Koppers Inc

General Information

ID	Branch	SIC	County	Basin	Start	End
876	Energy and Transportation	2491	Grenada	Yazoo River	11/09/1981	

Address

Physical Address (Primary)	Mailing Address
1 Koppers Drive Tie Plant, MS 38960	PO Box 160 Tie Plant, MS 38960

Telecommunications

Type	Address or Phone
Work phone number	(662) 226-4584, Ext. 11

Alternate / Historic AI Identifiers

Alt ID	Alt Name	Alt Type	Start Date	End Date
2804300012	Koppers Inc	Air-AIRS AFS	10/12/2000	
096000012	Koppers, Inc.	Air-Title V Fee Customer	12/11/2006	
096000012	Koppers Industries, Inc.	Air-Title V Operating	03/11/1997	03/01/2002
096000012	Koppers Industries, Inc.	Air-Title V Operating	01/13/2004	03/26/2007
096000012	Koppers Inc	Air-Title V Operating	03/26/2007	01/01/2009
MSR220005	Koppers Industries, Inc.	GP-Wood Treating	09/25/1992	
MSD007027543	Koppers Industries, Inc.	Hazardous Waste-EPA ID	08/27/1999	
HW8854301	Koppers Industries, Inc.	Hazardous Waste-TSD	06/28/1988	06/28/1998
HW8854301	Koppers Industries, Inc.	Hazardous Waste-TSD	11/10/1999	03/26/2007
HW8854301	Koppers, Inc. (Owner)	Hazardous Waste-TSD	03/26/2007	09/30/2009
876	Koppers Industries, Inc.	Historic Site Name	11/09/1981	12/11/2006
876	Koppers, Inc.	Official Site Name	12/11/2006	
MSP090300	Koppers Industries, Inc.	Water-Pretreatment	11/14/1995	11/13/2000
MSP090300	Koppers Industries, Inc.	Water-Pretreatment	09/18/2001	08/31/2006
MSP090300	Koppers Inc	Water-Pretreatment	03/26/2007	02/28/2012
MSU081080	Koppers Industries, Inc.	Water-SOP	11/09/1981	11/30/1985

Regulatory Programs

Program	SubProgram	Start Date	End Date
Air	Title V - major	06/01/1900	
Hazardous Waste	Large Quantity Generator	08/27/1999	
Hazardous Waste	TSD - Not Classified	06/28/1988	
Water	Baseline Stormwater	01/01/1900	
Water	PT CIU	11/14/1995	
Water	PT CIU - Timber Products Processing (Subpart 429)	11/14/1995	
Water	PT SIU	11/14/1995	

Locational Data

Latitude	Longitude	Metadata	S / T / R	Map Links

33 ° 44 ' 3 .00 (033.734167)	89 ° 47 ' 8 .06 (089.785572)	**Point Desc:** PG- Plant Entrance (General). Data collected by Mike Hardy on 11/8/2005. Elevation 223 feet. Just inside entrance gate. **Method:** GPS Code (Psuedo Range) Standard Position (SA Off) **Datum:** NAD83 **Type:** MDEQ	Section: Township: Range:	SWIMS TerraServer Map It

4/3/2007 11:08:47 AM

Mississippi Department of Environmental Quality
Office of Pollution Control

I-sys 2000 Master Site Detail Report

Site Name: Koppers Industries Inc

PHYSICAL ADDRESS	
LINE 1:	Tie Plant Road
LINE 2:	
LINE 3:	
MUNICIPALITY:	Tie Plant
STATE CODE:	MS
ZIP CODE:	38960-

MAILING ADDRESS	
LINE 1:	PO Box 160
LINE 2:	
LINE 3:	
MUNICIPALITY:	Tie Plant
STATE CODE:	MS
ZIP CODE:	38960-

OTHER INFORMATION	
MASTER ID:	000876
COUNTY:	Grenada
REGION	NRO
SIC 1:	2491
AIR TYPE:	TITLE V
HW TYPE:	TSD
SOLID TYPE:	
WATER TYPE:	INDUSTRIAL
BRANCH:	Energy
ECED CONTACT:	
Collier, Melissa	
BASIN:	

AIR PROGRAMS ☑ SIP ☐ PSD ☐ NSPS ☐ NESHAPS ☐ MACT

Mississippi Department of Environmental Quality
Office of Pollution Control

Pemits

PROGRAM	PERMIT TYPE	PERMIT #	MDEQ PERMIT CONTACT	ACTIVE
AIR	TITLE V	096000012	Burchfield, David	YES
WATER	PRE-TREATMENT	MSP090300	Collins, Bryan	YES
HAZ. WASTE	TSD	HW8854301		YES
HAZ. WASTE	EPA ID	MSD007027543		YES
HAZ. WASTE	TSD	HW8854301	Stover, Wayne	YES

Compliance Actions

MEDIA	ACTIVITY TYPE	SCHEDULED	COMPLETED	INSPECTED B
HAZ WASTE	Financial Record Review	1/18/00	1/18/00	Twitty, Russ
WATER	CMI - PRETREATMENT			Whittington, Darryail
WATER	CEI - PRETREATMENT	9/30/00		Twitty, Russ
WATER	CEI - NA	9/30/00		Twitty, Russ
HAZ WASTE	Compliance Evaluation Inspection	9/30/00		Twitty, Russ
AIR	State Compliance Inspection	9/30/00		Twitty, Russ
WATER	CEI - NA	3/2/99	3/2/99	Twitty, Russ
HAZ WASTE	Compliance Evaluation Inspection	3/2/99	3/2/99	Twitty, Russ
AIR	State Compliance Inspection	3/2/99	3/2/99	Twitty, Russ

Approved
Dec 3, 1987

CLOSURE PLAN
FOR THE
ASH WASTE PILE
AS A
LANDFILL DISPOSAL SITE

KOPPERS COMPANY, INC.
GRENADA, MISSISSIPPI
U.S. EPA ID. No.
MSD 007 027 543

KOPPERS COMPANY, INC.

PREPARED BY

KEYSTONE ENVIRONMENTAL RESOURCES, INC.
MONROEVILLE, PA

NOVEMBER 30,1987

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TABLE OF CONTENTS (cont'd.)

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Closure Plan
Koppers Co.
Grenada Plant
Tie Plant, Mississippi
EPA I.D. No. MSD 007 027 543

1.0 INTRODUCTION

This closure plan is being submitted in accordance with The Mississippi Commission on Natural Resources, Bureau of Pollution Control Order Number 1280-87. Koppers owns and operates an ash waste pile at their Grenada plant, located in Tie Plant, Mississippi. Koppers has been ordered to close this waste pile which has recently been classified as a Hazardous Waste Management unit by the referenced Order. This Order also included the requirement that a Closure Plan which complies with Part 265 of the Mississippi Hazardous Waste Management Regulations be submitted to the Commission by December 1, 1987.

2.0 FACILITY CONTACT INFORMATION

OWNER/OPERATOR'S NAME	KOPPERS CO., INC.
ADDRESS	P. O. Box 160 Grenada, MS 38960
PHONE	(601) 226-4584
EPA I.D. No.	MDS 007 027 543
PLANT CONTACT	Mr. J. D. CLAYTON
CORP. CONTACT	Mr. R. ANDERSON (412) 227-2683

3.0 GENERAL DESCRIPTION

3.1 Plant Description

Koppers Co. owns and operates a Wood Preserving Facility which generates and manages hazardous waste at their Grenada, Mississippi plant. The plant is located in Grenada County, approximately 2.5 miles south of Grenada (See Figure 1). The plant occupies approximately 170 acres and has been in operation since 1911.

The facilities at the plant include the operation of a boiler which produces steam by burning wood wastes and wood wastes with fuel additivies. Within the bounds of the current Operating Permit issued by the State Health Department,the plant is allowed to burn wood treating by-products which meet certain criteria. Some of these materials may contain hazardous constituents listed in Part 261 of the Mississippi Hazardous Waste Management Regulations. The ash produced by the burning of these materials has been stored on the plant property near the southern end of the plant (See Figure 2) in an area referred to as the `fly ash landfarm area'. This `landfarm' is in reality a waste pile where the fly ash has been stored. Koppers has considered this ash material to be a non-hazardous waste.

3.2 Regulatory Issues

Koppers Co. has submitted RCRA Part B Permit Applications addressing the operation of other hazardous waste units to both the Mississippi Department of Natural Resources and the EPA Region IV. These have been revised several times, and contain more complete descriptions of the plant history and operation.

The Mississippi Commission on Natural Resources, Bureau of Pollution Control has held a series of discussions with both the EPA and Koppers concerning the proper classification of this ash. On November 3,1987 the Commission issued Order number 1280-87 which classifies this ash as a hazardous waste. This Order contains a requirement that:

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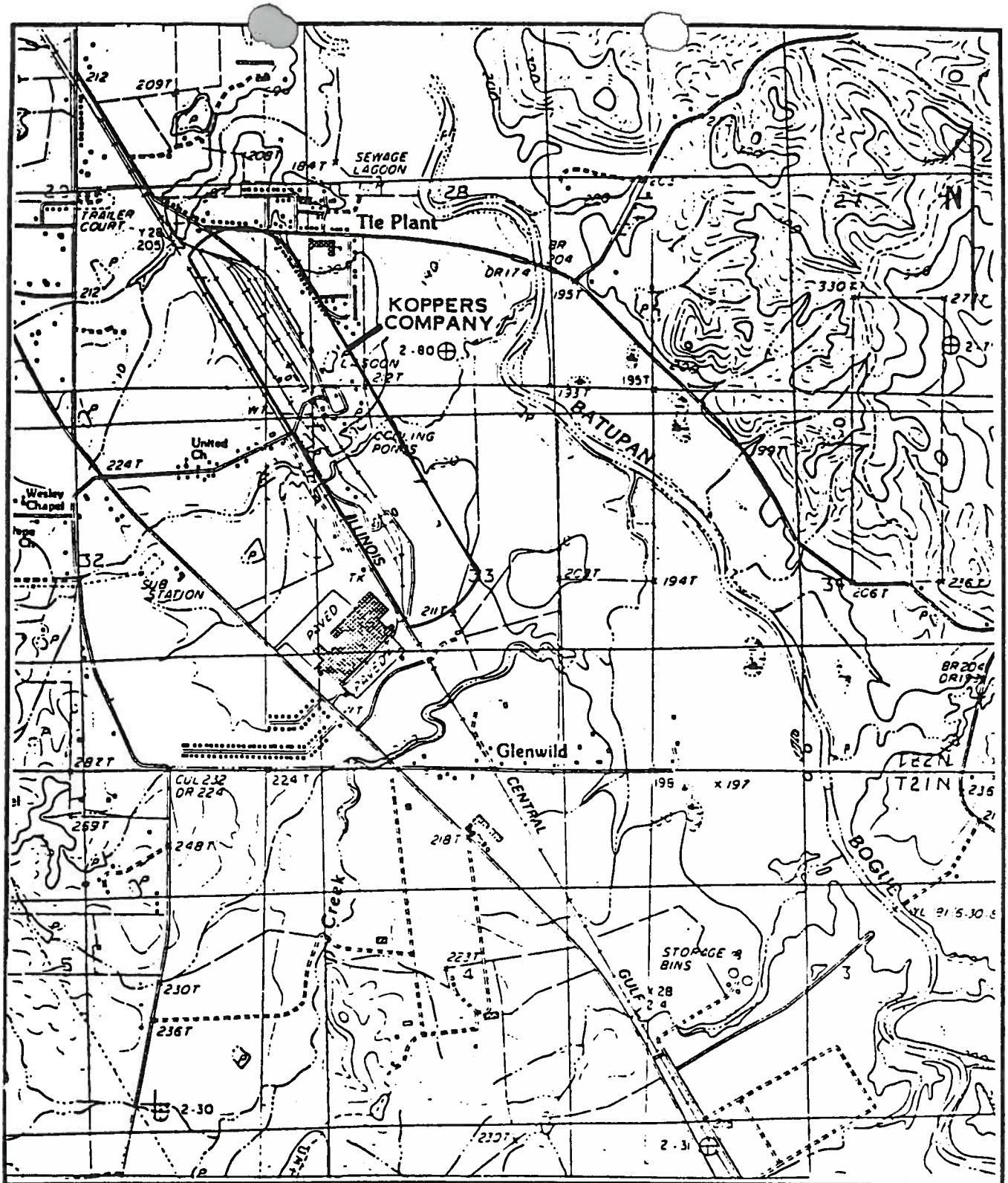


REFERENCE: U.S.G.S. 7.5' TIE PLANT
MS. QUADRANGLE, 1983

SCALE 1"=2000'

KEYSTONE
ENVIRONMENTAL RESOURCES, INC.

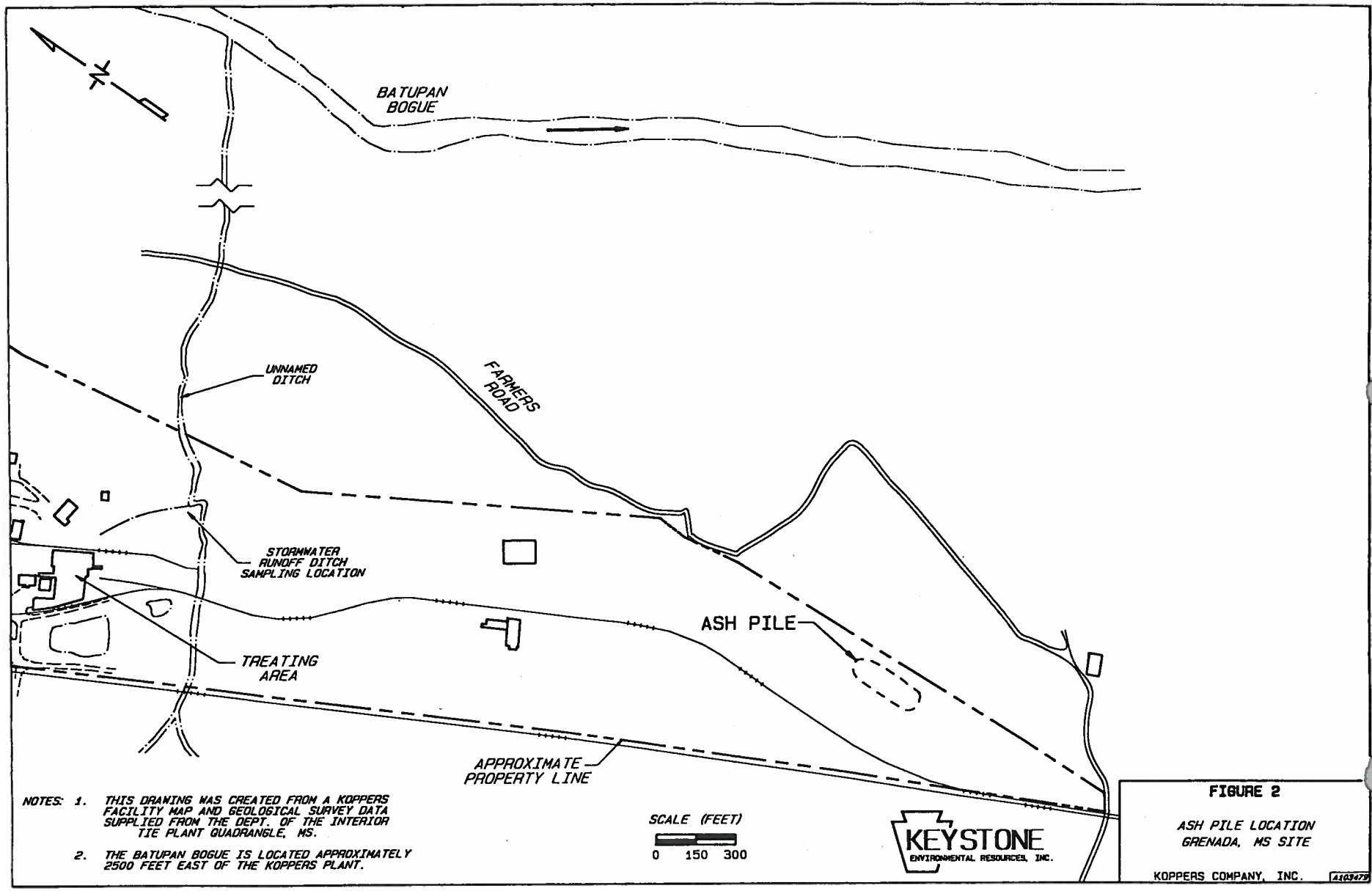
FIGURE 1

VICINITY MAP

GRENADA, MS SITE

KOPPERS COMPANY, INC.

C67542


N
BATUPAN BOGUE
UNNAMED DITCH
FARMERS ROAD
STORMWATER RUNOFF DITCH SAMPLING LOCATION
ASH PILE
TREATING AREA
APPROXIMATE PROPERTY LINE
NOTES: 1. THIS DRAWING WAS CREATED FROM A KOPPERS FACILITY MAP AND GEOLOGICAL SURVEY DATA SUPPLIED FROM THE DEPT. OF THE INTERIOR TIE PLANT QUADRANGLE, MS.
2. THE BATUPAN BOGUE IS LOCATED APPROXIMATELY 2500 FEET EAST OF THE KOPPERS PLANT.
SCALE (FEET)
0 150 300
KEYSTONE
ENVIRONMENTAL RESOURCES, INC.
FIGURE 2
ASH PILE LOCATION
GRENADA, MS SITE
KOPPERS COMPANY, INC.
A103479

"On or before December 1,1987 the Respondent (Koppers) must submit a closure plan in accordance with the requirements of Part 265, subparts G and M (sic) of the Mississippi Hazardous Waste Management Regulations."

3.3 Waste Description and Analysis

The fly ash in the existing waste pile originates at the boiler at the plant site. An sample of this material was analyzed during March of 1986, and the results submitted to the Mississippi DNR on August 26, 1986. A copy of the analysis is included in Attachment C..

4.0 CLOSURE ACTIVITIES

Koppers proposes to close the existing ash pile in an environmentally acceptable manner and in accordance with the Mississippi Hazardous Waste Management Regulations. The closure will be conducted in such a way that the "hazardous wastes" will remain in-place, and action will be taken to insure that future releases of hazardous constituents are prevented. Consequently, the ash pile will be closed as a waste disposal unit and will be subject to Part 265, subparts G and N of the Mississippi Hazardous Waste Management Regulations.

4.1 Overview

Koppers will close the Ash Pile at the Grenada plant as a Landfill. As such, this closure plan is intended to comply with Part 265, Subparts G & N of the Mississippi Hazardous Waste Management Regulations.

Closure will proceed by the construction of a Landfill Multi-media cap. Koppers will also initiate and maintain a groundwater monitoring system around the closed Ash Pile. Their activities are described in more detail below.

4.2 Final Contingent Plan Cover Design and Construction

It has been determined that closure of the Flyash/Pile Area will proceed by the construction of a landfill with a multi-media cap. Capping will consist of the following sequence: initially, the exposed surface of the ash pile will be formed to the proper configuration by a track mounted dozer and will be proof rolled using a rubber-tired or tracked vehicle to stabilize the surface materials and locate any soft areas that require additional conditioning to accept the RCRA cap. The clay barrier soil will then be installed over the ash pile, and an impermeable synthetic membrane liner (20 mil Poly Vinyl Chloride (PVC)) will be installed over the clay barrier. A geotextile fabric will be placed on the synthetic membrane. A free draining, granular, drainage layer will be placed above this and will be overlain by another layer of geotextile followed by suitable cohesive cover soil. Finally, a layer

of topsoil will finish the cap to the lines and grades shown on the contingency plan drawings accompanying these documents (Figure 3).

Therefore, closure of the ash pile will be performed as follows:

- Form (by grading) and proof roll the ash pile top and side slopes;
- Construct a multi-media RCRA type cap; and
- Revegetate the finished cap by seeding, adding soil supplements, and mulching.

