contaminated soil is washed into Bachelor Creek. Approximately one mile downstream from the site the stream becomes part of a recreational park where children play. The State has received complaints of children with creosote burns. These high concentrations of PAH and phenolics in wastes stored on site pose a direct contact threat as they erode into Bachelor Creek.

3. Direct Contact with Ground Water/Drinking Water.

TAT has done plume modeling for the area. This modeling indicates that the threat for ground water contamination exists. The site is situated in the middle of the Yazoo formation outcrop. The Yazoo is defined by a relatively thin layer of marine clay approximately 26 feet thick. Underlying the Yazoo is the Moodys Branch formation, a 28 foot thick bed of marl. Below the Moodys Branch is the upper contact of the Cockfield formation, a 150 foot thick bed of non-marine sandstone which comprises the shallowest aquifer for private wells in the Canton area. Regional faulting is recognized approximately two miles northeast of the site and tectonic uplift in the form of the Jackson Dome is found fifteen miles to the southwest.

In order for contaminants from the site to enter the Cockfield aquifer they must pass through the confining layers of the Yazoo and Moodys Branch formations. This would involve a breach in the integrity of their confining properties. With regional faulting and past tectonic activity in such close proximity to the site, the possibility of the confining layers being faulted sufficiently for contaminants to pass into the Cockfield aquifer is a real concern. In addition, the Yazoo and Moodys Branch are pocketed with thin lenses of cross bedded sands which would provide another avenue for the migration of contaminants into the Cockfield aquifer. Contamination levels at the site are high enough to warrant concern for the shallow aquifers underlying Canton, Mississippi. EPA has identified a municipal drinking water well field within 100 feet of the site and twelve private drinking water wells within a three mile radius of the site.

B. Environmental Release

Since 1986, when the stream bed was excavated, runoff from the waste pile has caused PAH concentrations in the stream to accumulate in the stream bed. TAT sampled the stream bed in March, 1989 and found PAH concentrations totalling 470 mg/kg (ppm).

Surface water run-off from this site discharges directly into Bachelor Creek. This Creek flows through downtown Canton. Approximately one mile downstream from the site the stream becomes part of a recreational park where children swim.

V. ENFORCEMENT STATUS

See Attachment 4, Enforcement Summary.

VI. COMPLIANCE WITH FEDERAL LAWS

A. Compliance with CERCLA

This request is being made from the 12 month statutory limit based on the exemption criteria set forth in CERCLA Section 104 (c) as amended by SARA. Specifically, the exemption criteria requires that the response action must (1) mitigate a near term threat, (2) prevent migration, and (3) provide assistance that would not otherwise be provided in a timely manner.

1. To Mitigate Near-term Threat.

The existing waste pile has high concentrations of PAHs (5016 ppm). The site is in downtown Canton and access to the site is not restricted. There is a high probability of direct contact exposure to the local residents. The proposed response action will eliminate the direct contact threat posed by the waste pile on site.

In addition, the SCS is widening Bachelor Creek to reduce soil erosion. The elevated concentrations of PAHs (199 to 856 ppm) in the creek sediment/soil on site require that those soils be excavated as hazardous substances.

2. To Prevent Further Migration.

To prevent further migration of creosote wastes into Bachelor Creek and ground water, the highly contaminated soils (5016 ppm) will be treated using alternative technology on site. The soils with lower contaminant concentrations (199 to 856 ppm) will be buried on site.

If the wastes are not removed or treated on site, then hazardous waste would continue to migrate and contaminate both surface water and ground water off site. The existing waste pile is within 100 feet of Bachelor Creek and within 100 feet of the City of Canton's drinking water well field.

To ensure an efficient and timely response at the Southeastern Wood Treating Site, Region IV will first excavate the stream bed in conjunction with SCS. Although the purpose of the SCS project is to control soil erosion, an incidental benefit will be flood control. The site is currently in the five year flood plain. After completion of the SCS project, the site will be in a ten year flood plain.

After the stream bed is excavated, and the volume of soil to be treated has been determined, EPA will require site specific bids for alternative technology treatment. Biological treatment vendors have indicated prices ranging from \$30 to \$200/ton. A recent EPA biological treatment project to treat 12,000 tons was awarded at a cost of \$84/ton. A transportable incinerator vendor, who has also suggested interest in the site, has insinuated incineration could be done in the \$100/ton price range.

In addition, the response action must be consistent with the remedial action to be taken. The proposed response action will completely treat the highly contaminated soil, thus destroying the contaminants and therefore it is consistent with any remedial action that might be proposed.

3. To Provide Assistance that Would Not Otherwise be Provided in a Timely Manner.

No other party can provide a timely response. The State is not financially able to accomplish the required work. EPA scored the Southeastern Wood Preserving site for the NPL in 1989. The preliminary score was 21.9. It is not expected that the site will be proposed for the NPL, thus no remedial follow up can be anticipated. Enforcement actions are not expected to result in funds to support the removal action. A summary of enforcement actions is presented in Attachment 4.

B. Compliance with Resource Conservation and Recovery Act

1. (RCRA) Land Ban Restrictions.

Sediment sludges from the treatment of waste waters from wood preserving processes that use creosote and/or pentachlorophenol are listed as RCRA K001 hazardous wastes. Under the RCRA Land Ban Regulations (40 C.F.R. Part 268), K001 wastes are first third wastes and must be pretreated prior to disposal in a landfill facility. The Land Ban regulations specify concentrations that the treatment technology must accomplish (Section 268.41 and Section 268.43).

EPA's Gulf Breeze Research Laboratory is conducting a field treatability study to confirm that biological treatment is an effective technology for creosote that has been stabilized with kiln dust. Data presently available indicates that the Land Ban standards will be met. The contract for biological treatment of the wastes will require that the treatment accomplish these concentrations. Therefore, implementation of this removal action is consistent with RCRA Land Ban disposal requirements.

2. Minimum Technology for Land Disposal.

EPA has promulgated treatment standards for K001. Therefore, there is not a Land Ban Soft Hammer provision requiring the waste be disposed of in a minimum technology landfill. The treated waste will be returned to the original area of contamination. Therefore, retrofitting of the disposal unit is not required, and this removal action is consistent with RCRA land disposal requirements.

VII. REGULATORY CRITERIA

Section 300.65(b)(2) of the National Contingency Plan (NCP) provides factors that shall be considered in determining the appropriateness of a removal action. The specific factors of Section 300.65(b)(2) that apply to this site are listed below. These factors are supported by the discussion of threat in this document.

- o Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations, animals, or food chain, Section 300.65(b)(2)(i);
- o Actual or potential contamination of drinking water supplies or sensitive ecosystems, Section 300.65(b)(ii);
- o High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate, Section 300.65(b)(2)(iv); and
- o Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released, Section 300.65(b)(2)(v).

VIII. SCOPE OF WORK

A. General

This remedy implements two phases of removal response actions:

1. Excavation of contaminated soil adjacent to Bachelor Creek in conjunction with the SCS erosion control project. This soil will be buried on site to eliminate the direct contact hazard.
2. Biological treatment of approximately 12,000 cubic yards of contaminated soils (5016 ppm) on site.

B. Proposed Schedule

The OSC will initiate a Delivery Order for the ERCS contractor to begin excavation of Bachelor Creek as soon as this exemption request is approved. Work must be completed before the rainy season starts in October.

<u>Activity</u>	<u>Begin</u>	<u>Complete</u>
Excavate Creek - ERCS	09-05-89	30 days
Bioremediation - Site Specific Bid	03-01-90	18 months

IX. PROPOSED BUDGET

A. Summary of Project Costs

1. Extramural Costs

	Current Ceiling	Requested Increase	Total
ERCS	\$250,000	\$ 230,000	\$ 480,000
TAT Costs	30,000	78,000	108,000
ERT Costs	0	36,000	36,000
Bioremediation	0	1,160,000	1,160,000
SUBTOTAL	\$280,000	\$1,498,000	\$1,778,000

2. Intramural Costs

	Current Ceiling	Requested Increase	Total
EPA Direct	\$10,000	\$ 23,000	\$ 33,000
EPA Indirect	10,000	59,000	69,000
SUBTOTAL	\$20,000	\$ 82,000	\$102,000
TOTAL	\$300,000	\$1,580,000	\$1,880,000

This estimate for the proposed increase assumes biological treatment will be performed on site at a cost of \$84/ton. Calculations used to develop the cost estimates are presented in Attachment 6.