The accomplishment of this work and the methods to be employed are described in this section.

4.2.1 Preparation of Ash Pile

The ash pile will be prepared for cover, by grading the ash pile to achieve the proper slopes and grades and proofrolled with suitable equipment to densify the fly ash. This will be accomplished by tracking with a crawler tractor weighing not less than 30,000 lbs. Four passes by the tractor on the surface should be performed. Any loose and/or saturated materials that will not compact to 90 percent maximum dry density (ASTM D 698) will be removed, mixed with dry materials and then replaced.

4.2.2 Preparation for RCRA Cap

Excavate the RCRA cap key trench around the perimeter of the pile and use the excavated materials to achieve final slopes and grades on the ash pile. Where unstable or pervious granular materials are encountered in the key trench excavation, the materials shall be over excavated and wasted on the ash pile. The cavity shall be backfilled with clean, impervious earth materials which shall be compacted to a dry density of at least 90 percent of the maximum standard Proctor (ASTM D 698) dry density. Key trench bottom side slopes shall be proofrolled to prepare surface materials for placement of cap clay barrier soils.

4.2.3 Placement of Clay Barrier Soil

The clay barrier soil will be placed and compacted on the prepared ash pile. Selected clay from an approved borrow source will be placed in lifts not to exceed 8 inches and compacted with a sheepsfoot or rubber-tired roller. The clay soil should be placed at a moisture content equal to or up to 3 percent wetter than optimum moisture content. The clay should be compacted to at least 95 percent standard Proctor (ASTM D 698).

The source of clay borrow will be tested to determine plastic limit, liquid limit and grain size. The material will also be required to have a compacted permeability of less than 1×10^{-7} cm/sec. Quality assurance testing during the construction will monitor the above parameters in addition to testing the compacted dry unit weight and moisture content.

4.2.4 Synthetic Membrane

A synthetic impermeable membrane will be placed on top of the clay barrier soil. The liner shall be of Polyvinyl Chloride, (PVC) or equal sheet material at least 20 mils thickness. The PVC material will be fabricated at the manufacturer's facility using adhesives to the maximum extent practical to minimize field joining.

The installer shall be licensed by the manufacturer to perform quality installations and field joining of sheets.

Test coupons of the manufacturer supplied materials and field joints will be tested in a laboratory to assure conformance to specifications. Field coupons will be obtained at the rate of one per 10,000 square feet and for each 500 feet of field joint, or one per crew joining day, whichever is the greater number of coupons.

4.2.5 Geotextile (Filter Fabric)

Two layers of geotextile (filter fabric) will be placed, one atop the synthetic membrane and one atop the sand and gravel conducting zone. The geotextile will be a non-woven material of 8 ounces per square yard weight and shall be "Mirafi" or approved equal.

The geotextiles will be installed in accordance with the recommendations of the manufacturer. Overlaps and stapling of the two sheets to be joined will be constructed by a qualified contractor.

4.2.6 Sand and Gravel Conducting Zone

A conducting layer of a sand and gravel mixture will be placed over the impermeable membrane to permit drainage of infiltration. The sand and gravel shall be durable, sould particles of a size and gradation which permits drainage at a rate of at least $1x10^{-3}$ centimeters/second. The sand and gravel shall be a uniform mixture with at least 50% sand size particles and less than 2% passing a number 200 sieve. The maximum allowable particle size is one inch. The sand and gravel shall be from an uncontaminated source.

The sand and gravel shall be placed to a thickness of 12 inches on the geotextile and compacted with a crawler tractor or vibrating roller. At least four passes of the crawler tractor or roller will be performed to densify the placed sand and gravel. The conducting zone material will be compacted to a relative density of at least 75 percent.

4.2.7 Drainage Pipe

To collect and conduct the waters in the conducting zone, a peripheral drain of 4 inch diameter PVC pipe will be placed at the edge of the conducting zone. At 40 foot centers, a 4 inch (consistent) diameter PVC pipe will transport the collected infiltration through the cap and discharge at the periphery of the cap.

The drainage pipe shall be 4 inch diameter, SDR 25, perforated drain pipe or approved equal. Couplings shall be of same size and material as the drain pipe. The pipe will be placed on a bed of sand and gravel with sand and gravel bedding placed and compacted by a vibrating plate compactor on all sides and atop the pipe. Geotextile will be placed atop the conducting zone after drainage pipe installation.

4.2.8 Cover Soil

Cover soil shall be placed atop the geotextile overlying the sand and gravel conducting zone. The cover soil shall consist of a natural sandy silt and/or clayey soil base which is well-graded and will support vegetation. The cover soil will be from an uncontaminated source.

The cover soil will be placed in loose lifts of 8 inches thickness and subjected to a moderate compaction effort. Each lift of the cover soil will be compacted by 2 passes of the crawler tractor. Sufficient lifts will be placed to achieve a minimum thickness of 18 inches. The cover soil will be graded to provide the final contours of the landfill cap.

4.2.9 Topsoil

A 6 inch thickness of topsoil shall be placed over the cover soil. The topsoil shall be a loamy soil containing humus and be capable of supporting vegetation. The topsoil shall be obtained and delivered to the site from an uncontaminated source.

The topsoil shall be placed and tilled on the final graded surface and be readied for the seeding and soil supplements. Tilling of the topsoil shall consist of discing to break up large clumps and dragging to smooth the surface and establish the final grades.

4.3 Groundwater Monitoring

As required under 40 CFR 265, a groundwater monitoring program is to be performed throughout the landfill disposal site closure period. This monitoring program has been submitted to the Mississippi DNR for approval. The monitoring system will utilize the RCRA monitoring wells installed for interim status monitoring at the facility in December 1987 (Pending MS DNR approval).

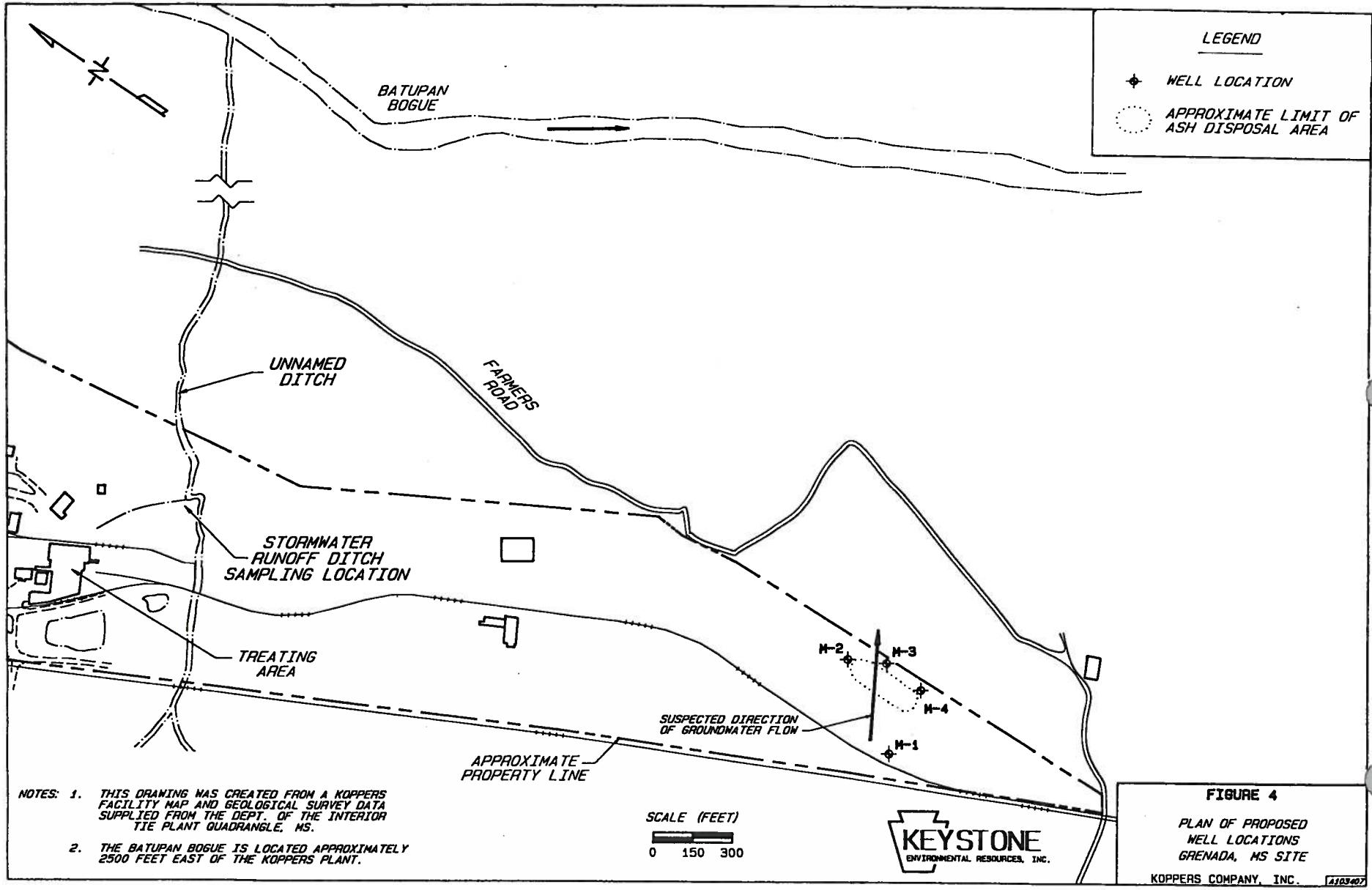
Certification of closure of the units will initiate the post-closure period. A modified groundwater monitoring program, meeting requirements of 40 CFR 265, Subpart F, will then be implemented. The detailed post-closure groundwater monitoring program will be contained within the Post-Closure Permit Application.

4.3.1 Monitoring Wells

The RCRA interim status monitoring system, shown on Figure 4 is composed of four monitoring wells. Three of these wells (M-2 M-3, and M-4) will be located immediately adjacent to the regulated unit at locations hydraulically downgradient of the landfill. The background well, M-1, will be installed at a location hydraulically upgradient of the unit.

Each of these wells will monitor the uppermost aquifer underlying the regulated unit. The wells will be constructed of 2-inch diameter flush-joint PVC riser, and a 10-foot section of 2-inch diameter flush-joint manufactured PVC screen. Each well will be protected by a steel casing and locking cap. The screened interval for each well will be placed at approximately 8 feet below the encountered water table with 2 feet above to allow for monitoring of seasonal fluctuations.

A formation stabilizer of medium to coarse sand will be placed in the annulus and will extend above the top of the well screen. A pelletized bentonite seal will be placed above the sand. The remaining annulus will be sealed with a cement/bentonite mix.


LEGEND
WELL LOCATION
APPROXIMATE LIMIT OF ASH DISPOSAL AREA
BATUPAN BOGUE
UNNAMED DITCH
FARMERS ROAD
STORMWATER RUNOFF DITCH SAMPLING LOCATION
TREATING AREA
M-1
M-2
M-3
M-4
SUSPECTED DIRECTION OF GROUNDWATER FLOW
APPROXIMATE PROPERTY LINE
NOTES: 1. THIS DRAWING WAS CREATED FROM A KOPPERS FACILITY MAP AND GEOLOGICAL SURVEY DATA SUPPLIED FROM THE DEPT. OF THE INTERIOR TIE PLANT QUADRANGLE, MS.
2. THE BATUPAN BOGUE IS LOCATED APPROXIMATELY 2500 FEET EAST OF THE KOPPERS PLANT.
SCALE (FEET)
0 150 300
KEYSTONE
ENVIRONMENTAL RESOURCES, INC.
FIGURE 4
PLAN OF PROPOSED WELL LOCATIONS GRENADA, MS SITE
KOPPERS COMPANY, INC.
A103407

A sloping cement collar will be place around the protective casing to prevent surface water ponding and seepage. Generalized well construction details are shown on Figure 5.

4.3.2 Groundwater Sampling

The groundwater sampling program and procedures will be detailed in the Quality Assurance/Quality Control plan. This will be supplied by Koppers prior to closure.

4.3.3 Static Water Levels and Purging

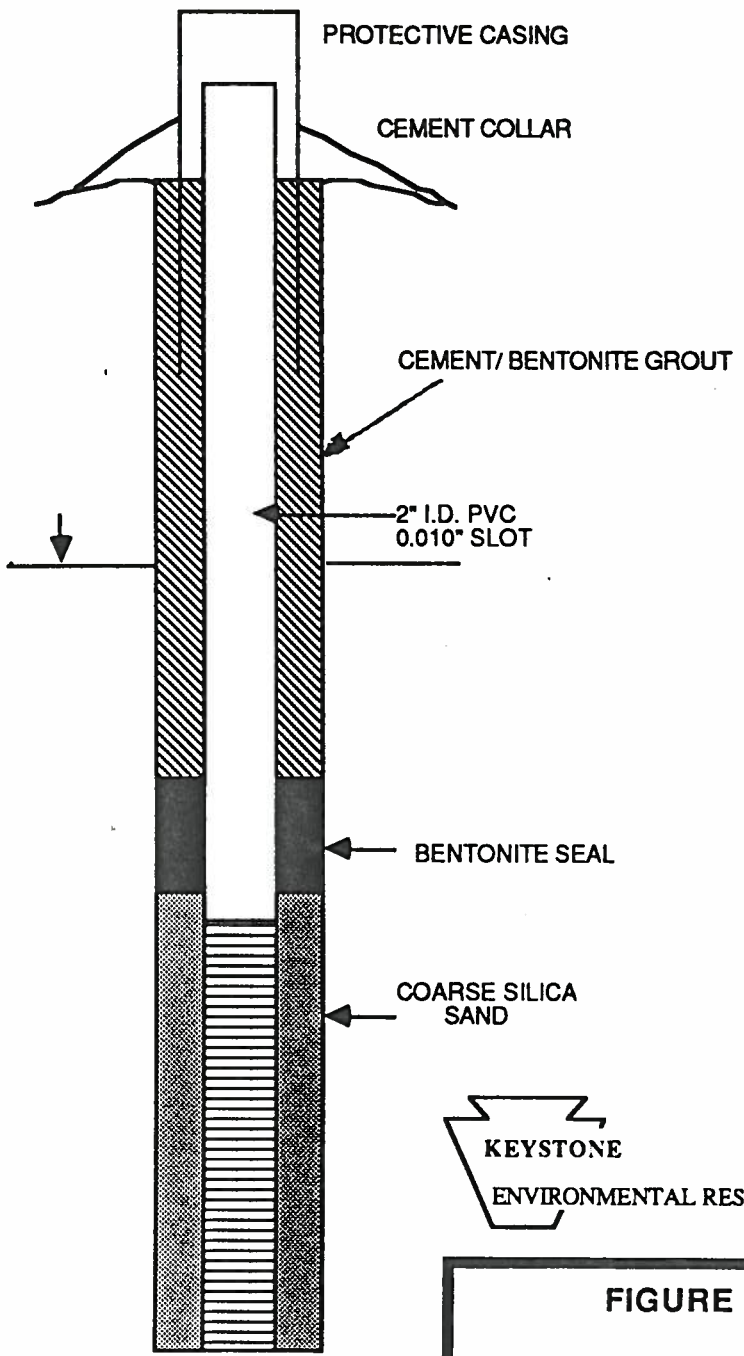
Groundwater samples and water levels will be collected on a quarterly basis throughout the closure period. Prior to sampling, the total depth and the water level for each well will be determined using an electronic oil/water interface probe to an accuracy of 0.01 foot.

Utilization of this probe will permit the detection of any floating or sinking layers of immiscible product, and their thickness, within the wells. The measurement of the depth of the well will indicate the integrity of the wells, and if siltation has occurred within the screened interval. The depth to water will be measured to a 0.01-foot accuracy and correlated to the previously surveyed top-of-PVC casings, to determine the groundwater elevations. These elevations will be used to generate groundwater elevation contour and flow direction maps for each quarterly sampling event.

The measuring equipment will be decontaminated between each well using pesticide grade acetone and deionized water rinses.

If a floating layer of oil is detected in any well it will be removed prior to purging. Depending upon the thickness of this oil layer, either a bottom-valve bailer or a peristaltic pump will be used to remove the material, which will be placed in the plant's wastewater treatment system.

The volume of water present in the wells will be calculated using the water level and total depth measurements. The wells will be purged by removing a minimum of



KEYSTONE
ENVIRONMENTAL RESOURCES, INC.

FIGURE 5

GENERALIZED WELL CONSTRUCTION

GRENADA, MISSISSIPPI SITE
KOPPERS COMPANY, INC.

DRAWING NOT TO SCALE

four casing volumes of water. Should a well bail dry, the purging process will be considered complete. The purging will be performed using dedicated stainless-steel bailers which will be lowered to various depths to remove water, and act as a surge to remove fine particles which have settled in the well. Laboratory decontamination procedures for the bailers will be detailed in the QA/QC plan. Water purged from the well will also be placed in the plant's wastewater treatment system.

To avoid cross-contamination during purging and sampling, new surgical and cloth gloves will be used for each well. New plastic sheeting is to be placed around each well to prevent any contact between the soil and the groundwater sampling equipment.

4.3.4 Sampling Procedures

The dedicated laboratory-cleaned, bottom-filling stainless steel bailers used for purging will also be used to sample the groundwater. Water samples will be collected from the entire length of the screened interval with minimal agitation of the well water. As suggested in the RCRA Technical Enforcement Guidance Document (TEGD), samples will be collected in order of their volatilization sensitivity.

Should any of the wells contain a significant amount of oil, it may be necessary to collect the water and product at one time. The sample would be stored in a new glass jar and the sample decanted once the water and product have separated.

The temperature, pH, and specific conductance measurements will be conducted in the field. Accurate measurements are ensured by the use of buffer solutions for calibrations prior to shipment as well as before, during, and after all field measurements.

Field data and pertinent observations will be detailed in the field logbook by the sampler(s) as suggested in the RCRA TEGD.

4.3.5 Quality Assurance/Quality Control

The QA/QC plan developed for this project also details sample container preparation, sample labeling, and chain-of-custody, including sealing, shipping and handling of the sample coolers.

4.3.5.1 Sample Containers and Preservatives

Many of the parameters to be analyzed for require special containers and/or preservatives. Laboratory preparation, bottles and preservatives will be described in the QA/QC plan, Appendix A.

4.3.5.2 Chain-of-Custody

4.3.5.1.1 Sample Labels and Sample Seals

Each sample bottle will be labeled for specific parameters prior to field activities. Field data, including well identification, sample time and date and the sampler's name, will also be placed on the sample label in the field. Sample seals for the coolers will be provided by the laboratory to ensure the integrity of the samples between collection and arrival at the laboratory. Sample seal identification numbers will be noted in the field logbook and on the chain-of-custody. Samples will then be placed in iced coolers, and sealed for overnight transport to the laboratory.

4.3.5.1.2 Chain-of-Custody and Sample Analytical Request Sheets

A chain-of-custody record/sample analysis request sheet will accompany each of the coolers containing sample jars. A sample chain-of-custody/analytical request sheet will be contained in the QA/QC plan. The following information will be recorded on the sheets:

- Sample identification numbers
- Well identification

- Date and time of collection
- Number/type of sample jars for each well
- Parameters requested for analysis
- Temperature of cooler prior to sealing
- Signature of collector(s)

Upon receipt at the laboratory, the internal temperature of the coolers will be recorded on sheets, along with the date and the receiver's signature.

4.3.6 Analytical Program

The QA/QC plan details the analytical parameters and methods to be employed for this project, and pertinent statistical information to ensure quality data is generated.