X. ATTACHMENTS

1. Location Map
2. Site Drawing
3. ATSDR Memorandums
4. Enforcement Summary
5. PRP Response
6. Cost Estimate

XI. REGIONAL RECOMMENDATION

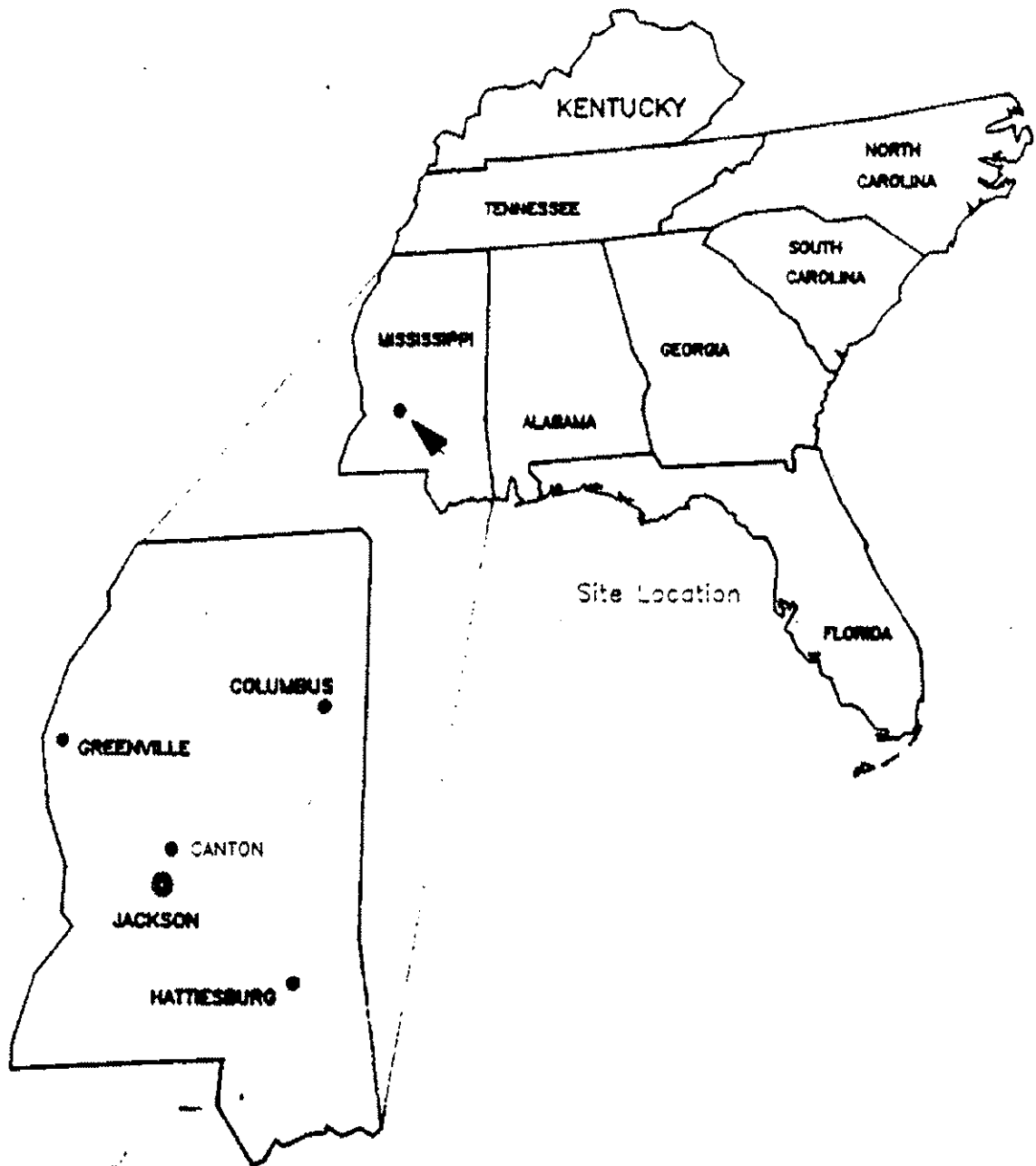
Because conditions at the Southeastern Wood Treating Site meet the NCP Section 300.65 criteria for an immediate removal, I recommend you approve the 12 month extension and ceiling increase. The total estimated project cost is \$1,880,000, of which \$1,490,000 is for extramural cleanup contractor costs. You may indicate your approval or disapproval by signing below.

Approve: Derrick M. Thomas

Date: 8-21-89

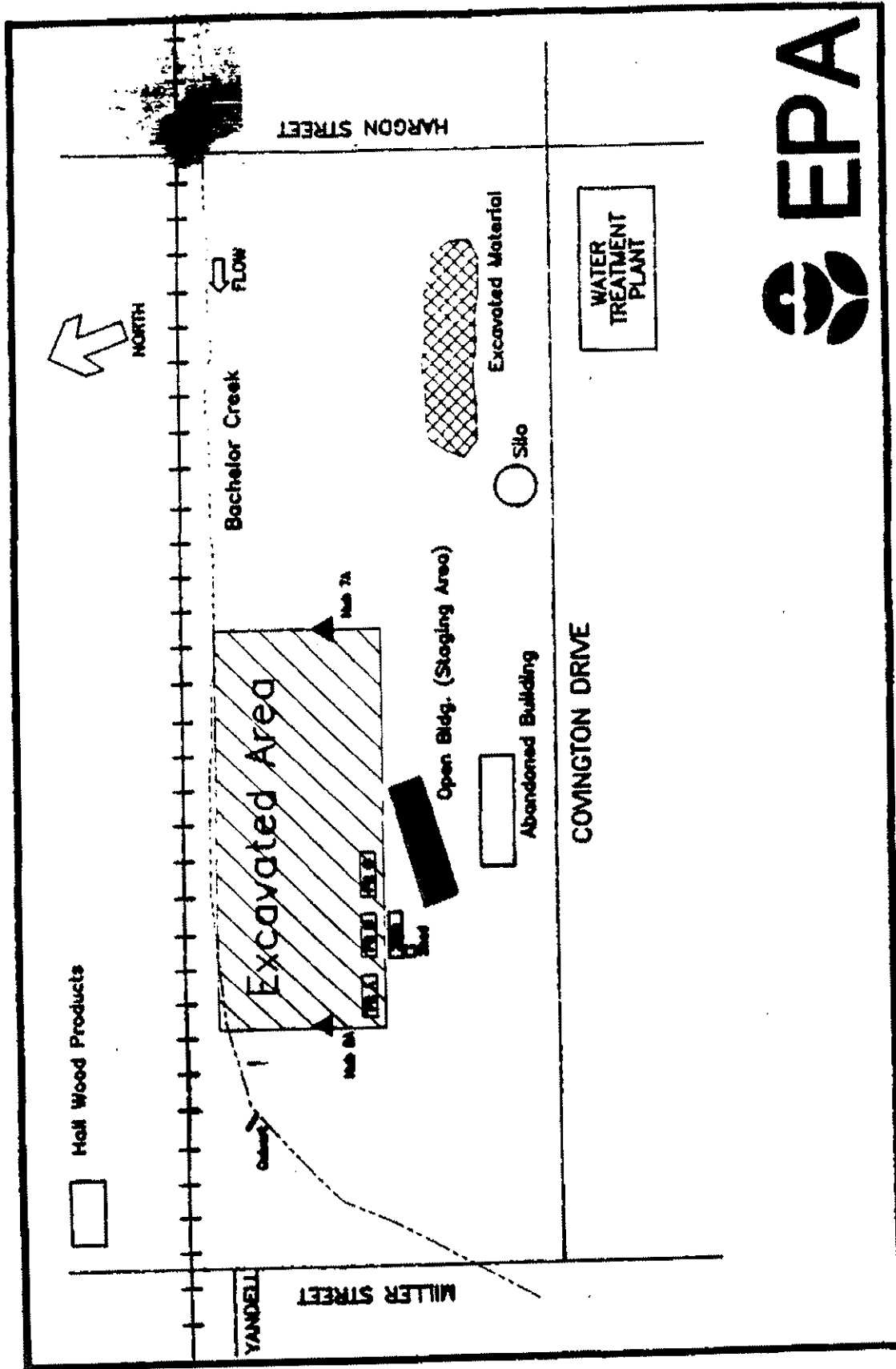
Disapprove: _____

Date: _____



E.P.A. Region IV
Weston T.A.T. Activity Location
TDD #04-8903-20
SOUTHEASTERN WOOD PRESERVING
CANTON, MADISON COUNTY, MISSISSIPPI