During closure, the groundwater samples will be collected quarterly for the groundwater contamination indicator parameters and annually for the groundwater quality parameters, as required under 40 CFR 265.92 (d). These parameters and the test method references are noted below:

Parameter	Test Method
pH	EPA-150.1
Conductivity	EPA-120.1
Total Dissolved Solids	EPA-160.1
Total Organic Carbon	EPA-420.2
Polynuclear Aromatic Hydrocarbons	EPA-610
Total Phenols	EPA-604
Pentachlorophenol	EPA-604

4.4 Equipment Decontamination

Draft Guidance Documents published by the EPA require that equipment and facilities used during closure of a hazardous waste unit be decontaminated in an

approved manner. The resulting residues will be disposed of in an environmentally sound manner, as described below.

The material in the Ash Pile is a dried, well drained solid, which has not produced a viable leachate. Thus, the closure of the waste pile is not likely to be a "dirty" operation.

During the closure of the waste pile, a temporary decontamination area will be constructed. This will be located adjacent to the ash pile, and will be of sufficient size to allowing cleaning of the largest piece of mobile equipment used during closure. The exact size and location of the decontamination area will be determined in the field, and provided to the MS DNR in a timely manner. The decontamination area will consist of an essentially flat area surrounded by at least 12" berms on all sides. The area will be covered by an impermeable membrane, and graded so that any liquids can be collected in a sump.

Following the compaction of one foot of the clean backfill (as described in Section 4, 4.4.3), all soil, dirt etc. will be removed from the mobile equipment. A majority of this will be removed using brooms and hand tools before the equipment is removed from the ash pile area. All equipment utilized in Sections 4, 4.4.1 - 4.4.3 will be moved from the ash pile directly to the decontamination area. Due to the nature of the contaminated soils, a majority of the decontamination of the equipment will be accomplished by scraping all soil from the equipment, using scrapers, brooms etc. If necessary, the equipment will be cleaned using high pressure water to remove all residual soil. All rinsate will be collected and disposed of in the plant wastewater treatment system. All soil removed from the equipment will be placed in the landfill and covered with clean backfill.

Once all the equipment which contacted the contaminated soil has been cleaned, the temporary decontamination area will be dismantled. The impermeable membrane will be placed in the clean backfill of the disposal site. All contaminated materials (gloves, hoses, personnel protective gear etc.) will be placed in the land fill prior to the placement of the clay cap.

5.0 CERTIFICATION OF CLOSURE

The regulations governing closure of waste disposal sites, as contained in 40 CFR 265 include requirements for Post Closure Care. These include both inspection and maintenance, and groundwater monitoring. The Post Closure Care Plan for the Ash Pile Disposal unit at the Koppers Grenada facility includes inspection, monitoring, and maintenance activities that are to be performed to prevent the post-closure escape of hazardous waste constituents to groundwater, surface water, or the atmosphere.

The Certification of Closure, as found in Section 8, and its acceptance by the Agency will initiate the post closure period. A modified groundwater monitoring program, meeting requirements of 40 CFR 265, Subpart F, will then be implemented. The detailed post closure groundwater monitoring plan will be contained in the Post Closure Permit Application.

5.1 Inspection and Maintenance of Final Cover

The following features are to be subject to inspection during the post-closure care period:

- Site access and security systems,
- Internal and external road systems,
- Covers (including vegetative cover condition, erosion, settlement, and displacement), and
- Runon and runoff control systems.

(See inspection log sheet, Appendix B)

The post-closure care of the closed surface impoundment will be conducted by Koppers during the operating life of the plant. Upon any permanent shut-down of

the plant, the post-closure care for the closed facilities at the Grenada site would be conducted primarily by a post-closure contract person. During continued plant operation, the plant manager will function as the contact person. The current plant manager, Mr. J. D. Clayton can be contacted at (601) 226-4589.

The contact person will be provided with necessary inspection equipment by Koppers. This equipment will be used by the contact person to perform the inspection, monitoring, and maintenance tasks. Although additional assistance is not expected, outside assistance may be required if, for some reason, major maintenance activities become necessary. The post-closure cost estimates that are included are based on the assumption that some outside assistance will be necessary through the post-closure period.

The contact person will conduct monthly inspections of the overall site as well as the closed surface impoundment. The contact person will inspect site access and security systems (i.e. fences and gates) on the internal and external road system. For the closed ash pile, the contact person will inspect the cover integrity including vegetative cover condition, potential erosion damage and cover subsidence, and runon and runoff control system integrity. The result of the inspections will be placed on an inspection log sheet (see Appendix B).

The monthly inspection frequency is justified because the forces of nature acting on the site are likely to cause relatively slow rates of change. For instance, the most likely natural force to affect change on the site is rainfall runoff. However, even if several large, closely-spaced rainstorms were to cause accelerated erosion, the monthly inspection schedule would still allow the contact person sufficient time to take appropriate action.

5.2 Inspection and Maintenance of the Groundwater Monitoring System

The following features are to be subject to inspection and maintenance during the post-closure care period:

- Groundwater monitoring wells,
- Monitoring well covers, and
- Benchmark integrity.

(See inspection log sheet, Appendix B)

Any excessive wear to the monitoring well covers will require replacement. The established benchmarks will be inspected, and if needed, repair work will be conducted to ensure that the proper elevation has been retained.

Because of the solid nature of the wastes, no leachate collection detection system or gas ventilation system is necessary.

The contact person will be responsible for maintenance activities at the site. Additional labor and equipment operators may be needed occasionally and their costs have been included in the post-closure cost estimate. Maintenance activities at the site will be triggered by problems/deficiencies which will be noted in the monthly inspections. Observation of the problems/deficiencies could result in initiation of one or more of the following maintenance activities (as appropriate):

- Repair of security control devices,
- Erosion damage repair,
- Correction of settlement, subsidence and displacement,
- Mowing, fertilization, and other vegetative cover maintenance,
- Repair of runon and runoff control structures, or
- Well replacement.

6.0 CERTIFICATION OF CLOSURE

To ensure that the surface impoundments have been closed in accordance with the final approved closure plan, an engineer(s) or his representative will be present at appropriate times during the implementation of the closure. These additional procedures will be followed:

1. Closure certification will be submitted to the Mississippi DNR within 60 days after completion of closure,

2. The professional engineer(s) will present documentation of his qualifications if requested.

3. The closure plan will be used as a check list to assure the proper procedures for closure have been incorporated, and

4. Once closure is completed, a survey plat will be submitted no later than the submission of the closure certification.

The following pages contain sample certifications. The certifications and similar certifications have been recommended by the U.S. EPA. The certification on page 7-2 will be signed by the owner, while the certification on page 7-3 will be signed by an independent professional engineer(s).

OWNER CERTIFICATION OF CLOSURE

I,_____
(Authorized Signature)

of_____
(Name and Address of Facility)

hereby state and certify that, to the best of my knowledge and belief, the

_____
(Hazardous Waste Management Unit(s)

has been closed in accordance with the Facility's closure plan and that closure was completed_____day of_____, 19___.

_____ _____
Signature Date

_____
Title

PROFESSIONAL ENGINEER CERTIFICATION OF CLOSURE

I,_____, a certified professional Engineer hereby certify, to the best of my knowledge and belief, that I have verified that Professional Engineer Closure Certificates were issued for all prior closure activities at:

_____

(Name and Address of Facility)

for_____,

(Hazardous Waste Management Unit)

and that I have made visual inspection(s) of the aforementioned facility, and closure of the aforementioned facility has been performed in accordance with the facility's closure plan.

_____ _____

Signature Date

_____ _____

Professional Engineer License No. for State of

_____

Business Address

_____

City/State/Zip Code

_____

Business Telephone (With Area Code)

7.0 CERTIFICATION OF POST-CLOSURE CARE

To ensure that post-closure care is completed in accordance to the accepted Plan, certification will be signed by the owner, and an independent, registered professional engineer after post-closure is complete.

8.0 CLOSURE COST ESTIMATE

A cost estimate for the closure of the surface impoundments as a landfill is presented in this section. This closure estimate is based on 1987 dollars and will be revised annually to reflect changes in closure cost brought about by completed activities and inflation. The Annual Implicit Price Deflator for Gross National Products will be used to make this adjustment.

The annually-adjusted closure cost will be submitted to state and federal agencies as required. The cost estimates can then be included in all files.

COST ESTIMATE FOR NON-CLEAN CLOSURE

Item	Quantity	Units	Unit Labor Cost	Unit Material Costs	Unit Equip Costs	Unit Installed Costs	Cost
Mobilization	3	PCS	200	-	200	400	$1,200
Proof roll	5,000	SY	0.20	-	0.20	-.40	200
"V" - Ditch Excavation	350	CY	2.76		2.00	4.76	1,666
Key Excavation	750	CY	2.76	-	2.00	4.76	3,570
Clay Barrier Soil	4,050	CY	4.20	2.00	4.65	10.45	42,322
Synthetic Membrane	33,280	SF	0.12	0.28	0.05	0.45	14,976
Sand & Gravel	800	CY	4.20	3.60	4.65	12.45	9,960
Geotextile (RF)	6,700	SY	0.50	0.86	0.09	1.40	9,380
Drainage Pipe	500	LF	1.41	0.64	-	2.05	1,025
Soil Cover	1,800	CY	2.76	2.00	4.34	9.10	16,380
Top Soil	600	CY	2.76	2.00	4.34	9.10	5,460
Revegetate	64	MFS	8.50	17.70	6.33	32.5	2,080
Decontamination	3	PCS	200	100	200	500	1,500
					Construction Subtotal		109,719
Engineering		LYS	-	-	-	-	$20,000
Inspection & Testing	30	Days	400	-	25	425	12,750
Material Tests	20	EA	300	-	-	300	6,000
Engr. Certification	200	Hrs	-	-	-	45	9,000
					Engineering Subtotal		47,750
					Construction & Engineering Subtotal		157,469
					Administration (10%)		15,750
					Contingency (10%)		15,750
					ESTIMATED TOTAL COST		$188,969

9.0 POST-CLOSURE COST ESTIMATES

Post-closure cost estimates for the surface impoundments are presented in Attachment 1.0 at the end of this section. The post-closure cost estimates are based on 1987 dollars and will be revised annually to reflect changes in the post-closure cost brought about by inflation. The Annual Implicit Price Deflator for Gross National Products will be used to make this adjustment. As discussed in Section 9.0, these adjusted cost estimates will be submitted for inclusion in all files.

COST ESTIMTE FOR POST-CLOSURE CARE

ASH PILE AREA
KOPPERS COMPANY, INC.
GRENADA, COLORADO

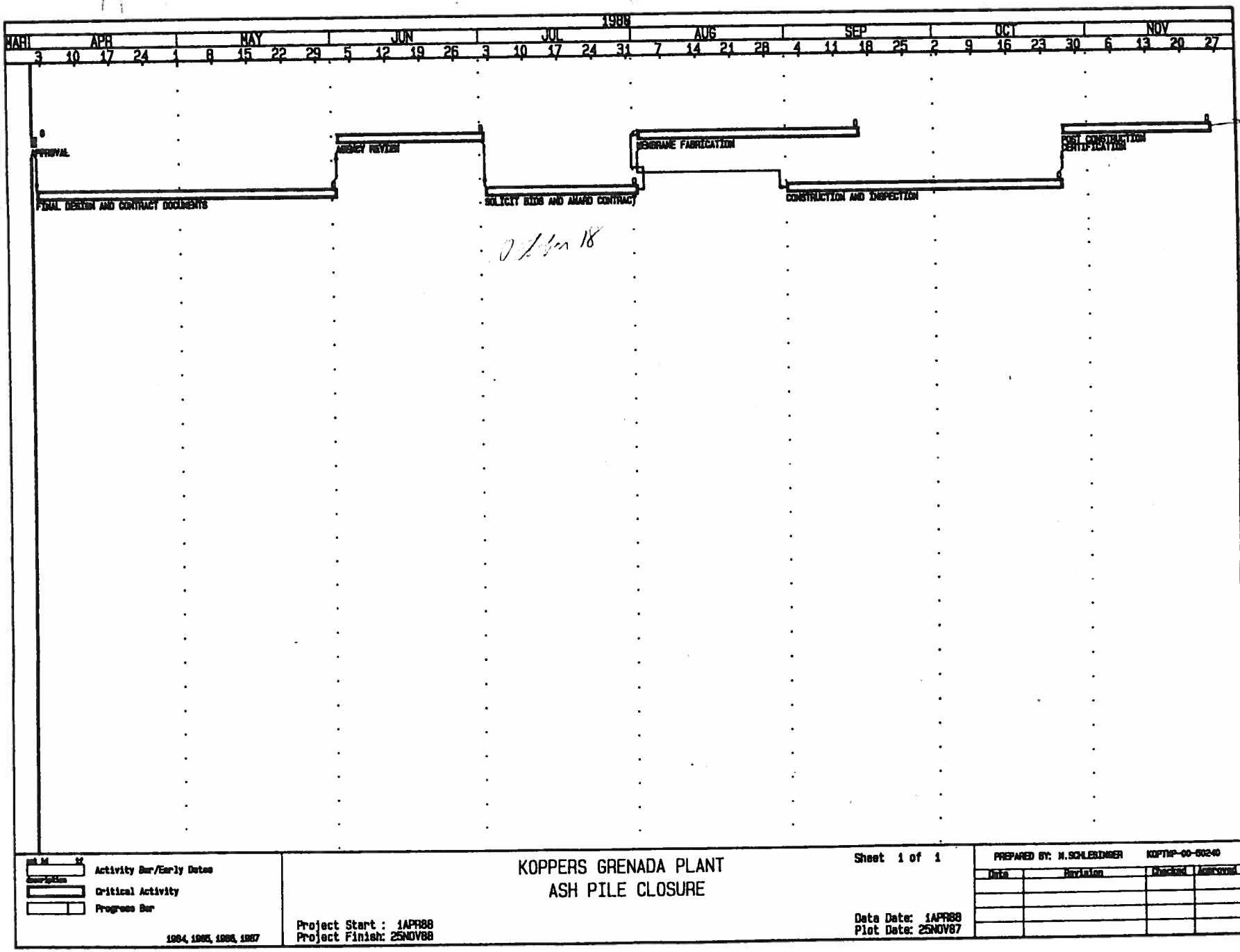
Item		Quantity Per Year	Unit Cost	Cost
1.	Inspection			
	a. Engineer, hours	48	60	2880
	b. Misc. expenses		Lump Sum	120
2.	Maintenance			
	a. Mowing (4 times/yr)	1.5 Ac	50/Ac	300
	b. Seeding (sq. ft.)	1.5 Ac	2200/Ac	3300
	c. Fertilizing, (Ac)	1.5 Ac	300/Ac	450
	d. Erosion repart (cu. yd.)	25	5.6	140
3.	Quarterly Monitoring			
	a. Technician			3208
	b. Analytical			13,200
ANNUAL COST				23,589
TOTAL COST				$707,940
30 Years				

10.0 FINANCIAL ASSURANCE MECHANISM FOR CLOSURE

This plant utilizes the corporate financial test to demonstrate Financial Assurance. A copy of current annual financial assurance mechanism is provided in Attachment 1.0 at the end of this section. A revised financial assurance document, based upon this revised closure plan, will be forwarded when it becomes available.

11.0 SCHEDULE FOR CLOSURE

A schedule for completion of this closure plan is attached. This schedule is based on approval of the plan by ADEM, and a Final ruling by EPA on the classification of the Ash Pile. Closure of the Ash Pile will not begin until EPA renders a Final classification of the material in the Ash Pile. This schedule may be modified due to weather conditions. ADEM will be notified of any significant changes to this schedule.


1988
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
3 10 17 24 1 8 15 22 29 5 12 19 26 3 10 17 24 31 7 14 21 28 4 11 18 25 2 9 16 23 30 6 13 20 27
APPROVAL
AGENCY REVIEW
DIAGRAM FABRICATION
POST CONSTRUCTION CERTIFICATION
FINAL DESIGN AND CONTRACT DOCUMENTS
SOLICIT BIDS AND AWARD CONTRACT
CONSTRUCTION AND INSPECTION
Activity Bar/Early Dates
Critical Activity
Progress Bar
1984, 1985, 1986, 1987
KOPPERS GRENADA PLANT
ASH PILE CLOSURE
Sheet 1 of 1
Project Start : 1APR88
Project Finish: 25NOV88
Data Date: 1APR88
Plot Date: 25NOV87
PREPARED BY: N.SCHLESINGER
KOPTHP-00-60240
Date
Revision
Checked
Approved

ATTACHMENT A

QUALITY ASSURANCE/QUALITY CONTROL PLAN

to be submitted at closure

ATTACHMENT B

POST-CLOSURE INSPECTION LOG SHEET

Inspector's Name/Title _____

Date of Inspection _____
(month/day/year)

Time of Inspection _____

Item	Types of Problems	Status ( ) Acceptable/Unacceptable	Observations	Date and nature of repairs/remedial acti
Backfilled Cover	Depressions, cracks or erosion			
Final Vegetative Cover	Depressions, cracks or erosion and barren spots, grass cutting			
Benchmarks	Deterioration, cracks or depression			
Groundwater Monitoring Wells	Concrete collar needs replaced, signs of cracks, replacement of exposed casing and cap			
Security	Fence broken or deteriorated			
Run-off/Run-on	Water Ponding			
Signs	Detroyed or damaged			

ATTACHMENT C

ASH PILE ANALYSIS

Koppers Company, Inc., Science and Technology
436 Seventh Avenue, Pittsburgh, PA 15219
Telephone 412-227-2000

KOPPERS

August 28, 1986

Mississippi Dept. of Natural Resources
Post Office Box 10385
Jackson, Mississippi 39209

ATTENTION: Mr. Jim Hardage
Hazardous Waste Section

RE: Koppers Company, Inc.
MSD 007 027 543
Boiler Ash Analysis

Dear Mr. Hardage:

Attached is the analysis of the Boiler Ash samples taken at our Grenada, Mississippi plant in March, 1986 which you requested. These were analyzed for K001 Appendix VII constituents by American Interplex Corp.

Please contact me at this office if we can be of any further assistance.