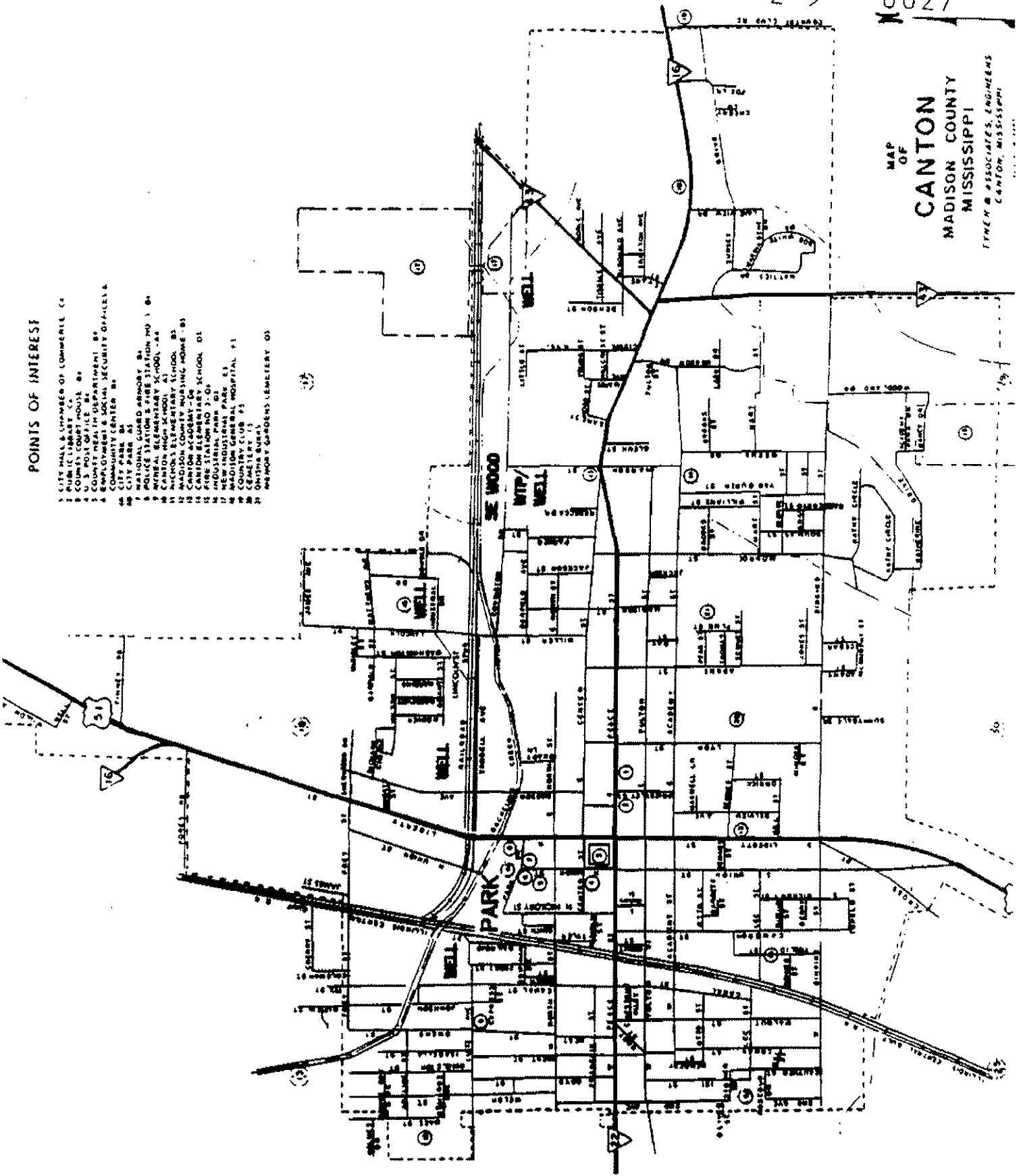




ROY F. WESTON Region IV TAT	SITE: Southeastern Wood Preserving
ACTIVITY DESCRIPTION: Site Diagram - Not To Scale	TDD NO.: 04-8903-20-2328
Canton, Madison County, Mississippi	DATE: 03 April 1989

POINTS OF INTEREST

- 1 CITY HALL & CHAMBER OF COMMERCE C4
- 2 PUBLIC LIBRARY C4
- 3 COUNTY COURT HOUSE B4
- 4 U.S. POST OFFICE B4
- 5 U.S. CUSTOMS & BORDER PROTECTION B4
- 6 EMPLOYMENT & SOCIAL SECURITY OFFICES A4
- 7 COMMUNITY CENTER B4
- 8 CITY PARK B4
- 9 CITY PARK B4
- 10 POLICE STATION & FIRE STATION NO. 1 B4
- 11 METNEAL ELEMENTARY SCHOOL A3
- 12 CANTON HIGH SCHOOL A3
- 13 CANTON'S ELEMENTARY SCHOOL B3
- 14 CANTON'S ELEMENTARY SCHOOL B3
- 15 CANTON'S ELEMENTARY SCHOOL B3
- 16 CANTON'S ELEMENTARY SCHOOL B3
- 17 FIRE STATION NO. 2-O4
- 18 INDUSTRIAL PARK O4
- 19 INDUSTRIAL PARK O4
- 20 INDUSTRIAL PARK O4
- 21 MADISON GENERAL HOSPITAL F1
- 22 COUNTRY CLUB F1
- 23 CEMETERY F1
- 24 CEMETERY F1
- 25 AIRPORT GARDENS CEMETERY O4



MAP OF
CANTON
MADISON COUNTY
MISSISSIPPI
TYNEN & ASSOCIATES, ENGINEERS
CANTON, MISSISSIPPI



DEPARTMENT OF HEALTH & HUMAN SERVICES

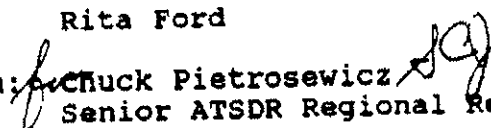
Memorandum

Date 6 July 1989

From ATSDR Regional Representative

Subject Southeastern Wood Preserving Site
Canton, MS

To Rita Ford

Thru:  Chuck Pietrosewicz
Senior ATSDR Regional Representative

As requested, we have reviewed the soil information for the above site. I have also consulted with Dr. Mark McClanahan of our Office of Health Assessment.

This site is an abandoned wood treating facility located in the city of Canton, MS. The site has reported levels of PAHs up to 5016 ppm in the soil. The site is reported to have no restrictions to public access. The site is also reported to be adjacent to the city well fields.

Based upon this information, we feel that this site may pose a potential health threat if persons are exposed through ingestion or dermally. Therefore we concur that some method of remediation should be conducted at this site to reduce or eliminate this exposure. We further concur with a clean-up level of 100 ppm based upon the pathways of ingestion or dermal contact. We also recommend that the drinking wells be periodically monitored for PAHs.

If you need any further assistance, please contact Chuck Pietrosewicz or myself.


Cody Jackson

cc: George Buynoski/OEA
Lee Tate/OHA
Mark McClanahan
File



DEPARTMENT OF HEALTH & HUMAN SERVICES

29 0029
Public Health Service
Agency for Toxic Substances
and Disease Registry

Memorandum

Date 15 August 1989

From ATSDR Regional Representative

Subject Southeastern Wood Preserving Site
Canton, MS

To Rita Ford

As per our discussion, we have re-evaluated this site based upon the new treatment approach proposed for this site. I have consulted with Dr. Mark McClanahan of our Office of Health Assessment.

This site is an abandoned wood treating facility located in the city of Canton, MS. The site has reported levels of PAHs up to 5016 ppm in the soil. The site is reported to have no restrictions to public access. The new treatment proposal is to treat all soils above 1000 ppm utilizing biological treatment and to bury those soils contaminated with PAHs between 100 and 1000 ppm to eliminate the direct contact and incidental ingestion pathways.

Based upon the information provided, we feel that this remediation approach of the site would remedy the potential health threat from ingestion or direct contact.

If you need any further assistance, please contact Chuck Pietrosewicz or myself.


Cody Jackson

cc: George Buynoski/OEA
Lee Tate/OHA
Mark McClanahan
File.

Note: Due to the CONFIDENTIAL nature of this material page 2.9 0030 of this document has been withheld. This document is available, for Judicial review only, in the Records Center at EPA Region IV, Atlanta, Georgia.



2 9 0031

INDUSTRIAL DEVELOPMENT AUTHORITY OF MADISON COUNTY

226 East Peace Street • P.O. Box 202
Canton, Mississippi 39046 • Telephone: 601/851-1111

MEMBERS OF THE AUTHORITY

JOHN WAGGAS, President
HILL WOLCOTT, Vice President
THOMAS J. JONES, Secretary
JOHN R. BROWN
JEWELYN DEAN
GEOFFREY
JIM BROWN

STAFF

DAVID L. JONES, Executive Director
B. M. JONES, Jr., Assistant Executive Director
J. A. WAGGAS, Jr., Assistant Executive Director
J. A. WAGGAS, Jr., Assistant Executive Director