Sincerely yours,

Charles P. Brush, P.E.
Program Manager
Hazardous Waste Affairs

CPB/bj
Enclosure

cc: J.D. Clayton
J. Kane
C.P. Markle

AMERICAN INTERPLEX CORPORATION

3400 ASHER AVENUE
LITTLE ROCK, ARKANSAS 72204
(501) 664-5060

5668 SOUTH PEX ROAD
MEMPHIS, TENNESSEE 38119
(901) 767-2081

Koppers Company, Inc.
Post Office Box 15490
North Little Rock, AR 72117

April 9, 1986

ATTN: Mr. David L. King

Control No. 6574

Description of Sample: Four (4) samples of boiler ash & four (4) samples of Boiler Cinders from Grenada Plant received on 3/26/86

Results:

Parameters, ppm	Boiler Ash Composite	Boiler Cinder Composite
*EPA No. K001	N.D. <0.01, <0.01	N.D. <0.01, <0.01

*Analytes in EPA No. K001 are as follows:

Pentachlorophenol	Chrysene
Phenol	Naphthalene
2-Chlorophenol	Flouranthene
P-Chloro-m-cresol	Benzo(b)flouranthene
2,4-Dimethylphenyl	Benzo(a)pyrene
2,4-Dinitrophenol	Indeno(1,2,3-cd)pyrene
Trichlorophenols	Benz(a)anthracene
Tetrachlorophenols	Dibenz(a)anthracene
Cresote	Acenaphthalene

Method: EPA 625

Remarks: Duplicate analyses were performed as per request.
N.D. = None Detected

AMERICAN INTERPLEX CORPORATION

By _____
Lydia Morton, Lab Director

CHAIN OF CUSTODY RECORD

Location of Sampling: X Producer __ Hauler __ Disposal Site

__ Other: _____

Company's Name Koppers Co, Inc Telephone (601) 226-4184

Address P.O. Box 160 (number street) Tie Plant (city) MS (state) 38960 (zip)

Collector's Name W. H. Lindsey (signature) Telephone (601) 226-4584

Date Sampled 4 samples of Ash & Cinders 3/19 - 3/22/86 Time Sampled 7 AM hours

Type of Process Producing Waste Boiler Ash and Cinders

Waste Type Code NA Other _____

Field Information Samples (1pt) were collect of Ash on 3/19/86, 3/20/86, 3/21/86, & 3/22/86 1 pt Samples of Cinders (Bo Ho - AS) were Collected on 3/19/86, 3/20/86, 3/21/86, & 3/22/86 LAB TO COMPOSITE SAMPLES FOR ASH & CINDERS (Bo Ho - ASH)

Sample Allocation:

1. ~~Koppers~~ (name of organization)
2. _____ (name of organization)
3. _____ (name of organization)

Chain of Possession

1. W. H. Lindsey (signature)			3/25/86 (inclusive dates)
2. David L. King (signature)	Reg Envr Coord (title)		3/25/86 (inclusive dates)
3. Lydia Hill (signature)	Lab Dir (title)		3/26/86 (inclusive dates)

Beazer Materials and Services, Inc.
A Member of THE BEAZER GROUP
Environmental Services
436 Seventh Avenue, Pittsburgh, PA 15219
Phone: 412-227-2500 Fax: 412-227-2950

G.T Macalusa MSDNR

Beazer

February 16, 1990 FEDERAL EXPRESS

Mr. Wm. Stephen Spengler, P.E.
Mississippi Department of Natural Resources
Bureau of Pollution Control
Box 10385
2380 Highway 80 West
Jackson, MS 39204

Re: Koppers Industries, Inc.
Grenada, MS Facility

Dear Mr. Spengler:

This letter is in response to your letter dated January 30, 1990 in which several issues relative to the above-referenced facility were raised. The following constitutes our response to these items:

1. The delays associated with the conduct of the GWQAP for the boiler ash landfarm were detailed in a letter to Ms. Macalusa of your offices dated January 31, 1990, a copy of which is attached. The delays have revolved around our inability to secure off-site access for the drilling of proposed monitoring wells. Our efforts in obtaining the appropriate off-site access agreement continues to this date. As mentioned in this letter we have asked Keystone Environmental Resources, Inc. to prepare an interim report addressing groundwater quality in the absence of off-site data. The original schedule estimated in the approved work plan was contingent on the securement of the off-site access which is central to our investigation.

2. The text referenced in the Risk-Based Engineering Assessment-Grenada County Landfill report erroneously indicates that EP Toxicity metals analyses were conducted on ash samples in 1986 and therefore are not provided in Exhibit 4. This was discussed with Ms. Macalusa by telephone in early January 1990 at which time I provided EP Toxicity data dated January 25, 1985 from our files to her via facsimile. I have attached a copy of these data for your convenience. This is the extent of the data available in our files.

Writer's Direct Dial 412-227-2952

3. The materials generated during the installation and development of monitoring wells for the GWQAP for the boiler ash landfarm consists of drilling fluids and muds. These materials have been placed in 55-gallon steel drums for interim storage. An inventory of the drums is attached for your attention. These materials are not derived from a listed hazardous waste, and based on our knowledge of the type of soil where borings were located should not exhibit the characteristics of a hazardous waste. Based on this assessment we propose to manage the solid fractions in conjunction with the management of the on-site waste pile material and the aqueous fractions will be processed in the on-site wastewater treatment plant.

I trust that these responses address the issues raised in your letter. Please do not hesitate to call me should you have any questions.

Sincerely,

Matthew C. Plautz, P.E.
Program Manager-Environmental Services

MCP/cr
Enclosure
cc: B. Nolan
J. Clayton (KII)
J. Batchelder (KII)
D. King (Keystone)
G. Macalusa (MSDNR)
J. Scarbrough (USEPA IV)

KOPPERS

Interoffice Correspondence

JAN 2 [illegible] 1985

To C. J. Vita

Location Pittsburgh

Subject Grenada, MS
Ash Analyses
(821-1739)

From R. D. Hepner

Location Monroeville

Date January 25, 1985

Two, five gallon composite samples of Boiler Fly Ash (GM-279) and Boiler Bottom Ash (GM-280) were received October 4, 1984 for analyses you requested in a letter of October 2, 1984 to R. C. Bartlow.

The results of requested analyses are presented below:

Characteristics	GM-279	GM-280
Physical:		
pH	9	11
Visual	powdery brown	powdery white with stones
EP Toxicity Characteristics:		
Arsenic	< 2.0	< 2.0
Barium	< 1.0	3.8
Cadmium	0.001	< 0.001
Chromium	0.026	0.077
Lead	< 0.1	< 0.1
Mercury	< 0.0002	< 0.0002
Selenium	< 0.005	< 0.005
Silver	< 0.05	< 0.05
	Results in mg/L	
Additional Test:		
Zinc, Total	160 mg/Kg	200 mg/Kg

The EP Toxicity Metals are all below recommended maxima.

R. D. Hepner

RDH:mjt
cc: R. C. Bartlow-Grenada
C. P. Brush
J. Kane
T. A. Marr

Post-It™ brand fax transmittal memo 7671 # of pages ▸ 1

To Gayle Macaluso	From MC Plautz
Co. MSDNR	Co. BTM+S
Dept.	Phone #
Fax # 601-961-5190	Fax # 412-227-2957

REV 2

Beazer Materials and Services, Inc.
A Member of THE BEAZER GROUP
Environmental Services
436 Seventh Avenue, Pittsburgh, PA 15219
Phone: 412-227-2500 Fax: 412-227-2950

Beazer

January 31, 1990

Ms. Gail Macalusa
Mississippi Department of
Natural Resources
2380 Highway 80 West
Jackson, MS 39209

Re: Boiler Ash Landfarm
Koppers Industries, Inc.
Grenada, MS Facility
MSD 007 027 543

Dear Ms. Macalusa:

The purpose of this letter is to bring you up to date on the current status of activities involving the boiler ash landfarm at the above referenced facility. The ongoing activities include the conduct of the Groundwater Quality Assessment plan (GWQAP) and the physical closure of the unit.

The GWQAP has been delayed due to the inability of Beazer Materials and Services, Inc. (BMS) to obtain access to the proposed off-site well locations. This problem has been communicated to you verbally since late October 1989. The following presents a summary of our efforts to date:

- Late September 1989- Keystone Environmental Resources, Inc. (Keystone), our consultant on the project, begins a records search to identify the property owners for the proposed well locations.

- 9/27/89 thru 10/17/89- Keystone contacts Mr. Wayne E. Carlin, the property owner, to explain the proposed work effort and forwards a copy of the standard BMS access agreement. Mr. Carlin at the end of this discussion cycle indicates he will not grant the requested access because the well locations will potentially interfere with farming.

- 10/17 thru 10/27/89- Keystone proceeds with the installation of three on-site monitoring wells to keep the project moving forward in the absence of secured off-site access.

Writer's Direct Dial 412-227-2952

- 11/15/89- Keystone begins sampling of new wells in accordance with the work plan in absence of secured off-site access.

- 11/89 thru 12/89- BM&S's legal staff continue discussions with Mr. Carlin to obtain a suitable legal agreement for off-site access.

- Week of 12/11/89- First round of groundwater sampling completed.

- 1/5/90- Mr. Carlin discusses well locations with Keystone and indicates he will be at the property on 1/15/90. (Note: Mr. Carlin is an absentee property owner who lives in Ohio)

- Week of 1/8/89- Second round of groundwater sampling completed.

- 1/15/90- Keystone meets with Mr. Carlin at his property to flag proposed well locations for the GWQAP and for aditional locations contemplated for the RFI Phase II Work Plan. Mr. Carlin finally appears interested in working out some kind of access agreement with BM&S.

- 1/15/90 thru present- BM&S legal staff continues to work with Mr. Carlin to obtain a signed access agreement. Resolution of this matter is anticipated in the near future.

I have instructed Keystone to begin the preparation of an "interim" type report based on the information obtained to date during our assessment. As of this date the analytical data have not been received from the laboratory. It is BMS's intention to submit to MSDNR the data generated in a timely matter. As indicated in the GWQAP schedule, the timing of activities associated with this work effort were contingent upon BMS obtaining the proper off-site access agreement. The delays described above have revolved around the access problems we have had and not on field delays associated with our contractors. We are prepared to complete the GWQAP upon receipt of the appropriate off-site access agreement and in no way are seeking to delay the issuance of a RCRA permit for this unit.

With regards to the closure schedule for the ash landfarm the following information details the most current status. BMS requested an extension for the completion date for closure of this unit in a letter to you dated November 8, 1989. The extension date requested was April 15, 1990. The actual field work for this unit

was initiated the week of 1/22/90 and is expected to take approximately 3 months to complete assuming good weather and other factors. The engineering certification package is expected to take another month for a total project duration of four months. Based on this knowledge the existing estimated completion date of April 15, 1990 is non-attainable and a new completion date of June 1, 1990 is hereby requested. The primary reason why the project was not initiated until late January 1990 was the fact that the actual areal dimensions of the unit were quite larger than those indicated in the conceptual closure plan, necessitating a longer time frame to compile the final plans and specifications for the unit which were suitable for bidding.

We trust that this information satisfies your concern with the identified schedules. Please call if you have any questions.

Very truly yours,

Matthew C. Plautz, P.E.
Program Manager-Environmental Services

MCP/cr
cc: B. Nolan
J. Clayton (KII)
J. Batchelder (KII)
S. Spengler (MSDNR)
R. Yocius (Keystone)
D. King (Keystone)

DRUM INVENTORY
ASH PILE - GWQA

BEAZER MATERIALS AND SERVICES, INC.
GRENADA, MS

GENERAL CONTENT	NUMBER OF DRUMS
Empty (clean)	121
Empty (dirty)	1 - Donated to KII
Unused Grout 10-22-89	2
Unused Grout 10-23-89	1
Well M-2B Drill Mud/Cuttings 10-17-89	6
Well M-2B Flushwater 10-17-89	7
Well M-2B Grout Cuttings 10-21-89	3
Well M-2B Drill Mud/Cuttings 10-21-89	2
Well M-2B Drill Mud/Cuttings 10-21-89 and Boring BM-2B Extra Grout 10-22-89	1
Well M-2B Flushwater/Cuttings 10-21-89	1
Well M-2B Flushwater 10-21-89	1
Well M-2B Grout Water 10-21-89	1
Boring BM-2B Casing Flushwater 10-21-89	2
Boring BM-2B Grout Water 10-21-89	1
Boring BM-2B Drill Mud 10-22-89	5
Boring BM-2B Drill Mud/Cuttings 10-22-89	2
Boring BM-2B Flushwater 10-21-89	1
Boring BM-2B Grout Water 10-22-89	1
Well M-5A Drill Mud/Cuttings 10-19-89	2
Well M-5A Flushwater 10-19-89	4
Well M-5B Drill Mud/Cuttings 10-18-89	5
Well M-5B Flushwater 10-18-89	5
Well M-5B Grout Cuttings/Water 10-23-89	2
Well M-5B Drill Mud/Cuttings 10-23-89	1
Well M-5B Drill Mud 10-23-89	2
Well M-5B Flushwater/Cuttings 10-23-89	1
Well M-5B Flushwater 10-23-89	3
Unused Grout and Well M-5B Grout Cuttings/Water 10-23-89	1

Beazer Materials and Services, Inc.
A Member of THE BEAZER GROUP
Environmental Services
436 Seventh Avenue, Pittsburgh, PA 15219
Phone: 412-227-2500 Fax: 412-227-2950

Beazer

January 31, 1990

Ms. Gail Macalusa
Mississippi Department of
Natural Resources
2380 Highway 80 West
Jackson, MS 39209

Re: Boiler Ash Landfarm
Koppers Industries, Inc.
Grenada, MS Facility
MSD 007 027 543

Dear Ms. Macalusa:

The purpose of this letter is to bring you up to date on the current status of activities involving the boiler ash landfarm at the above referenced facility. The ongoing activities include the conduct of the Groundwater Quality Assessment plan (GWQAP) and the physical closure of the unit.

The GWQAP has been delayed due to the inability of Beazer Materials and Services, Inc. (BMS) to obtain access to the proposed off-site well locations. This problem has been communicated to you verbally since late October 1989. The following presents a summary of our efforts to date:

- Late September 1989- Keystone Environmental Resources, Inc. (Keystone), our consultant on the project, begins a records search to identify the property owners for the proposed well locations.

- 9/27/89 thru 10/17/89- Keystone contacts Mr. Wayne E. Carlin, the property owner, to explain the proposed work effort and forwards a copy of the standard BMS access agreement. Mr. Carlin at the end of this discussion cycle indicates he will not grant the requested access because the well locations will potentially interfere with farming.

- 10/17 thru 10/27/89- Keystone proceeds with the installation of three on-site monitoring wells to keep the project moving forward in the absence of secured off-site access.

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- 11/15/89- Keystone begins sampling of new wells in accordance with the work plan in absence of secured off-site access.

- 11/89 thru 12/89- BM&S's legal staff continue discussions with Mr. Carlin to obtain a suitable legal agreement for off-site access.

- Week of 12/11/89- First round of groundwater sampling completed.

- 1/5/90- Mr. Carlin discusses well locations with Keystone and indicates he will be at the property on 1/15/90. (Note: Mr. Carlin is an absentee property owner who lives in Ohio)

- Week of 1/8/89- Second round of groundwater sampling completed.

- 1/15/90- Keystone meets with Mr. Carlin at his property to flag proposed well locations for the GWQAP and for aditional locations contemplated for the RFI Phase II Work Plan. Mr. Carlin finally appears interested in working out some kind of access agreement with BM&S.

- 1/15/90 thru present- BM&S legal staff continues to work with Mr. Carlin to obtain a signed access agreement. Resolution of this matter is anticipated in the near future.

rec. 3/21/9

I have instructed Keystone to begin the preparation of an "interim" type report based on the information obtained to date during our assessment. As of this date the analytical data have not been received from the laboratory. It is BMS's intention to submit to MSDNR the data generated in a timely matter. As indicated in the GWQAP schedule, the timing of activities associated with this work effort were contingent upon BMS obtaining the proper off-site access agreement. The delays described above have revolved around the access problems we have had and not on field delays associated with our contractors. We are prepared to complete the GWQAP upon receipt of the appropriate off-site access agreement and in no way are seeking to delay the issuance of a RCRA permit for this unit.

With regards to the closure schedule for the ash landfarm the following information details the most current status. BMS requested an extension for the completion date for closure of this unit in a letter to you dated November 8, 1989. The extension date requested was April 15, 1990. The actual field work for this unit

was initiated the week of 1/22/90 and is expected to take approximately 3 months to complete assuming good weather and other factors. The engineering certification package is expected to take another month for a total project duration of four months. Based on this knowledge the existing estimated completion date of April 15, 1990 is non-attainable and a new completion date of June 1, 1990 is hereby requested. The primary reason why the project was not initiated until late January 1990 was the fact that the actual areal dimensions of the unit were quite larger than those indicated in the conceptual closure plan, necessitating a longer time frame to compile the final plans and specifications for the unit which were suitable for bidding.

We trust that this information satisfies your concern with the identified schedules. Please call if you have any questions.

Very truly yours,

Matthew C. Plautz, P.E.
Program Manager-Environmental Services

MCP/cr
cc: B. Nolan
J. Clayton (KII)
J. Batchelder (KII)
S. Spengler (MSDNR)
R. Yocius (Keystone)
D. King (Keystone)

Beazer Materials and Services, Inc.
A Member of THE BEAZER GROUP
Environmental Services
436 Seventh Avenue, Pittsburgh, PA 15219
Phone: 412-227-2500 Fax: 412-227-2950

Beazer

November 8, 1989

Ms. Gail Macalusa
Mississippi Department of
Natural Resources
2380 Highway 80 West
P.O. Box 10385
Jackson, MS 39209

Re: RCRA Closure Schedules
Koppers Industries, Inc.
Grenada, Mississippi Facility
MSD 007 027 543

Dear Ms. Macalusa:

As requested by MSDNR, Beazer Materials and Services, Inc. (BM&S) has prepared the following summary of schedule information associated with the closure of the surface impoundment and boiler ash landfarm at the above-referenced facility. I apologize for not sending this information to you sooner.

Surface Impoundment - On June 28, 1988, Koppers Company, Inc. (Koppers), now BM&S, was issued a hazardous waste management permit (No. 88-543-01) which included an approved closure plan and estimated schedule. The schedule for closure estimated a total duration of 435 days from initiation. Although the upgraded wastewater pretreatment system did not become fully operational until March 1989, the facility ceased the continued use of the impoundment on or about August 7, 1988 in advance of the land disposal prohibition of EPA hazardous waste K001. At about that time, Koppers had initiated the removal of K001 sludge resident in the impoundment. Assuming that August 8, 1988 coincides with "Day 0" of the schedule, completion of closure was therefore expected on or before September 6, 1989. Certain events have transpired which have delayed the project as outlined below. In addition, a chronological history of the closure through September 21, 1989 was sent to your attention on October 6, 1989.

1. Closure Plan Modification - A letter dated April 13, 1989 was sent by BM&S to MSDNR requesting a Class I modification incorporating a change in the closure cap configuration which was better engineered and protective than the original. On June 9, 1989, BM&S received notice from MSDNR that the modification had been approved. During this time period a significant quantity of rainwater had accumulated in the

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impoundments which required pumping to the Grenada POTW (under a limited hydraulic loading rate) over a time period of approximately 30 days before closure activities could be resumed. This down-time was not anticipated in the original closure schedule.

Total delay: Modification approval = 57 days
Pumping rainwater = 30 days
Total Delay = 87 days

2. Closure Execution: Due to the characteristics of the borrow material, bentonite was added to the soil to obtain a permeability of less than 1×10^{-7} cm/sec. Field placement and subsequent permeability tests for the first soil-bentonite life failed these minimum permeability requirements and necessitated removal of the lift, modification to soil-bentonite mix ratios and replacement of the first lift. The total delay caused by this activity was approximately 14 days. Weather conditions during September and October 1989 have not been ideal for soil working activities resulting in additional delays of undetermined duration. The final seeding of the completed cap occurred during the week ending November 3, 1989 corresponding with the completion of field activities.

   Total delay: 14 days (plus undetermined weather delays)

Therefore, the total determined delays amount to approximately 101 days (excluding undetermined weather delays), which changes the anticipated date of final closure from September 6, 1989 to December 16, 1989. Closure activities remaining involve the final survey of the closed impoundment and preparation of survey plat and deed restriction package and preparation of a thorough construction documentation report which will include the engineers and owner/operator certifications, and as-built drawings. BM&S anticipates that this report will be submitted to MSDNR on or before December 16, 1989, dependent upon the timely submittal of the final survey for inclusion in the construction documentation report. BM&S has strived to execute this important project in an expeditious and technically sound manner.

Boiler Ash Landfarm - The closure plan for the boiler ash landfarm was submitted to MSDNR in December 1987 in satisfaction of amended Agreed Order 1280-87. The closure plan stipulated closure of the unit as a landfill. On June 9, 1989, BM&S received notice from MSDNR that the closure plan had been approved by the Mississippi Natural Resources Permit Board. The

approved closure plan included an estimated schedule of approximately 8 months. This schedule assumed approval of the closure plan on April 3, 1988 in its development. Because the closure plan was not approved until June 9, 1989, the modified estimated completion date for closure activities is February 9, 1990.

BM&S is currently in the process of finalizing the construction specifications for bidding the project. The actual letting of the contract is expected by late November 1989. Construction activities are estimated to take approximately three months and preparation of the final construction report including certifications another month for a total of four months. BM&S is therefore requesting an extension of the completion date for closure activities from February 9, 1990 to April 15, 1990. This new projected closure completion date is contingent upon suitable weather conditions and/or other factors that may cause delays. BM&S will promptly notify MSDNR of any changes to this schedule attributable to delays. BM&S believes that the additional time is necessary to perform the closure project under strict adherence to the approved closure plan.