May 19, 1986

Mr. Edward Hatcher
Emergency and Remedial Response Branch
U. S. Environmental Protection Agency
345 Courcland St., NE
Atlanta, GA 30365

RE: Southeastern Wood Preserving Site
Covington Ave.
Canton, MS

Dear Mr. Hatcher:

In reiteration of my telephone conversations with Larry Zimmerman on May 14 and with Jan Rogers on May 19 regarding Thomas W. Devine's letter about the above referenced site, the Industrial Development Authority of Madison County does currently own this property which lies between Canton Industrial Park #1 and Canton Industrial Park #2. The Industrial Development Authority of Madison County is a public agency created by the Madison County Board of Supervisors and the Mississippi State Legislature in 1979 to promote industrial park development and job creation in this high unemployment area of Mississippi. On these expressed purposes, our Authority purchased this property on August 20, 1984 at the foreclosure auction ordered by the U. S. Small Business Administration of Southeastern Wood Preserving, Inc.

A wood chip boiler was also purchased at the same time with the intent to parallel it with a solid waste boiler to be installed by the City of Canton so that steam and electricity could be generated for the industrial area at the same time waste was being incinerated.

The actual treatment plant was purchased at the same foreclosure auction by White Pole & Timber Company of Kennedy, Alabama. A year later, White Pole & Timber also bought the wood chip boiler after it was determined that the solid waste incineration operation would be too expensive for the City of Canton to undertake. Both the treatment and the boiler systems have since been substantially removed from the site by that firm's owner, Joe White.

Mr. Edward Hatcher
Page Two
May 19, 1986

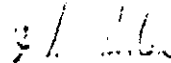
2 9 0032

Our Industrial Development Authority is completely unprepared in ability or in tax funds, for such an investigation and possible cleanup. We are not insured against the release of hazardous wastes and substances as we have never envisioned becoming a manufacturer over and above our responsibility as the county's industry real estate development agency.

We welcome your agency's investigation of any possible danger this former creosote plant could be to the general public. If indeed there is determined to be a danger to the general public, we would request an environmental cleanup from your organization. Any of your employees and officials may have complete access to this property and any other of our other public industrial property which surrounds this site. As our public property is watched by city police and municipal utility employees, it would be advisable that you check with Canton City Hall before moving on the site.

You may contact me, or John Wallace, our volunteer president, or Sidney Runnels, Mayor of Canton, as you proceed further with your investigation.

Sincerely,



Duke Loden, CID
Executive Vice President

DL/mo

cc: Sidney Runnels, Canton Mayor
John Wallace, IDAMC President

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30365

Site: _____

Break: 2:9

Other: _____

ACTION MEMORANDUM

DATE: MAY 28 1986

SUBJECT: Immediate Removal Request for the Southeastern Wood Preserving Site, Canton, MS

FROM: Edward L. Hatcher
On-Scene Coordinator

TO: Jack E. Ravan
Regional Administrator

PURPOSE

This request is for authorization to proceed with an immediate removal for \$300,000 at the Southeastern Wood Preserving Site in Canton, MS. A significant threat to public health and the environment exists at this time and may worsen if response is delayed at this site.

BACKGROUND

A. Incident or Site Setting/Description:

1. Physical location - Immediately adjacent to the plant is Towne Creek, or Bachelor's Creek. Towne Creek flows into Bear Creek and then into the Big Black River. The site is one mile northeast of the City of Canton and is in a mixed commercial, industrial, and residential area. It is approximately 300 feet from the nearest habitation.
2. General character of site - Southeastern Wood Preserving Company has been under the ownership of three different companies in its approximately 52 year history. Production began around 1928 and was owned by Canton Treating Company and Mr. L. H. Dunham was the company president. In October 1965 the company was purchased by Mr. Hugh M. Dickson and became Dickson Treating Company. The company declared bankruptcy in late 1979 and was taken over by the government for a period of about two years. In 1982, Southeastern Wood Preserving, Mr. Cleve Searcy and Mr. Charles Southeerland - owners, bought the abandoned company. Southeastern Wood never actually operated the plant.

3. Waste management - The production process involved debarking of the Southern Yellow Pine timbers and placing them in retort cylinders for drying and pressure treatment using creosote and pentachlorophenol as preservatives. The production schedule for each day consisted of two charges per day requiring twelve hours for each charge. Each charge resulted in the generation of 50,000 gallons of wastewater for discharge. Prior to hookup with the city sewage system these wastewaters were allowed to flow into Towne Creek. The treated wood was stored on the site before shipment to market.

In May of 1977, the company was hooked into the City of Canton sewage system. The agreement between the city and Mr. Dickson allowed the discharge of wastewaters into the city lagoon provided adequate pre-treatment of the waste was done prior to release into the city lagoon. On several occasions, Dickson Treating Company was ordered to cease discharge into the lagoon because of failure to adequately pretreat the waste prior to discharge into the lagoon. These incidences resulted in the disruption of the lagoon's treatment processes.

B. Quantity and Types of Substances Present

The company used creosote and pentachlorophenol in their treatment process for approximately 50 years. There are large areas of obvious contamination at the treatment area. There are also piles of contaminated soil on the site. Two lagoons were covered over by a previous owner. Also, according to the State, the yard was heavily contaminated from drippage from the treated wood. This area was also covered some time back. Towne Creek is heavily contaminated with creosote/pentachlorophenol at the site and further downstream. Creosote and PCP wastes are currently leaking into the creek.

C. Is the site on the NPL? If so, when is later remedial action expected?

The site is not on the NPL.

THREAT

A. Threat of Exposure to Public or the Environment

The site is located in a commercial/residential area of Canton, MS. Towne Creek runs adjacent to the site and is heavily contaminated. Towne Creek runs through Canton, through a park where children play, and adjacent to a housing project. Access to the site and the creek are unrestricted. The wells for the City of Canton are located within 200 feet of the site. The State has received numerous complaints of children with creosote burns from nearby residents.

B. Evidence of Extent of Release

State samples have identified the following creosote constituents and pentachlorophenol.

Bis (2-ethyl/hexyl) thylate	1,600,000 mg/kg
Acenaphthene	1,400,000 mg/kg
Flouranthene	3,500,000 mg/kg
Napthalene	1,000,000 mg/kg
Parene	2,200,000 mg/kg
Phenathrene	5,000,000 mg/kg
PCP	315,000 mg/kg

C. Previous Actions to Abate Threat

No actions have been taken to abate the threat.

D. Current Actions to Abate Threat

No actions are currently underway to abate the threat.

ENFORCEMENT

A notice letter was sent to the current owner. The response is included in attachment 1.

PROPOSED PROJECT AND COST

A. Objectives of the Project

The Southeastern Wood Preserving Site located in Canton, MS requires immediate actions to preclude endangerment to human health and/or the environment. Hazardous wastes resulting from the creosote/pentachlorophenol treatment process are located at the process area, in a pile near the entrance road and reportedly buried near Towne Creek. Creosote is currently leaching from the site into Towne Creek

In order to mitigate the threat to human health and the environment, the following actions must be accomplished:

1. All surface contaminated soil, oil and water must be removed and disposed of in a manner consistent with all State and federal regulations.
2. The source of the leachate entering Towne Creek must be identified and actions must be taken to preclude further leaching of the material into the creek. Any actions taken must be consistent with all applicable state and federal regulations.

Because of budget restraints, it is requested that this site be addressed and funded in two phases. The first phase would consist of excavation and stock piling the hazardous wastes. These waste would be secured awaiting disposal. Depending upon the amount of material excavated, the second phase of the cleanup would consist of either on site treatment or off site disposal. The anticipated cost of completing the first phase of the cleanup is \$250,000. The disposal phase of the operation would be determined after the disposal/treatment option is selected. Additional funds to complete the cleanup would be requested when funds are available and the amount can be accurately estimated.

B. Cleanup Contractors	\$250,000
TAT costs	30,000
NCLP analytical services	
ERT/IT study	
Intramural (HQ and Region)	20,000
TOTAL PROJECT CEILING	\$300,000

C. Project Schedule:

Phase 1 - Begin one week following funding, completed within 6 weeks
Phase 2 - Start date depends upon funding, completion depends upon disposal option selected.

D. If applicable, describe how actions will be consistent with remedial plan.

N/A

REGIONAL RECOMMENDATION

Because conditions at the Southeastern Wood Preserving Site meet the NCP section 300.65 criteria for an immediate removal, I recommend your approval of the immediate removal request. The estimated total project costs are \$300,000 of which \$250,000 are for extramural cleanup contractor costs. You may indicate your approval or disapproval by signing below.

Approve: Joe B. Franzetta Date: MAY 28 1986

Disapprove: _____ Date: _____