I trust that this information satisfies your needs at this time. Please do not hesitate to call if you should have any questions.

Sincerely,

Matthew C. Plautz, P.E.
Program Manager-Environmental Services

MCP/cr
cc: B. Nolan
J. D. Clayton (KII)
J. Batchelder (KII)
S. Spengler (MSDNR)
M. Bollinger (Keystone)

Beazer Materials and Ser[illegible]s, Inc.
A Member of THE BEAZ[illegible]ROUP
Environmental Services
436 Seventh Avenue, Pitt[illegible]gh, PA 15219
Phone: 412-227-2500 Fax: 412-227-2950

Beazer

September 21, 1989

Mr. William Stephen Spengler, P.E.
Coordinator, RCRA TSD Branch
Hazardous Waste Division
Mississippi Department of
Natural Resources
2380 Highway 80 West
Jackson, MS 39309

Re: RCRA Issues
Koppers Industries, Inc.
Tie Plant, MS Facility

Dear Mr. Spengler:

I would like to take this opportunity to bring you up to date with several activities either underway or planned for the above referenced facility. The following constitutes a brief summary of these activities.

- Surface Impoundment - The final cap components for closure of the surface impoundment are currently being placed. Closure activities were severely delayed by heavy rains in late spring/early summer and subsequently by the field contractor's ability to process the accumulated rainwater based on the City of Grenada POTW capacity and operating constraints. I have asked Keystone Environmental Resources (Keystone), our engineer on the project, to develop a history and will forward this to you upon completion.

  We have not as yet received the Appendix IX results from the groundwater sampling round completed in June, 1989 and will submit those to you when available. At that time we will also submit a permit modification to initiate a compliance monitoring program, as necessary. A new upgradient monitoring well was installed in March, 1989.

- Boiler Ash Landfarm - We are currently finalizing a construction bid package to initiate closure of the boiler ash landfarm in accordance with the approved closure plan. Closure will commence in the near future.

Writer's Direct Dial 227-2952

The Groundwater Quality Assessment is scheduled to begin in October, 1989 pending receipt of appropriate access agreements for construction of wells on off-site property locations.

As discussed above, we have not as yet received the Appendix IX results from the groundwater sampling round completed in June, 1989 and will submit those to you when available.

o Groundwater Treatment Residuals - It has been recently brought to my attention that the following shipments of non-hazardous wastes were burned at the Grenada boiler (copies of shipping documents attached):

Date	#Drums
1/17/89	76
2/6/89	61

These manifests were included with the ones sent to Kalal (MBK) on May 3, 19 They were penalized for these

These wastes originated at a closed wood preserving site previously operated by Koppers Company, Inc. in Nashua, New Hampshire. Beazer Materials and Services, Inc. (BM&S) is conducting an environmental site remediation at the facility pursuant to an Administrative Order with the State of New Hampshire. The remediation program consists, in part, of pumping of contaminated groundwater and subsequent treatment in a groundwater treatment system. The groundwater treatment residuals generated from this system met the specifications for the boiler Fuel Additive Program and therefore were shipped to the Grenada boiler as detailed above. The characterization of these materials has been raised as an issue by the State of New Haqmpshire. BM&S has therefore decided to discontinue future shipments to Grenada. In any event, the materials in question were processed during the time frame in which BM&S and MSDNR were negotiating on Agreed Order (No. 1598-89) finalized on June 23, 1989 which resolved the oil/water separator characterization issue and obligated BM&S to assess the impacts, if any, from placing the boiler ash at the Grenada County Landfill.

wastes in the June 23, 1989 agreed order.

BM&S is making a concerted effort at being responsive to regulatory compliance issues at both the state and federal levels. If you should have any questions, please do not hesitate to call.

Sincerely,

Matthew C. Plautz, P.E.
Program Manager-Environmental Services

MCP/cr
cc: Gail Macalusa (MSDNR)
B. Nolan
S. Craig
D. Calland, Esquire (Babst/Calland)
J. Batchelder (KII)
J. D. Clayton (KII)

SHIPPING DOCUMENT
For Tracking Purposes

Shipper's Name & Mailing Address
Koppers Co INC.
Hillsperry Road
NASHUA, N.H. 03061
Phone: (603) 880-8345

Mailing Address
Koppers Co INC
P.O. Box 3485
NASHUA, N.H.
03061

Transporter Company Name
FRANKLIN PUMPING SERVICE INC.
P.O. BOX 617
INDUSTRIAL ROAD
WRENTHAM, MA. 02093
Phone: (508 384-6151

Designated Facility Name and Site Address
Koppers Co INC
TIE PLANT ROAD
TIE PLANT, MS 38960
Phone: (601) 226-4584

U.S. DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CODE, AND ID NO.)	CONTAINERS NO.	CONTAINERS TYPE	TOTAL QUANTITY	UNIT WT/VOL
a. NONHAZARDOUS process waste containing used creosote	76	DRUMS 17-H	76	40,000
b.				
c.				

Addition Descriptions for Materials Listed Above
RQ HAZARDOUS SUBSTANCE, (solid) N.O.S. ORM-E
NA 9188 (contains creosote)

Special Handling Instructions gloves + goggles

SHIPPER ACKNOWLEDGEMENT OF RELEASE OF MATERIALS

Print/Type Name	Signature	Month	Day	Year
Paul S. Kilchenstein	Paul S. Kilchenstein	10	11	89

TRANSPORTER ACKNOWLEDGMENT OF RECEIPT OF MATERIALS

Print/Type Name	Signature	Month	Day	Year
Ron McGrath	R McGrath	10	11	89

FACILITY ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

Print/Type Name	Signature	Month	Day	Year
GARY E. MCCLELLAND	Gary E. McClelland	10	19	89

FORM 179600 REV: 0 DATE: 9-12-88

SHIPPING DOCUMENT
For Tracking Purposes

Shipper's Name & Mailing Address
Koppers Company INC
Hillsterry Road
NASHUA, N. H. 03061
Phone: (603) 880-8345

MAILING Address: Koppers Co INC
P.O. Box 3485
NASHUA N. H.
03061-3485

Transporter Company Name
FRANKLIN PUMPING SERVICE INC.
P.O. BOX 617
INDUSTRIAL ROAD
WRENTHAM, Ma. 02093
Phone: (508) 384-6151

EPA ID # MADO 84814136

Designated Facility Name and Site Address
Koppers Co INC
TIE PLANT ROAD
TIE PLANT, MS 38960
Phone: (601) 226-4584

EPA ID # MSD 007027543

U.S. DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CODE, AND ID NO.)	CONTAINERS NO.	CONTAINERS TYPE	TOTAL QUANTITY	UNIT WT/VOL
a. NON HAZARDOUS process waste containing used creosote	61	DRUMS 17-H	61	Approx 30,000 lbs
b.				30,640 2-8-89 PM
c.				

Addition Descriptions for Materials Listed Above
RQ HAZARDOUS Substance, (solid) N.O.S. ORM-E
NA-9188 (CONTAINS CREOSOTE)

Special Handling Instructions
When handling, wear protective equipment such as impervious gloves and eye protection NON-HAZARDOUS WASTE - For tracking purposes only

SHIPPER ACKNOWLEDGEMENT OF RELEASE OF MATERIALS

Print/Type Name	Signature	Month	Day	Year
Paul S. Kilchenstein	Paul S. Kilchenstein	02	06	89

TRANSPORTER ACKNOWLEDGMENT OF RECEIPT OF MATERIALS

Print/Type Name	Signature	Month	Day	Year
RON McGRATH	Ron McGrath	02	06	89

FACILITY ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

Print/Type Name	Signature	Month	Day	Year
GARY E. MCCLELLAND	Gary E. McClelland	02	08	89

FORM 179600 REV: 0 DATE: 9-12-88

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171

June 1, 1989

CERTIFIED MAIL NO. P 965 303 958

FILE COPY

Mr. Matthew C. Plautz, P.E.
Program Manager - Environmental Services
Beazer Materials & Services, Inc.
436 Sevetnh Avenue
Pittsburgh, Pennsylvania 15219

Dear Mr. Plautz:

Re: Boiler Ash Closure Plan
Permit Modification
Grenada, MS Facility

On May 23, 1989, the Mississippi Natural Resources Permit Board approved the Boiler Ash Landfill Closure Plan and the requested modifications for the cap on the surface impoundment at the Grenada, Mississippi, facility.

Enclosed find pages 21 through 24 which should be inserted in Section VIII, Attachment I of Mississippi Hazardous Waste Management Permit No. 88-543-01 to replace the original pages. The enclosed document "Construction Specifications for Surface Impoundment Closure" should be inserted after page 24 in the same section. Print numbers A103986, revision O, and A103987, revision O, which are enclosed, should replace print numbers A102982, revision O and A102983, revision O.

If you have any questions, feel free to contact Mr. Kaleel Rahaim of my staff at (601) 961-5171.

Sincerely,

Charles H. Chisolm
Bureau Director

CHC:SS:lr
Enclosure
cc: Mr. James H. Scarbrough, EPA (w/enclosure)

Beazer Materials and Services, Inc.
A Member of THE BEAZER GROUP
Environmental Services
436 Seventh Avenue, Pittsburgh, PA 15219
Phone: 412-227-2500 Fax: 412-227-2042

May 5, 1989 FEDERAL EXPRESS

Mr. Kaleel Rahaim
Mississippi Department of Natural Resources
Bureau of Pollution Control
Hazardous Waste Division
2380 Highway 80 West
Jackson, MS 39209

Re: Boiler Ash Landfarm Closure Plan
Koppers Industries, Inc. Facility
Grenada, Mississippi
MSD #007027543

Dear Mr. Rahaim:

Beazer Materials and Services, Inc. (BMS) maintains that our position related to the submitted closure plan for the boiler ash landfarm at the Koppers Industries, Inc. facility in Tie Plant, Mississippi, is consistent with the requirements of the closure performance standard defined in MHWMR 265.111. We believe that the construction of a low permeability cap will effectively control surface water penetration and protect against contaminated stormwater run-off.

The boiler ash landfarm, located in the southern portion at the facility, received ash generated from the burning of wood and various wastes in the boiler prior to July 1987. The ash was placed on a landfarm area where residuals removed from two old surface impoundments prior to November 19, 1980 were mixed with surface soils (i.e. landfarmed) to allow for natural biodegradation processes to occur. To the best of our knowledge, there are no residual source materials that require removal or treatment from this area. In addition, a groundwater monitoring system comprised of one upgradient well and three downgradient wells have been installed around the unit to detect releases of monitored constituents. Upon completion of closure, groundwater monitoring and other maintenance activities will continue under post-closure care provisions.

Writer's Direct Dial 227-2952

In summary, BMS believes that our approach to closure of the boiler ash landfarm is appropriate and consistent with applicable regulation. If you should have any questions, please do not hesitate to call.

Sincerely,

Matthew C. Plautz, P.E.
Program Manager-Environmental Services

MCP/cr
cc: B. Nolan
B. Hamilton
J. Batchelder
R. Anderson
J. Clayton

Boiler Ash Landfill
Koppers Company, Inc.
Beazer Materials & Services, Inc.

1. Material from surface impoundments closed prior to 1980 placed on surface and landfarmed-sludge was worked into the soil, fertilized, and limed. Tillage was to a depth of about 1 foot.

2. Ash from boilers at Koppers, Grenada was placed on the surface until March, 1987. Ash content covers approximately 0.73 acres with an average depth of 6".

3. Cap to be placed over the landfill is a RCRA type cap with a double liner:

   2 feet of clay ($K < 1 \times 10^{-7}$ cm/sec)
   20 mil. Synthetic Impermeable Membrane (PVC)
   Geotextile Filter Fabric
   1 foot SAnd and Gravel Conducting ($K \geq 1 \times 10^{-3}$ cm/sec)
   Geotextile Filter Fabric
   1 foot 6 inches Cover Soil, Clean Fill 6 inches
   Topsoil with humus Revegetation (Seed, Fertilizer, Mulch)

4. Four existing groundwater monitoring wells meet RCRA requirements for the unit. Notice of gw contamination given. Groundwater Quality Assessment Plan (GWQAP), as attached, has been submitted. RCRA Facility Investigation (RFI)/Corrective Measures Studies (CMS) ongoing at site.

5. Geology at the site underlying the boiler ash landfill: Basic City Shale (which overlies the Meridian Sand) appears to be absent at the site. The fine grained shallow deposits likely represent modern alluvial deposits. The upper contact of the sand unit at the site is encountered at elevations ranging from 170 to 200 ft. It is concluded that the continuous sand unit encountered beneath the site is the Meridian Sand of the Tallahatta Formation. The current water table level of the alluvial aquifer is between 19 and 22 ft. below the surface.

6. Analysis of Ash and Cinders from the Grenada Plant was analyzed by an independent lab in April, 1986. Analysis showed <0.01 ppm for all K001 analytes. Bureau Analysis of cinders and ash showed ash fairly clean while cinders had some Base/Neutral Compounds identified.

City of Grenada Wells

	Depth		Approx Distance To Unit	
Well #1 Girl Scout Rd	500'		4 miles	NNE
Bryant Well #5	175'		2½ miles	NNW
West End Well	247		3 mi	NNW
Green St. West Well	170		4 mi	NNW
Green St. East Well	135'		4 mi	NNW
Well #1 Ind. Park	482'		2 mi	NW
Well #2 " "	794'		2 mi	NW
Well #3 " "	491'		1½ mi	NW
Bryant St. Well #4	170'		3½ mi	NNW
" " " #3	184'		3½ mi	NNW
" " " #2	172'		3½ mi	NNW
" " " #1	172'		3½ mi	NNW
Well #2 Girl Scout Rd	360'		4 mi	NNE
Well #1 - Maundy Rd	606'		1½ mi	W
Well #1 - Gore Springs	723'	(Lower Wilcox)	4 mi	NE
" #2 " "	670'	" "	4 mi	NE
Tie Plant	518'	(middle Wilcox)	1 mi	NNE
Well #1 Elliot	979'	(middle wilcox)	4 mi	NE
" #2 "	554'	(lower Wilcox)	4 mi	NE
" #3 "	611'	(minor wilcox)	4 mi	NE
Penneco Hosiery	198'	(upper Wilcox)	3½ mi	NW
" "	210'	" "	3½ mi	NW
" "	204'	" "	3½ mi	NW

Heatcraft

Depth	Approx Distance To Unit
487'	1/3 mile
567'	1/3 mile
536'	1/3 mile

MEMORANDUM

FILE COPY
Permit

TO: Steve Spengler

FROM: Kaleel Rahaim

SUBJECT: Closure Plan for the Ash Waste Pile
Koppers Company, Inc., (now BM&S)
Grenada, Mississippi, MSD007027543

DATE: March 27, 1989

As a result of Mississippi Commission on Natural Resources, Bureau of Pollution Control Order Number 728-87, Beazer Materials & Services, Inc. (formerly Koppers Company, Inc.) has submitted a closure plan.

The closure plan provides for closing a 0.73 acre landfill in which ash from a boiler using K001 Hazardous Waste was generated. Approximately 890 yds^3 of ash material was placed in the area from 1979-1987.

A RCRA type cap composed of a clay barrier layer followed by an impermeable synthetic membrane liner (20 mil PVC), then a geotextile fabric is proposed. Over these layers will be placed a free draining granular layer followed by another geotextile layer followed by a suitable cohesive cover soil. Finally, a layer of topsoil that will be vegetated is applied.

Groundwater monitoring is continuing at this location per regulations.

KR:cm

KOPPERS COMPANY, INC.
GRENADA, MISSISSIPPI
EVENTS

November 3, 1987 - Administrative Order Number 1280-87 issued.

December 4, 1987 - Closure Plan for Boiler Ash Landfarm received.

January 27, 1989 - Plan Reviewed and sent to Public notice.

March 1, 1989 - Public Notice Deadline - No comments received.

RCRA SITE INSPECTION

1) Inspector and Author of Report

Karen McKinney
Environmental Engineer

2) Facility Information

Koppers Company, Inc.,
MSD 007 027 543
P.O. Box 160
Tie Plant, MS 38960

3) Responsible Official

J.D. (Rock) Clayton, Plant Manager

4) Inspection Participants

Karen McKinney, USEPA
Leo Romanowski, USEPA
Dave Bockelmann, MSDNR
J.D. (Rock) Clayton, Koppers

5) Date and Time of Inspection

December 12, 1988 - 9:15 a.m. CST

6) Applicable Regulations

Mississippi Hazardous Waste Management Regulations (MHWMR) Sections 262, 264, and 265 (adopted by reference and therefore cited herein as 40 CFR).

7) Purpose of Inspection

This inspection was a USEPA Compliance Evaluation Inspection (CEI) to determine the facility's overall compliance with the applicable regulations.

8) Facility Description

The Koppers Tie Plant facility is located about five miles southeast of Grenada, Mississippi. The facility uses creosote and pentachlorophenol-in-oil in the pressure treatment of wood products for railroad ties, utility poles and pilings. The hazardous wastes produced by this facility are K001, U051, and F027 and consist of bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol (K001), and waste creosote (U051), or certain waste pentachlorophenol (F027). The regulated waste management units at the facility are a drum storage area, a

surface impoundment, an ash landfarm, and a sprayfield. The facility has an operating permit issued by the Mississippi Commission for the use of the surface impoundment. The surface impoundment is in the process of closure.

The surface impoundment was used as a wastewater treatment lagoon. It is about one-half acre in size and had a maximum operating depth of about seven feet. The surface impoundment generated K001 (bottom sediment sludge from the treatment of wastewaters from wood preserving processes using creosote or pentachlorophenol). The surface impoundment was preceded by a mechanical oil/water separator and flow equalization which recaptures product and minimizes the amount of creosote which flows into the impoundment and becomes waste. Wastewater from the impoundment was pumped to a sprayfield for treatment. The facility is in the process of closing the impoundment. The impoundment has been dewatered and has had 3,032 tons of soil and sludge removed. Koppers is awaiting test results for clean closure.

The wastewater from the treating process is now pumped into two 10,000 gallon railcar tanks equipped with heating coils. The water is evaporated by the heating coils and any sludge generated is recycled back into the process.

Effluent from the surface impoundment was periodically pumped to the sprayfield. The sprayfield is located on the north-northwest section of the property. It is about four acres in size and surrounded by a low berm that controls run-on/run-off. The field is covered with non-food-chain vegetation. The frequency of pumping depended upon water levels within the surface impoundment and climatic conditions. Spraying did not occur during rainfall.

Koppers operates a boiler at its facility for the conversion of thermal wood and various wastes into steam. These wastes included the listed hazardous wastes K001, U051, and F027. The ash generated from the operation of the boiler was placed on a landfarm until 1987. The landfarm had been used, prior to November 19, 1980, for the disposal of wood treating process wastes which came from old surface impoundments that had been closed. The ash is a listed hazardous waste thereby making the ash landfarm a regulated land disposal unit. Koppers stopped burning the hazardous waste in July of 1987. The facility still burns non-hazardous waste in the boiler which comes from the process areas (cleaning of the treatment cylinders and door pit areas, etc.) and disposes of the ash at a local landfill.

The facility operates a less than 90-day storage building located in the process area. Koppers previously had interim status for a storage area located near the holding tanks. This area was used only once and is no longer in use. It has been certified closed. The building stores drums containing the non-hazardous waste which is used in the boiler and hazardous waste which is stored until it is shipped off-site.

9) Findings

A record review of the inspection logs, personnel training records, manifests, closure plans, groundwater monitoring records, and the contingency plan was conducted. Records were kept back to 1981. The inspection logs were kept in proper order. Inspections were conducted at the sprayfield, surface impoundment, ash landfarm, and the drum the storage building. The personnel training records were maintained for three years or more. Closure plans and the contingency plan were kept at the facility. Financial assurance and liability records were inspected and found to be in compliance. The closure cost estimate for all regulated units was updated in March of 1988. It was suggested that the cost estimate be broken out by units instead of a lump sum.

In reviewing the manifests and waste analysis records, it was discovered that Koppers had received hazardous waste (K001) from another Koppers facility and had burned it in the boiler. The ash was sent to a local landfill. The waste was classified as non-hazardous on the manifest and was received on July 29,1988 and August 15, 1988. The sludge came from creosote blowdown tanks, PCP separators, and something referred to as basement sediment and is therefore considered K001.

The groundwater monitoring records were reviewed. The records were kept for three years for the surface impoundment and sprayfield. Groundwater monitoring began at the ash landfarm in February of 1988.

An inspection of the operating area and regulated units followed the record review. The first area looked at was the less than 90-day storage area. Six drums of hazardous waste (U051) were being stored at the time of the inspection. Four of the drums have been stored since November 18, 1987 and two since March 10, 1988. The storage of these drums exceed the 90 days allowed in 40 CFR Part 262.34. This was noted as a violation at the May 16, 1988 inspection. The facility has had an adequate amount of time to dispose of the drums. The facility has therefore operated a storage facility without having an operating permit or interim status and must close the unit.

The next area seen was the process area which includes the treatment cylinders, creosote tanks, and the boiler. An area inside the concrete wall surrounding the creosote tanks used to be the facility's interim storage area. This area was used only once since it became too difficult to lift the drums over the wall to store and remove them. The facility has since closed out this unit. Additionally the concrete pad near the boiler was used to store hazardous waste before it was burned. It has since been cleaned and decontaminated.

The ash landfarm is a land disposal unit and is therefore subject to the landfill regulations (Subpart N of 40 CFR). The unit is surrounded by a three-strand barb-wire fence which is inadequate security for a landfill. There is plastic sheeting covering the ash landfarm that is being used for wind dispersal control. There was

ponding on top of the plastic, bare patches not covered by the plastic, and the plastic did not extend to all sides. Additionally, soils from cleanup activities around the plant were placed on top of the plastic. There are four groundwater monitoring wells for the ash landfarm.

The facility has begun closure at the surface impoundment. The impoundment has been dewatered and had soils and sludges removed. Closure activities began in July of 1988. Closure has been halted until results from soil testing are received. The front portion of the fence had been removed during closure operations. During periods of inactive closure the fence needs to be reinstalled. There are eight groundwater monitoring wells for the surface impoundment.

The sprayfield has four groundwater monitoring wells and is surrounded by a three-strand barb-wire fence. The gate was locked but held on the post by one strand of wire. The gate needs to be better secured to the fence posts. More signs are needed around the sprayfield so that they can be seen from any approach. The sprayfield ceased receiving wastewater from the impoundment in July, 1988 and has had all spray nozzles removed. There is still brownish-black soils and dead vegetation surrounding the area where the nozzles were. There is a berm surrounding the sprayfield for run-on/run-off control.

10) Conclusions

Koppers has violated the following requirements of the applicable regulations:

40 CFR Part 262.12(c) - The facility must not offer his hazardous waste to transporters or to treatment, storage, or disposal facilities that have not received an EPA identification number.

40 CFR Part 262 Subpart B - The Manifest
40 CFR Part 262 Subpart C - Pre-transport Requirements
40 CFR Part 262 Subpart D - Recordkeeping and Reporting

These four violations address the disposal of hazardous waste boiler ash (K001) at a local landfill when sludge from the separator and blowdown tank was burned in the boiler.

40 CFR Part 264.14 - Security - The front portion of the fence surrounding the surface impoundment had been removed to implement closure. However, at the time of the inspection, closure activities had been suspended for several months. Therefore, a temporary fence should be placed there to prevent unknowing entry to the surface impoundment until closure activities are resumed.

40 CFR Part 265.14 - Security - There needs to be more signs located around the sprayfield so as to be seen from all approaches. Additionally, the gate to the sprayfield needs to be repaired.

40 CFR Part 265 Subpart G - Closure and Post-closure Care - The facility has failed to close the sprayfield.

The state has addressed this violation with an Administrative Order which is under appeal.

40 CFR Part 265.302 - General Operating Requirements - The facility has failed to provide adequate run-on/run-off control and wind dispersal control systems for the ash landfarm.

Section 3005 - Solid Waste Disposal Act - Permits for Treatment, Storage, or Disposal of Hazardous Waste - The facility has operated a storage area without having a permit or interim status. The facility must close this unit in accordance with the regulations.

Additionally, the facility has operated the sprayfield without having interim status or a permit. This violation has been addressed by the state and is currently under appeal.

11) Recommendations

Koppers needs to break out their closure and post-closure cost estimates into specific units instead of lump sum. This would ensure that all unit cost estimates are updated accordingly.

Koppers is fast approaching the 180 days allowed for closure of the surface impoundment and needs to either meet the deadline or request an extension.

Koppers needs to provide documentation as to where the waste is coming from that is being burned in the boiler. This is to ensure that only non-hazardous waste is being burned. The facility may need to conduct analysis or certifications of all wastes received.

12) Signed

Karen McKinney
Inspector

Jan 26 '89
Date

13) Concurrence

for Doyle T. Brittain, Chief
West Compliance Unit

01/27/89
Date

Approval

Allan E. Antley, Chief
Waste Compliance Unit

1/30/89
Date

RCRA Inspection Report

1. Inspector and Author of Report

David J. Bockelmann
Environmental Scientist

2. Facility Information

Koppers Company, Inc.
P. O. Box 160
Tie Plant, Mississippi 38960
MSD007027543

3. Responsible Company Official

Mr. J. D. "Rock" Clayton, Plant Manager

4. Inspection Participants

Mr. David J. Bockelmann, BPC
Ms. Karen McKinney, EPA
Mr. Leo Romanowski, EPA
Mr. J. D. "Rock" Clayton, Koppers
Mr. Gary McClelland, Koppers

5. Date and Time of Inspections

December 12, 1988 - 9:15 a.m. CST

6. Applicable Requirements

Mississippi Hazardous Waste Management Regulations (MWHMR) Parts 262, 264, 265, and 268. Mississippi Hazardous Waste Management Permit No. 88-543-01.

7. Purpose of Inspection

This was a Compliance Evaluation Inspection to determine the facility's overall compliance with the applicable interim status regulations and with the facility's Hazardous Waste Management Permit No. 88-543-01 which covers the operation, closure and post-closure requirements for the facility's surface impoundment.

8. Facility Description

Koppers Company, Inc. is located in the Town of Tie Plant which is approximately 5 miles southeast of Grenada, Mississippi. The facility uses creosote and oil borne pentachlorophenol in the pressure treatment of wood products for railroads, utilities and others.

The primary product is treated railroad cross-ties. Raw materials and treated products arrive and leave by rail and truck. The hazardous wastes which are generated, treated, stored and, in the past, disposed of at the facility are bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorphenol (K001), waste creosote (U051), and certain waste pentachlorophenol (F027). The facility has four hazardous waste management units which are a less than 90 day container/drum storage building, a surface impoundment, a spray irrigation field, and a boiler ash landfarm. A permit for the operation of the surface impoundment was issued on June 28, 1988. State administrative orders requiring the submittal of Part B permit applications for the spray irrigation field and the boiler ash landfarm were also issued on July 22 and 29, 1988. A Part B permit application for the boiler ash landfarm was received by the Bureau on November 9, 1988. The administrative order requiring the submittal of a Part B permit application for the spray irrigation field is currently under appeal by the facility.

The facility is currently in the process of closing the surface impoundment which was operated as a wastewater treatment lagoon and generated the listed hazardous waste K001. Treatment of wastewater in the surface impoundment was preceeded by a flow equalization tank, a pentachlorophenol and oil separator where pentachlorphenol and oil are recovered and recycled, a creosote separator where creosote is recovered and recycled, and a flocculation system. Since the start of closure at the surface impoundment, the facility has been disposing of their wastewater by pumping it to a series of two 10,000 gallon railroad tank cars where the wastewater is heated and evaporated to the atmosphere. The facility is currently in the process of constructing a wastewater pretreatment system and obtaining a Pretreatment permit to discharge the treated wastewater to the City of Grenada POTW.

The spray irrigation field was the final stage in the facility's wastewater treatment system. It is approximately four acres in size and is surrounded by a low berm for run-on/run-off control. The spray irrigation field received effluent from the surface impoundment which was land applied via six spray irrigation nozzles. The field is covered with non-food chain vegetation and was operated as a land treatment unit for the biodegredation of effluent from the surface impoundment prior to the start of closure at the surface impoundment.

The facility operates a boiler for the thermal conversion of wood and various wastes into steam. Prior to October of 1986 these wastes included the listed hazardous wastes K001, U051 and F027. The ash generated from this process is a listed hazardous waste and, prior to July, 1987, was land disposed on the boiler ash landfarm located in the southern portion of the facility. Prior to November 19, 1980, two old surface impoundments located in the central portion of the facility were closed and the waste sludge removed during closure was also disposed of at the boiler ash landfarm area. The facility currently operates the boiler burning wood and various wastes associated with wood treating operations. These wastes have been reported by the facility to be non-hazardous. The ash generated from this process is currently being disposed of at a local sanitary landfill. During this inspection it was found that the facility has apparently burned listed hazardous wastes along with non-hazardous wastes in the boiler and that the ash generated from the burning of these apparently hazardous wastes was also disposed of at the local sanitary landfill.

The facility operates a less than 90 day container/drum storage building located near the process area. The building is used to store drums of both hazardous and non-hazardous waste.

9. Findings

An inspection and review of the facility's records was conducted. These records included inspection logs, personnel training records, waste manifests, groundwater monitoring records and reports, financial assurance and liability insurance records, closure plans and the facility contingency plan.

The facility's inspection logs, personnel training records, closure plan and contingency plan were reviewed and found to be up-to-date and in compliance.

The facility utilizes the corporate financial test to demonstrate financial assurance for closure/ post-closure and liability insurance. This is currently being revised to include closure/post-closure costs and liability insurance for the boiler ash landfarm and will be resubmitted as soon as it is available.

A review of the facility's 1988 groundwater monitoring and analysis records for the surface impoundment, boiler ash landfarm and spray irrigation field was conducted. This review included data submitted by

Koppers as well as groundwater analytical data collected by U.S. EPA in May, 1988. The findings of this review with respect to each unit is outlined below.

Surface Impoundment. The facility was issued Hazardous Waste Management Permit No. 88-543-01 for the surface impoundment on June 28, 1988. Prior to this date the surface impoundment was regulated under the interim status standards contained within MHWMR Part 265. The first and second quarters of groundwater data were submitted under MHWMR Part 265 and the third and fourth quarters of groundwater data were submitted under the permit requirements. A review of this data found that no statistical analyses were reported. Site specific constituents were analyzed for during all four quarters. These showed constituent concentration levels above method 8270 detection limit, listed in SW-846, for wells R-1, R-10A, R-7, R-8A, R-9C and R-90 in the first quarter and well R-1 in the second, third and fourth quarters. In the absence of any statistical analyses, this data can only be interpreted as evidence of groundwater contamination at the surface impoundment.

Permit Condition IV.C.3. required that upgradient well R-1, which was improperly constructed, be replaced with a properly constructed well within thirty days of the effective date of the permit; this well has not yet been replaced. Additionally, because well R-1 is improperly constructed, the analytical data from it cannot be reliably evaluated.

Boiler Ash Landfarm. Groundwater monitoring at the boiler ash landfarm was first started in 1988. Monitoring was done on an accelerated schedule with one sampling event per month during February, March, April and May. A fifth sampling event was also conducted in July. A review of this data found that no MHWMR Part 265 Appendix III parameters or EPA interim primary drinking water standards were analyzed for during the first year sampling events as required by MHWMR 265.92(c)(1). The indicator parameter of Total Organic Halogen (TOX) was not included in any of the five rounds of analytical data or in the statistical analysis submitted for the fifth round sampling event, as required by MHWMR 265.92(c)(1), 265.92(d)(2), and 265.93(b). Site specific constituents were also analyzed for and reported at the boiler ash landfarm. Low level concentrations of nearly all the site specific polynuclear aeromatic hydrocarbons (PAH's) were repoted in all three downgradient wells during the first, second, third, and fifth round sampling events. Low level concentrations of a few of the phenolic

compounds were reported for the first, third, fourth and fifth round sampling events, no phenolic compounds were reported as being analyzed for in the second round event. Additionally, the U.S. EPA sampling event conducted in May, 1988, found the following constituent concentrations in downgradient well MW-3: 1600 ppb trichloroethene, 57 ppb cis - 1,2-dichloroethene, 6.5 ppb carbon disulfide and 1.6 ppb chloroform. From all of the data presented, it appears that there is groundwater contamination at the boiler ash landfarm. Because of the concentration levels reported for trichloroethene and cis - 1,2-dichloroethene, it is recommended that an analysis for these two constituents be included in all future sampling events at the boiler ash landfarm.

Spray Irrigation Field. The spray irrigation field is considered by the State of Mississippi to be a regulated hazardous waste management unit, Koppers is currently contesting this position.

Groundwater at the sprayfield was sampled on a quarterly basis during 1988. A review of this data found that no statistical analyses were submitted for any of the four quarters. Site specific constituents were analyzed for during all four quarters. These showed constituent concentration levels above method 8270 detection limit listed in SW-846 for wells SF-3 and SF-4 in the first quarter, well SF-2 in the second quarter and well SF-4 in the fourth quarter. In the absence of any statistical analyses, this data can only be interpreted as evidence of groundwater contamination at the surface impoundment.

A review of the facility's waste manifests for 1988 was also conducted. These manifests were for wastes which were shipped to the Koppers Grenada facility to be burned in the facility's boiler in conjunction with their fuel additives program. The ash generated from this process is currently disposed of at a local county landfill. A review of these manifests, and the waste analysis sheets for each manifest, found that several of the manifests were for wastes which appear to be hazardous waste. The following is an outline of these manifests:

Manifest Doc. No.	Source[1] of Waste	No. of Containers	Total Quantity (lbs)	Date of Receipt
67212	Creosote Process Sludge from oil & water separator	75	41,200	7/22/88
67213	As described above	74	40,947	7/30/88

67214	As described above	83	46,940	8/9/88
00182	PCP Separator	48	30,260	8/24/88

1 Source description is taken from the waste analysis sheet for each individual manifest.

It appears from the source descriptions that these wastes are a K001 hazardous waste which is defined as "bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorphenol". Creosote or pentachlorophenol sludges from a wastewater separator would fit into this definition and would be classified as a K001 hazardous waste. The ash generated from the burning of a hazardous waste is also a hazardous waste. This being the case, Koppers appears to have improperly transported and disposed of K001 hazardous waste at the local Grenada County landfill. Additionally, all K001 hazardous wastes disposed of after August 8, 1988, would have been subject to the land disposal restrictions contained within MHWMR Part 268.

Following the record review a visual site inspection of the facility was conducted. The site inspection included the less than 90 day container/drum storage building, the surface impoundment, the spray irrigation field and the boiler ash landfarm.

The less than 90 day container/drum storage building contained 34 drums labeled as non-hazardous and 6 drums labeled as containing U051 hazardous waste. Four of these drums had an accumulation date of November 19, 1987, and the other 2 drums had an accumulation date of March 10, 1988. All six drums containing U051 hazardous waste had been stored for longer than 90 days.

The surface impoundment was inspected and is in the process of being closed. Sludges and associated soils had been removed. No closure activities were being conducted at the time of the inspection. A gap in the fence around the surface impoundment, created to allow the entrance of equipment for sludge and soil removal, should be closed until such time as closure activities resume.

The spray irrigation field was inspected. It is recommended that additional signs warning against unauthorized entry be placed along the east side fence line. It is further recommendedd that the gate be repaired as well as the west side fence line where some

small trees and limbs have fallen across the fence. The facility ceased operation of the spray irrigation field after wastewaters were removed from the surface impoundment and closure of the surface impoundment was initiated.

An inspection of the boiler ash landfarm found that contaminated soils removed from various facility process areas was being stored here on top of plastic. It is recommended that these soils not be stored in the boiler ash landfarm area.

10. Conclusions

Koppers Company, Inc. is in apparent violation of the following requirements of the applicable Mississippi Hazardous Waste Management Regulations and the requirements of Mississippi Hazardous Waste Management Permit No. 88-543-01:

(a) MHWMR 265.93 - Preparation, Evaluation, and Response - The facility has failed to perform the required statistical analyses at the surface impoundment and at the spray irrigation field and has failed to properly notify the Executive Director of the existence of groundwater contamination at these sites as required. Additionally, the facility has failed to properly notify the Executive Director of the existence of groundwater contamination at the boiler ash landfarm.

(b) MHWMR 264.71 and 264.72 - The facility failed to note and failed to report a significant manifest discrepancy in that K001 hazardous waste was brought on-site under manifests which described it as non-hazardous process waste containing used creosote or non-hazardous process waste containing used pentachlorophenol. (Note: This waste was subsequently burned in the facility's boiler)

(c) MHWMR Part 262 Subparts A, B and C - The facility improperly transported hazardous waste ash, derived from the burning of K001 hazardous waste in their boiler, to a facility, the local Grenada County landfill, which did not have an EPA identification number and was not permitted to dispose of hazardous waste. In addition, the facility had no records of these shipments being properly manifested, labeled or marked as required.

(d) MHWMR Part 268 - The facility did not have any records or certifications that would have shown

that the two shipments of waste (identified by Manifest Document Nos. 67214 and 00182) received on-site after August 8, 1988, the effective date of land disposal restriction treatment standards for K001 hazardous waste, would have met the land disposal restriction treatment standard for K001 prior to disposal as required.

(e) MHWMR 262.34 - The facility stored six drums of U051 hazardous waste at its less than 90 day container/drum storage building for longer than 90 days.

(f) MHWMR 264.14 - The facility did not maintain an adequate and continuous barrier around the permitted closing surface impoundment.

(g) MHWMR 265.302 - The facility failed to provide adequate run-on/run-off control and wind dispersal control systems for the boiler ash landfarm.

(h) Koppers needs to address the issue in Permit Condition IV.C.3. requiring that upgradient well R-1 be replaced with a properly constructed well.

(i) MHWMR 265.92 - Sampling and Analysis - The facility failed to analyze groundwater samples from the Boiler Ash Landfarm Monitoring wells for the indicator parameter of Total Organic Halogen (TOX) as required.

11. Recommendations are listed as follows:

Koppers need to break out their closure and post-closure cost estimates into specific units instead of lum sum. This would insure that all unit cost estimates are updated accordingly.

12. Signed

David J. Dahlman

13. Approval

Wm Sleyter Snyder 3/3/89

cc: Mr. James H. Scarbrough, EPA

FILE COPY

July 27, 1988

Mr. Paul Lindlau
31 Long Valley Blvd.
Long Valley, New Jersey 07853

Dear Mr. Lindlau:

Re: Koppers Company, Inc.
Grenada, Mississippi

In response to your letter of July 5, 1988, Koppers Company in Grenada currently has one hazardous waste management permit for the operation of a surface impoundment for which closure must begin on or before November 8, 1988. Copies of the fact sheet, statement of basis and permit conditions are enclosed. Attachments A through I of this permit are somewhat lengthy and contain technical and background data used in the development of the enclosed permit conditions. If you should require a copy of these attachments, please contact me at the number listed below.

Koppers has two additional units at the Grenada facility, a spray irrigation field used for the land treatment of wastewater from their surface impoundment and a boiler ash waste pile where ash from the burning of hazardous wastes (K001 and U051) combined with wood chips was land disposed. The boiler ash waste pile is no longer active. The State is currently in the process of issuing administrative orders that will require Koppers to submit Part B permit applications for both of these units.

If you should have any questions or require any additional information, please contact me at (601) 961-5171.

Sincerely,

David J. Bockelmann
Hazardous Waste Branch

DJB:els
Enclosure

MISSI[illegible]I DEPARTMENT OF NATURAL R[illegible]RCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171

Permitting file

MEMORANDUM

TO: Koppers File

FROM: Dave Bockelmann

Through: Karen McKinney, EPA, Leo Romanowski, EPA

DATE: July 1, 1988

REFERENCE: June 15, 1988, meeting between Mississippi Department of Natural Resources personnel and personnel from Koppers Company, Inc. and Keystone Environmental Resources, Inc.

ATTENDEES: Sam Mabry, MSDNR
Art Prestage, MSDNR
Steve Spengler, MSDNR
Dave Bockelmann, MSDNR
Robert Anderson, Keystone
Dave King, Keystone
J. D. "Rock" Clayton, Koppers

DIVISION OF SOLID WASTE
REVIEWED BY _____
DATE _____
COMMENTS Sent to EPA July 14, 1988 GJR

A copy of the meeting agenda is attached. The following items were addressed during the meeting:

1. Surface Impoundment

   a. Koppers submitted an updated schedule for the completion and hook-up of their pretreatment system to the city POTW. A copy of this is attached and has been included in the permit.

   b. MSDNR requested Koppers to submit an updated closure schedule for the surface impoundment. An updated schedule as well as a revised closure plan was received on June 13, 1988, and was forwarded to EPA on June 24, 1988.

   c. An order will be issued requiring Koppers to submit a contingency plan for closure of the surface impoundment if their pretreatment system is not completed or permitted by November 8, 1988. Additionally, Koppers was informed that if the Land Ban Regulations are adopted as is, they will have to cease use of the surface impoundment on August 8, 1988. Koppers said that if this happened they would shut the plant down

until their pretreatment system is permitted and completed.

2. Boiler Ash Landfarm

   a. Koppers did not have their groundwater sampling results; however, they did say that the results showed that there is groundwater contamination in this area. This is consistent with EPA sampling results from a CDEI performed on May 2 to 5, 1988.

   b. An order will be issued requiring Koppers to submit an updated Part A which includes the boiler ash landfarm and a Part B which addresses compliance monitoring and corrective action. MSDNR will move to review and public notice the existing closure plan and close this unit under interim status.

3. Spray Irrigation Field

   a. After reviewing the existing data on the spray field, Koppers was informed that both the Bureau and EPA considered it a RCRA regulated hazardous waste management unit.

   b. An order will be issued requiring Koppers to submit an updated Part A which includes the spray field and a Part B which includes post-closure care. Additionally, Koppers was informed that they would have to cease using the spray field on August 8, 1988, if Land Ban restrictions for K001 are adopted as proposed.

4. Unnamed Ditch

   a. Reviewed existing data on the contamination in and adjacent to this unit.

   b. An order will be issued requiring Koppers to place absorbent booms across the stream to prevent the off-site movement of contamination in the surface water. Additional assessment will be performed during the RFI.

5. RFA/RFI

   a. Discussed EPA letter of June 10, 1988, and the comments contained in that letter. MSDNR and Koppers agreed that the well recommended in comment number 5 was not necessary. MSDNR will send a letter to Koppers addressing the RFI, EPA comments and items 6 and 7 of Commission Order 1208-87.

6. Boiler and Boiler Ash

a. Koppers will submit a more detailed schedule of events concerning the switch-over from burning hazardous to non-hazardous waste in the boiler.

DB:lr

SCHEDULE FOR WASTEWATER
PRETREATMENT SYSTEM
KOPPERS COMPANY, INC.
TREATED WOOD PRODUCTS
GRENADA, MISSISSIPPI

Begin Construction	July 23, 1988
Finish Construction	October 13, 1988
Process Start-up (cease using surface impoundment)	October 19, 1988
Full Operation	November 2, 1988

MEETING AGENDA

Koppers Company, Inc.

June 15, 1988

1.) Surface Impoundment Permit.

   a.) Submittal of schedule for completion of pretreatment system and hook-up to POTW.

   b.) Submittal of updated schedule for closure.

   c.) Contingency plan for closure if pretreatment system is not permitted or completed by November 8, 1988.

2. Boiler Ash Landfarm.

   a.) Review groundwater sampling results.

   b.) Closure & Post-Closure requirements.

      1) Submittal of updated Part A.

      2) Submittal of Part B.

3. Spray Irrigation Field

   a.) Review existing data.

   b.) Closure & Post-Closure requirements.

      1) Submittal of updated Part A

      2) Submittal of Part B

4. Unnamed Ditch

      a.) Review existing data.

      b.) Discuss interim measures for remediating contamination.

5. RFA/RFI for Solid Waste Management Units.

      a.) EPA letter and comments

6. Boiler & Boiler ash

RCRA INSPECTION REPORT

1. Inspector and Author of Report

   David J. Bockelmann
   Environmental Scientist

2. Facility Information

   Koppers Company, Inc.
   MSD007027543
   P. O. Box 160
   Tie Plant, Mississippi 38960

3. Responsible Company Official

   J. D. "Rock" Clayton, Plant Manager
   Dave King, Environmental Coordinator - Keystone

4. Inspection Participants

   Dave Bockelmann, MSDNR
   Karen McKinney, USEPA
   J. D. "Rock" Clayton, Koppers
   Dave King, Keystone

5. Date and Time of Inspections

   May 16, 1988 - 9:15 a.m. CST

6. Applicable Regulations

   Mississippi Hazardous Waste Management
   Regulations 262 and 265.

7. Purpose of Inspection

   This was a Compliance Evaluation Inspection to determine the facility's overall compliance with the applicable interim status regulations.

8. Facility Description

   Koppers Company, Inc. is located in the Town of Tie Plant which is approximately 5 miles southeast of Grenada, Mississippi. The facility uses creosote and oil borne pentachlorophenol in the pressure treatment of wood products for railroads, utilities and others. The primary product is treated railroad cross-ties. Raw materials and treated products arrive and leave by rail and truck.

The hazardous wastes which are generated, treated, stored, and/or disposed of at the facility are bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol (K001), waste creosote (U051), and certain waste pentachlorophenol (F027). The facility has four hazardous waste management units which are a less than 90 day container/drum storage area, a surface impoundment, a spray irrigation field, and a boiler ash landfarm. At the time of this inspection a permit for the operation of the surface impoundment was under review and was subsequently issued on June 28, 1988. Orders requiring the submittal of Part B permit applications for the spray irrigation field and the boiler ash landfarm were also issued on July 22 and 29, 1988.

The facility currently operates a surface impoundment which is approximately 0.78 acres in size and has an operating depth of about 6-7 feet. The surface impoundment is operated as a wastewater treatment lagoon and generates the listed hazardous waste K001. Treatment of wastewater in the surface impoundment is preceded by a flow equalization tank, a pentachlorophenol and oil separator where pentachlorophenol and oil are recovered and recycled, a creosote separator where creosote is recovered and recycled, and flocculation. Closure of the surface impoundment will begin on or before November 8, 1988.

The spray irrigation field is the final stage in the facility's wastewater treatment system. It is approximately four acres in size and is surrounded by a low berm for run-on/run-off control. The spray irrigation field receives effluent from the surface impoundment which is land applied via six spray irrigation nozzles. The field is covered with non-food chain vegetation and is operated as a land treatment unit for the biodegradation of effluent from the surface impoundment.

The facility operates a boiler for the thermal conversion of wood and various wastes into steam. Prior to October of 1986 these wastes included the listed hazardous wastes K001, U051, and F027. The ash generated from this process is a listed hazardous waste and, prior to July, 1987, was land disposed on the boiler ash landfarm located in the southern portion of the facility. The facility still operates the boiler, burning wood and non-hazardous wastes which come from the process areas (cleaning of the treatment cylinders and door pit areas, etc.) and disposes of the ash at a local landfill. Prior to November 19, 1980, two old surface impoundments located in the central portion of the facility were closed and the waste sludge removed during closure was disposed of at the boiler ash landfarm area.

The facility operates a less than 90 day container/drum storage building located near the process area. The building is used to store drums of non-hazardous waste which is burned in the boiler and drums of hazardous waste prior to being shipped off-site.

9. Findings

An inspection and review of the facility's records was conducted. These records included inspection logs, personnel training records, waste manifests, groundwater monitoring records, financial assurance and liability insurance records, closure plans and a facility contingency plan. Records at the facility were kept back to 1981.

Waste manifests, financial assurance and liability insurance records, closure plans and the facility contingency plan were reviewed and found to be in compliance.

A review of the groundwater monitoring records for the surface impoundment and the spray irrigation field found that these records were kept for 3 years and were up-to-date. Groundwater monitoring at the boiler ash landfarm began in February, 1988. Results of this monitoring were not yet available.

A review of the personnel training records found that they were kept for 3 years and were up-to-date for all employees with the exception of Mr. Monroe Harper who had not received a training review in 1987. Mr Harper needs to receive a training review and have his training record updated.

A review of the inspection logs found that they were up-to-date and kept in proper order. However, it is recommended that the following additions be included in the inspection logs. The inspection log for the surface impoundment should include notations for inspecting the fence and signs. The inspection log for the less than 90-day container/drum storage building should include notations for inspecting the conditions of the drums and should note when no drums are being stored. The inspection log for the boiler ash landfarm should be more specific and include notations for inspecting the fence, signs, evidence of releases (from run-off or wind dispersal) and comments on general site conditions.

Following the record review a visual site inspection of the facility was conducted. The site inspection included the less than 90-day container/drum storage building, the facility process area, the boiler ash landfarm, the surface impoundment and the spray irrigation field.

The less than 90-day container/drum storage building contained 6 drums of hazardous waste (U051). Hazardous waste labels were attached to the drums; however, no accumulation dates were recorded on the drums. The storage building also contained 74 drums of non-hazardous waste which is burned in the facility's boiler.

The next area inspected was the facility process area which includes the treatment cylinders, process tanks and the boiler. A concrete pad adjacent to the boiler feed hopper contained drums

of non-hazardous waste which is fed into the boiler and burned along with scrap wood chips. Prior to October, 1986, this pad was operated as a less than 90-day container/drum storage area for hazardous waste which was burned in the boiler. There was no record of this pad having been cleaned-up or decontaminated after the facility ceased storing hazardous waste drums on the concrete pad. This area needs to be closed in accordance with Mississippi Hazardous Waste Management Regulation (MHWMR) 265.111 and 265.114 and the closure procedure documented. In addition, there were no records available to document the clean out or decontamination of the boiler in changing over from burning hazardous waste to burning non-hazardous waste. However, in subsequent conversations and meetings with Mr. Rob Anderson (Keystone Environmental Resources, Inc.) and Mr. Rock Clayton (Plant Manager, Koppers Company, Inc.) the following information concerning the boiler change over was presented. Koppers stopped receiving and stopped burning hazardous waste in the boiler in October, 1986. The boiler was shut down at 3:00 p.m. on April 13, 1987. The boiler fire box was cleaned out and all the fire brick within the fire box was replaced. The ash collection system and the ash collection bins were emptied and cleaned out. The boiler started back up burning non-hazardous waste on May 7, 1987. In July, 1987, the facility stopped placing ash on the boiler ash landfarm and began disposing of it at a local landfill.

The facility's Part A listed an area within a concrete wall which surrounds the process tanks as an interim status container/drum storage area. However, Mr. Dave King (Keystone Environmental Resources, Inc.) and Mr. Rock Clayton (Plant Manager, Koppers Company, Inc.) explained that this area was never actively used because of the difficulty in placing and retrieving drums over the concrete wall which is approximately 3 feet high. The facility needs to document that this area was never actively used, that no spills from containers/drums occurred, and that the area was effectively closed by the removal of any containers/drums that were originally placed there.

The boiler ash landfarm is located in the southern portion of the facility and has not been used since July, 1987. Prior to July, 1987, it was operated as a hazardous waste landfill and as such is subject to the regulations governing landfills (Subpart N of Part 265 of the Mississippi Hazardous Waste Management Regulations - MHWMR). The boiler ash landfarm is not managed to control run-on/run-off or the dispersal of the ash by wind. Some of the ash from the unit could be seen on a facility road running along the outside of the unit. Additionally, the unit is surrounded by a three-strand barbed wire fence which is inadequate security for a landfill. Additional signs are needed and the gate at the northern part of the unit did not have a lock to prevent entry. The unit has one background and three downgradient monitoring wells.

The surface impoundment is located in the east central portion of the facility and is surrounded by a fence on all sides.

Additional signs are necessary so that they can be seen from all approaches. The facility has received an operating permit for the surface impoundment and will be required to close the surface impoundment on or before November 8, 1988. The unit has two background and six downgradient monitoring wells.

The spray irrigation field is located at the northern end of the facility and consists of six spray irrigation nozzles and is surrounded by a low berm to control run-on/run-off. Access is controlled by a three-strand barbed wire fence which is in poor condition near the sprayfield gate. The fence near the gate has apparently been knocked down due to the placement and removal of material from a scrap pile which is located within the sprayfield fence. The fence in this area needs to be repaired and it is recommended that the scrap pile be removed. The northern portion of the sprayfield perimeter is bounded by a public road and a residential area. The fence along the northern perimeter of the sprayfield is inadequate security because of the proximity of the public road and residential area. Extra signs are also needed so that they can be easily seen from all approaches. The unit has one background and three downgradient monitoring wells.

Koppers contends that the spray irrigation field is not a regulated unit and has operated it without having interim status. Subsequent to this inspection, an Administrative Order has been issued to Koppers requiring them to submit a complete Part B post-closure permit application for the spray irrigation field.

10. Conclusions

Koppers is in apparent violation of the following requirements of the applicable regulations:

1. MHWMR Part 262.34 - Accumulation Time - Koppers operates a less than 90-day container/drum storage building. Six drums of hazardous waste were being stored at the time of the inspection. These drums contained hazardous waste labels but no accumulation dates were recorded on the labels as required.

2. MHWMR Part 265.14 - Security - The facility has inadequate fencing surrounding the boiler ash landfarm. Since the boiler ash landfarm is not located within the operating portion of the facility it needs to have better security to prevent unknowing entry. Additionally, there is no lock on the gate at the boiler ash landfarm.

   That portion of the fence that extends along the northern perimeter of the spray irrigation field and is adjacent to the public road and residential area is inadequate security to prevent unknowing entry to the

unit. Additional signs are also needed so that they can be easily seen from all approaches to the unit.

3. MHWMR Part 265 Subpart G - Closure and Post-Closure Care - The facility has not documented the closure of the original interim status container storage area (located within the concrete wall that surrounds the process tanks). The facility has not closed the less than 90-day container/drum storage area that was located on the concrete pad adjacent to the boiler feed hopper (this area is presently being used for non-hazardous storage). The facility has not closed the spray irrigation field (still being operated) or the boiler ash landfarm.

   Subsequent to this inspection Administrative Order 1440-88 has been issued, which contains a closure schedule for the spray irrigation field.

4. MHWMR Part 265 Subpart N - Landfills - The facility's boiler ash landfarm has been operated as a landfill and therefore must comply with the landfill requirements. The facility has not provided run-on/run-off control or means to control wind dispersal of the ash.

5. Section 3005 Solid Waste Disposal Act - Permit for Treatment, Storage, or Disposal of Hazardous Waste - The facility has operated the spray irrigation field without ever having interim status. The original Part A submitted in 1980 did not include the spray irrigation field and the facility has not submitted a Part B permit application to operate this unit.

   Subsequent to this inspection, Administrative Orders 1438-88 and 1440-88 have been issued requiring the facility to submit Part B permit applications for both the spray irrigation field and the boiler ash landfarm.

11. Signed

Inspector

12. Approval

DIVISION OF SOLID WASTE

REVIEWED BY _____

DATE _____

COMMENTS _____

cc: Mr James H. Scarbrough, EPA

Leo's comments on top of mine & my comments on Leo's comment.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30365

MAR 1 8 1988

4WD-RCRA

Mr. Charles Estes, P.E., Coordinator
Hazardous Waste Division
Mississippi Department of Natural
Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209

RE: Draft Operating Permit (Surface Impoundment)
Koppers Company, Inc., Grenada, Mississippi
EPA I.D. Number MSD 007 027 543

Dear Mr. Estes:

EPA has completed its review of the Mississippi Department of Natural Resources (MDNR) draft RCRA operating permit for Koppers' surface impoundment. This draft operating permit was transmitted to EPA via a February 25, 1988, cover letter by Mr. David Bockelman of the MDNR. Based on this review, EPA has determined that certain clarifications of the submittal are required.

In addition to requesting a few missing maps and figures, major review comments (Attachment I) require discussion within the draft permit of the following eight (8) items:

- Justification for selecting site specific indicators for the detection of groundwater contamination
- Regulatory status and groundwater monitoring of the sprayfield
- Closure plan for the ash pile
- Koppers delisting petition for their boiler ash
- Quantity of K001 hazardous waste sludge and size of the surface impoundment to be regulated by this permit
- Possible revision of the Part A Application
- Anticipated closure date for the surface impoundment
- Written certification of both Part A and Part B documentation and attachments by a responsible Koppers corporate officer

EPA anticipates that a response to these review comments can readily be prepared for inclusion into the draft permit. Therefore, the MDNR should proceed, as agreed, with a joint State of Mississippi/EPA public notice (of permit issuance) by March 31, 1988. The HSWA (EPA) portion of the permit is currently being prepared for your review prior to joint public notice.

If you have any questions on this matter, please contact Mr. Leo Romanowski, Jr., at (404)347-3433.

Sincerely yours,

James H. Scarbrough

James H. Scarbrough, P.E.
Chief, RCRA Branch
Waste Management Division

Enclosure

ATTACHMENT I

Technical Adequacy Review Comments
for Draft Operating Permit
Koppers Company, Inc.
EPA I.D. Number MSD 007 027 543

Location in MDNR Permit		Review Comments
Part I - Standard Conditions		
Front Cover, I.D.3., I.D.7., etc.	1.	Identify the relationship between the Director, Executive Director, and the Director, Bureau of Pollution Control, MDNR. ✓ Done
I.A.	2.	The regulated unit needs to be specifically identified very early within the permit dialogue. Provide the approximate size, location, and waste loading (cubic feet of K001 sludge). ↑ N/A ✓ Done
Part II - General Facility Conditions		
II.F.1.	3.	Referenced section F-3a does not exist. Need to clarify. ✓ Included
Part III - Storage and/or Treatment in the Surface Impoundment		
III.A.1.	4.	Clarify this statement to indicate that the regulated K001 wastes are listed in Attachment A. ✓ Done
III.A.2.	5.	The maximum quantity of waste, 2500 pounds, which may be stored/treated in the surface impoundment is very much less than the quantity of K001 sludge which Koppers estimates to be present. Koppers estimated (Maximum Waste Inventory, Section VI 3.0 of the Closure Plan) that the surface impoundment currently contains 10 inches of bottom K001 sludge with a total estimated volume of 650 yd^3. Assuming a sludge density of 100-130 lb/ft^3, the weight of the bottom sludge presently within the surface impoundment is approximately 1,755,000 pounds. This weight exceeds the draft permit maximum quantity of waste by a factor of 700. Please correct this discrepancy by revising the Part A Application (Attachment A). ✓ Done Part A Revised Rewarded condition III.A.2

This discrepancy resulted from comparing "dry" vs "wet" sludge volumes + weights.

Location in MDNR Permit		Review Comments
III.D.1.	6.	Add "an uncontrolled and sudden" in front of "drop in the water level". ✓ None
Part IV - Groundwater Protection		
IV.C.1.	7.	Provide a copy of Figure E-1 which was not included. Figure E-1 should be the "Site Topographic Map with Monitoring Well Locations and Showing Point of Compliance." Specifically, identify the upgradient well, the compliance point wells as required by CFR 264.95 and 264.98, and the property boundaries. ✓ None
IV.E.1.	8.	For a detection monitoring program, the owner/operator must monitor for specific indicator parameters (CFR 264.98(a)). As identified in Section E-5a of the permit, the analytical parameters capable of determining groundwater impact from creosote and pentachlorophenol processes are: ✓ None

pH
Specific Conductance
Total Dissolved Solids
Total Organic Carbon
Pentachlorophenol
Polynuclear Aromatic Hydrocarbons
Total Phenols
Total Organic Halogen

A sentence was added to the permit explaining this and the justification was added to the file by memo.

Note: The memo was not forwarded to EPA.

Provide justification for restricting the groundwater monitoring parameters in Permit Section IV.E.1. to the specific site indicators of napthalene, acenapthalene fluoranthene, pentachlorophenol and 2,4 dinitrophenol.

Since the Koppers' plant manager indicated (see March 1987 RFA p. 2-1) a "different chemical process was used in the past (prior to 1970)", it is recommended that groundwater monitoring also include analyses for chromium, arsenic, and copper. ✓ Not Done

The CCA process was never used while the present surface impoundment was in use. Monitoring for CCA was addressed in some detail in my SWMU comments. These were sent to EPA by my transmittal letter dated 2-29-88

Location in MDNR Permit		Review Comments
IV.F.1. This is addressed in condition IV.H.2.b.	9.	Verify that the Director of the Department of Natural Resources is to be notified when groundwater analyses exceed background levels. ✓
IV.H.2.f.	10.	Identify the authority (Executive Director?) to whom the Permittee must successfully demonstrate. ✓ Done
Attachment A - Part A Application		
Page 1 of 5	11.	Verify the Process Design Capacity of 19,545 gallons. Attachment B, page B-3 indicates the surface impoundment has a hydraulic capacity of 748,000 gallons. Additionally, in the Closure/Post-Closure Plan (Attachment I, Section VI.3.0), Koppers has estimated the total yearly sludge collection at 2500 pounds or 312 gallons. Koppers also determined that the current 10 inches of impoundment sludge represents approximately 650 cubic yards. Please clarify the correct estimate of hazardous waste to be regulated in the surface impoundment. Use the Part A Application (Section IV) to describe the currently impounded waste and the estimated annual quantity of waste. ✓ Done Part A Ammend
Figure A-1 No other areal photo available.	12.	This aerial photo is inadequate. Provide a photo of the facility which clearly delineates all existing structures, existing treatment, storage and disposal areas; and sites of future treatment, storage, and disposal (CFR 270.13(k)(9)(1)). ✓ Not Done
Not provided * Fig. E-1 shows surface impoundment + E/W property lines. The only thing that should be necessary for this part of the Permit is the S.I. and nearby property lines. Past TSD areas should have been included in HSWA Permit. The site plan in Attach. I shows S.I., spray field + container storage bldg. and property line for the N ½ of facility. Only thing not covered is the ash landfarm. This could be included in addendum to Permit.		Provide a scale drawing of the facility showing the location of all past, present, and future treatment, storage and disposal areas. Indicate the legal boundary of the property on the drawing and/or the aerial photo. ✓

Location in MDNR Permit		Review Comments
Attachment B - Facility Description		
B-1	13.	Clear up any regulatory confusion by providing a historical discussion concerning: a. wastewater sprayfield status and groundwater monitoring b. closure plan for the ash pile c. status of Koppers delisting petition for their boiler ash
Attachment C - Waste Characteristics		
p. 2	14.	Section C, Table 2 is missing. Provide this list of facilities which are expected to ship qualified waste to the Koppers (Grenada) plant.
pp. 2 and 15	15.	Reference to Attachment 5 as a QA/QC program appears to be in error. Please correct. Provide a legible copy of Attachment 1 (Section C).
		Table of Contents requires section labels and the page numbers past page 16 need to be corrected.
		Attachments No. 3 and No. 7 are missing and Attachments No. 4 through No. 6 are mislabled in the Table of Contents.
p. 44	16.	Correctly label this table as Table 3.
Attachment E - Groundwater Monitoring		
Figure E-1	17.	This figure is missing. Provide a site plan map detailing the detection monitoring system. Specifically, indicate the compliance point boundary, background wells, upgradient wells, regulated units and the hazardous waste management area.

Told Leo that this information would be included in the appropriate addendums to the Permit.

This Table was included but was mislabeled.

Done

Corrected Attachment is correct Attachment

This needs to be done

not Done

Done

corrected

Correct

Included

Background wells, upgradient + downgradient wells are defined in Part IV.

Note: The definition of the wells in Part IV could be clearer.

Location in MDNR Permit		Review Comments
Attachment I - Closure/Post-Closure Plans for Surface Impoundment		
Section VI 5.0	18.	The closure schedule and critical flow path project schedule (Attachment 8) indicate that the construction of the pretreatment plant upgrade has been ongoing through 1st - 2nd quarters 1988. Since these schedules were projected almost one year ago, an updated schedule of the construction and start-up dates is required.
Section VI Attachment 8	19.	Identify the anticipated dates (month/yr) for the actual closure and closure certification of the surface impoundment.
Certification	20.	Koppers Company, Inc. should provide written certification by a responsible corporate officer that this document and all attachments (Part A and Part B Applications) are accurate and complete. This certification should conform with the wording as provided in CFR 270.11(d).

At this time (5-17-88) final hook-up to the POTW has not been approved but is very close to being approved. All that remains undecided is where Koppers will tie into the POTW. Anticipated schedule of completion should be close to those dates shown in Attach. 8 - perhaps a month or two later, or three.

This is addressed in conditions II.I and III.G.

My Comments on Leo's Comments GBB

Comment #

✓3 - Find & include see F-3A (II.F.1) (Done)

✓4 - III.A.1 - I think this statement is OK (K001 constituents - App. VII or not listed in 40 CFR Part 261 Appendix A)

✓5 - III.A.2 - List max. waste in lbs & max. annual application rate of 2500 lbs.

✓6? - III.D.1. (Revised)

✓7 - IV.C.1 Included Fig. E.1.
- E & W Property lines are shown
- Monitor Well Locations are shown
- Background & Compliance point wells are defined in Part IV of the Permit
- Point of Compliance is shown.

✓8 - IV.E.1 - pH, Spec. Cond., TDS, TOH, TOC are subject to too many variables and therefore, their use results in an excessive number of false & misleading positives. The use of indicator parameters specific to the site will provide a monitoring program that is geared directly to detection of contamination from the S.I. without the negative aspect of having to deal with false positives. (264.98(j))
- The use of CCA has never been associated with the surface impoundment and therefore it is not recommended to monitor for CCA. (Should be covered in SWMU Permit)

✓ 9 — IV. F. 1 This verification is listed under Condition IV. H. 2. b of the Permit

✓ 10 — IV. H. 2. F. (Revised)

✓ 11. — Will do (Done)

✓ 12 — Fig A-1 This is the only aerial photo we have - adequately shows surface impoundment. It is not necessary to show all facility sites - this is a permit for the S. I. only.

✓ 12a) — This should be under SWMU permit - Legal boundary shown on Fig E-1 and on Site Plan Map Attach 1 - Sec. III of Attach I

✓ — 13 — Not applicable to the S. I - would probably only cause more confusion as to what is being regulated.

✓ 14 — This Table is included and has been changed to Table 3

15 — ✓ Need to change Attach 5 ← This is now Attach C changed
- Need to provide legible copy of Attach 1
- Need Section Labels + page corrections
- Attach. No. 3 is included Water Treatment Chemical (Flocculant)
- Attach. 7 is included - Sampling Procedures for H. W. Streams.
- Attach 3-6 in Table of Contents are mislabled

✓ 16 Table 3 Changed

✓ 17 Fig E-1 ~~does~~ has been included - all H.W.M.U are included, E+W plant boundaries are shown

✓ 18 Why?

✓ 19 Don't know - will cease to be used on or before Nov. 8, 19

✓ 20 Found & will include

FILE COPY

January 31, 1987

Mr. J. R. Batchelder
Vice-President and Manager
Technical and Environmental Services
Tar and Wood Products Sector
Koppers Company, Inc.
436 Seventh Avenue
Pittsburgh, Pennsylvania 15219

Dear Mr. Batchelder:

Re: Koppers Company, Inc.
KAD007027954
Surface Impoundment and Spray Field
Closure Plan

The Bureau of Pollution Control has completed a review of the above referenced closure plan. Enclosed please find our technical comments, a copy of the checklist used in the review process, and a draft RCRA guidance document on landfill design, liner systems, and final cover.

The revised closure plan must adequately address all of the Bureau's concerns. To facilitate our final review, the revised plan should also be in the same format as the checklist.

The date for submittal of the revised plan will be determined after the meeting that is scheduled with Koppers representatives for February 5, 1987.

If you have any questions regarding this matter, please contact me.

Sincerely,

Jim Hardage
Hazardous Waste Division

JH:bdb
Enclosure
cc: Mr. Cyrus Barkis
Mr. J. D. Clayton
Mr. Ron Borosky (w/enclosure)
Mr. James Scarbrough, Environmental Protection Agency (w/enclosure)

TECH[redacted] COMMENTS REGARDING KOPPERS' C[redacted]RE PLAN

I. GENERAL CLOSURE REQUIREMENTS

A-1. Steps in the Closure Process

1. Step Three - Dewatering

The plan states that half of the water (approximately 350,000 gallons) will be pumped to the spray field at a rate of 10,000 gpd. More information is needed on (a) the maximum hydraulic loading capacity of the spray field and (b) the effect of this loading rate on the vegetation and the accumulation/mobilization of K001 constituents. Such factors as annual precipitation, seasonal variation in precipitation, soil characteristics, and evapotranspiration and infiltration must be included to support the proposed rate of application.

2. Step Five - Removal of Oils and Sludges

The plan states that fuel oils may be blended with the sludges and oils to adjust their properties. It is not clear whether such blending will occur in the impoundment, in rail tank cars, or temporary holding tanks. More information is needed, including a description of the blending process, the structures/equipment used, precautions to prevent spills, etc.

3. Step Six - Oil Recovery by Centrifuge

The plan states that oil will be recovered by centrifuge as quantity warrants. More information on this process is needed, including a description of the process, the structures/equipment used, precautions to prevent spills, etc.

4. Step Seven - Use of Oil/Sludge as Fuel

The plan states that oil/sludge with HHV >5000 BTU/lb. will be used as fuel in the plant boiler. Storage of K001 waste on-site prior to use as a fuel will require the submittal of a revised permit application if storage exceeds ninety days and the volume of hazardous waste is greater than the volume specified in Koppers December, 1986 Part B permit application for container storage.

5. Step Eight - Processing of Sludges

The plan states that sludges with HHV <5000 BTU/lb. will be processed through a filter press to remove free liquids. Dry filter cake will be sent off-site to a secure disposal facility. More information is needed, including a description of the process, the structures/equipment used, precautions to prevent spills, etc.

6. Step Nine - Washing of Sludges/Soils

The plan states that sludges with an FOG >3% may be washed to reduce fats, oil, and grease. More detailed information on this process (and where it will occur) is needed. Include a description of the process, the structures/equipment used, precautions to prevent spills, etc.

7. Step Ten - In-situ Treatment of Sludges/Soils

The plan states that sludges with FOG <3% will be treated in-situ. A treatability study or other information that demonstrates the feasibility of in-situ biological treatment of K001-contaminated sludges must be provided.

8. Step Eleven - Characterization Study for In-Situ Biological Treatment

The plan states that a characterization study will be performed to determine nutrient requirements, length of time required for degradation, etc. How long does a characterization study take? What parameters are measured? How is the study conducted? Provide additional information.

9. Step Sixteen - Clean Closure

Notification that the unit has been decontaminated must consist of a certification of closure, and documentation supporting the certification.

A-2. Maximum Inventory of Wastes

No comments.

A-3. Closure Schedule

1. Since the proposed closure plan is contingent on installation of a pretreatment facility, the plan must include a schedule for design and construction of the pretreatment facility, including projected dates for completion of major activities.

2. The plan states that Koppers will initiate closure within 30 days after November 8, 1988, in the event that final discharge arrangements with the POTW are not made by then. However, no explanation is provided regarding how closure would proceed under those circumstances. Provide an alternate plan describing in detail how the wastewater from the impoundment will be treated and discharged in the event that final arrangements with the POTW are not made by November 8, 1988.

B. Closure Cost Estimate

State in the narrative that the closure cost estimate will be revised annually.

C. Amendment of Closure Plan

No comments.

D. Revisions to Cost Estimate

No comments.

E. Certification of Closure

1. The closure schedule indicates that certification of closure will be submitted within the required time frame. This item should be addressed in the narrative as well. (Subpart G of Part 265 requires submittal of the certification within 60 days of completion of closure.)

2. State in the narrative that the certification will be signed by the owner/operator and an independent registered professional engineer.

3. State in the narrative that documentation supporting the engineer certification will be furnished upon request.

4. Describe, either in narrative or by checklist, the testing and verification program that will be used to support the certification.

F. Survey Plat

State in the narrative that a survey plat will be submitted no later than the submission of the certification of closure, if clean closure cannot be attained.

II. GENERAL POST-CLOSURE REQUIREMENTS

A. Post-Closure Care and Use of Property

No comments.

B-1. Monitoring Activities

State in the narrative that the following items are not applicable: (1) monitoring of leachate collection/detection system; and (2) gas ventilation system. Provide an explanation.

B-2. Maintenance Activities

State in the narrative that the following items are not applicable: (1) leachate collection/detection equipment; (2) gas collection and control system.

B-3. Post-Closure Contact

The plan must include the name, address, and phone number of the person to contact during the post-closure care period.

C. Post-Closure Cost Estimate

State in the narrative that the post-closure cost estimate will be revised annually.

D. Amendment of Closure Plan

No comments.

E. Revisions to Post-Closure Cost Estimate

No comments.

F. Post-Closure Notices

1. State in the narrative that a record of the type, location, and quantity of hazardous waste disposed of within each unit of the facility will be submitted within sixty days after certification of closure, if clean closure cannot be attained. (Refer to 40 CFR 265.119.)

2. State in the narrative that both (a) a certification that the required notation has been recorded in the deed, and (b) a copy of the document in which the notation has been placed will be submitted within sixty days after certification of closure. (Refer to 40 CFR 265.119.)

G. Certification of Post-Closure (Non-Clean Closure)

1. The plan must state that a certification of post-closure will be submitted upon completion of the post-closure care period.

2. State that the certification will be signed by the owner/operator and an independent registered professional engineer.

3. State that documentation supporting the engineer certification will be provided upon request.

VI. SURFACE IMPOUNDMENTS (Closure by Removal)

A-1. Waste Removal and A-2. Removal/Decontamination of Residues and Equipment

1. A cursory description of the processing alternatives/method of waste removal is provided but additional information is needed. (See comments under I. A-1, General Closure Requirements.)

2. The plan should address the method of controlling wind dispersal, procedures for controlling run-on and run-off, and procedures for protection of surface water and groundwater. Provide an explanation for any of these items that are not applicable.

3. Describe how equipment will be decontaminated (e.g., high-pressure water) and how wash water will be collected.

VII. LANDFILLS (Non-Clean Closure)

A-1. Final Cover Design and Construction

1. The plan must provide for installation of a drainage and filter layer in the final cover, if more than residual contamination is left in the impoundment after treatment/disposal of sludge:

   (a) The impoundment is in a high annual precipitation area. A drainage layer is required to reduce percolation through the low permeability bottom layer. The Hydrologic Evaluation of Landfill Performance (HELP) Model developed by the U. S. Army Waterways Experiment Station, Corps of Engineers, in Vicksburg, Mississippi, may be used to evaluate performance. The technical documents (EPA/530-SW-84-009 and EPA/530-SW-84-010) can be obtained from EPA Headquarters by calling (800) 424-9346 (Hotline) or (FTS) 382-3000 (Hotline). The contact person (for content information only) is Paul Cassidy (382-4682).

   (b) The drainage layer must be designed so that discharge flows freely in the lateral direction to minimize head on and flow through the low permeability layer.

   (c) The plan must provide an additional drawing (cross sections) of the impoundment that illustrates the drainage and filter layers.

   (d) Koppers should propose a level of contamination above which a drainage and filter layer would be required.

2. The top slope of the final cover must be specified. (EPA guidance specifies a final top slope of three to five percent, unless the owner or operator knows that an alternate slope will effectively promote drainage and not subject the closed facility to erosion.)

3. The plan must provide for a perimeter drainage ditch to remove run-off, prevent ponding, etc.

4. The plan should specify the vegetation species and provide assurance that the root system will not penetrate into the low permeability bottom layer.

5. The plan should address the following items or else state that they are not applicable and provide an explanation: (1) potential settlement of the cover; (2) potential for gas generation; and (3) effects of freeze-thaw cycles on the cover.

A-2. Decontamination of Equipment and A-3. Other Activities

See comments under VI. A-2 and VI. A-3.

B-1. Post-Closure Maintenance and Monitoring Requirements

1. Provide checklist of items to be inspected and procedures to undertake if a problem exists.

2. See additional comment under II. B-2.

VIII. CLOSURE OF LAND TREATMENT UNITS

A-1. Control of Migration of Hazardous Constituents to Groundwater

No comments.

A-2. Control of Release of Contaminated Runoff to Surface Waters

See comments under VIII. D-2. and D-3.

A-3. Control of Airborne Particulates

No comments.

A-4. Compliance with Food-Chain Crop Restrictions

The plan should address restrictions or else state that this section is not applicable and provide an explanation, e.g., crops will not be grown.

C-1. Removal of Contaminated Soil

No comments.

C-2. Placement of Final Cover

No comments.

D-1. Unsaturated Zone Monitoring

1. Specify the location of all sampling points and the frequency of sampling. Provide rationale.

2. Specify location of background sampling points. Provide a rationale.

3. Specify methods/devices for sample collection.

4. Specify sample preservation, shipment, and chain-of-custody procedures.

5. Reference SW-846 (or other) methods, including statistical procedures to be used to evaluate data.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30365

SEP 11 1986

4WD-RM

Mr. Sam Mabry, Director
Division of Solid/Hazardous
Waste Management
Post Office Box 10385
2380 Highway West
Jackson, Mississippi 39209

Re: Koppers Company, Grenada, Mississippi

Dear Mr. Mabry:

Reference is made to the conference call between EPA and Mississippi on September 9, 1986 regarding Koppers Company, Grenada, Mississippi. Specifically, you requested EPA's written interpretation of the regulatory status of the Koppers Company if they submit a closure plan and withdraw their Part B application.

If Koppers intends to close in lieu of maintaining active status of their surface impoundment, they should be advised to submit a formal letter of intent to close the unit. The closure plan should be submitted within a reasonable time; and the hazardous waste application should be revised to a post-closure application. If the closure plan is submitted within a reasonable timeframe, the facility could continue to manage hazardous waste in the unit until the State approved the closure plan. Approval of the closure plan is generally accomplished within 180 days from submittal by the facility.

The facility would retain interim status unless the State terminates interim status as provided in §270.10(e)(5). Failure to furnish a requested Part B application on time, or to furnish in full the information required by the Part B application, is grounds for termination of interim status under Part 124. The owner or operator would then be required to submit a closure plan no later than 15 days after termination of interim status under §265.112(c)(1).

The second item discussed by the State during the call was the tentative schedule being implemented in a Commission Order under development for Koppers. The schedule stipulated that the closure plan would be submitted December 15, 1986; and the post-closure application would be submitted January 1988. Although this was a tentative schedule, sixteen months is an excessive length of time for revising the current Part B application to a post-closure application. Three months would be an appropriate time-frame to revise the application. The delay in submittal of the closure plan should also be evaluated by the State.

Lastly, the sprayfield at Koppers is a regulated unit under the State's hazardous waste regulations. The decision made on the Brown Wood case does not apply to other facilities; Mississippi has previously received the legal interpretation on this.

If you have questions or comments in this matter, please call me at 404/347-3016.

Sincerely yours,

James H. Scarbrough

James H. Scarbrough, P.E., Chief
Residuals Management Branch
Waste Management Division