

Ciba-Geigy Corp.
AC01 3/31/92

28337

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

IN THE MATTER OF:)
Ciba-Geigy Superfund Site)
McIntosh, Alabama)
Ciba-Geigy Corporation)
Respondent)
EPA Docket No.: 92-20-C

Proceeding under Sections 104,
122(a) and 122(d)(3) of the
Comprehensive Environmental
Response, Compensation
and Liability Act of 1980,
as amended, 42 U.S.C.
§§ 9604 and 9622.

ADMINISTRATIVE ORDER BY CONSENT
FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS)
(ECOLOGICAL ASSESSMENT)

I. JURISDICTION

This Administrative Order by Consent (Consent Order) is entered into by the United States Environmental Protection Agency (EPA) with Ciba-Geigy Corporation (Respondent), pursuant to the authority vested in the President of the United States by Sections 104, 122(a) and 122(d)(3) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended, 42 U.S.C. §§ 9604, 9622(a) and 9622(d)(3). This authority was delegated by the President to the Administrator of the EPA by Exec. Order No. 12580, dated January 23, 1987, 52 Fed. Reg. 2923 (Jan. 29, 1987), and was further delegated to the Regional Administrator of Region IV EPA and redelegated to the Director, Waste Management Division.

Respondent agrees to undertake all actions required by the terms and conditions of this Consent Order for the conduct and implementation of the RI/FS (Ecological Assessment). The Respondent consents to and will not contest EPA jurisdiction regarding this Order.

II. PARTIES BOUND

This Consent Order shall apply to and be binding upon EPA and the Respondent, its agents, successors and assigns. The signatories to this Consent Order certify that they are authorized to execute and legally bind the parties they represent to this Consent Order. No change in the ownership or corporate status of the Respondent shall alter its responsibilities under this Consent Order.

The Respondent shall provide a copy of this Consent Order to any subsequent owners or successors before ownership rights are transferred. The Respondent shall provide a copy of this Consent Order to all contractors, subcontractors, laboratories, and consultants which are retained to conduct any work performed under this Consent Order, within fourteen (14) days after the effective date of this Consent Order or the date of retaining their services, whichever is later. Respondent shall condition any such contracts upon satisfactory compliance with this Consent Order. Notwithstanding the terms of any contract, Respondent is responsible for compliance with this Consent Order and for ensuring that its subsidiaries, employees, contractors, consultants, subcontractors and agents comply with this Consent Order.

III. STATEMENT OF PURPOSE

In entering into this Consent Order, the mutual objectives of EPA and Respondent are: (A) with respect to the Ecological Assessment, to supplement the existing Remedial Investigation (RI), to determine fully the nature and extent of the threat to the public health or welfare or the environment caused by the release or threatened release of hazardous substances, pollutants, or contaminants at or from the Site into the environment; and (B) with respect to the Addendum to the Feasibility Study (FS), addressing the floodplain area of the Site, to develop and evaluate alternatives for remedial action to prevent, mitigate or otherwise respond to the migration or the release or threatened release of hazardous substances, pollutants, or contaminants from the Site; and (C) to recover response and oversight costs incurred by EPA with respect to this consent order.

The activities conducted pursuant to this Consent Order will be consistent with the National Contingency Plan (NCP), 40 C.F.R. Part 300, et seq., and will be subject to the express EPA approvals as set forth below.

IV. EPA'S FINDINGS OF FACTS

The following constitutes an outline of the facts upon which this Consent Order is based:

A. The Ciba-Geigy McIntosh plant property encompasses 1,468 acres adjacent to the Tombigbee River near McIntosh, Alabama. The facility began operations in 1952, and currently manufactures over 100 specialty chemicals, making it Ciba-Geigy's largest manufacturing facility in the United States.

B. The Ciba-Geigy McIntosh facility began operations in October 1952, as the Geigy Chemical Corporation, manufacturing dichlordiphenyl-trichloroethane (DDT). Over the next eighteen years the operation expanded to include the production of fluorescent brighteners for laundry products, herbicides, insecticides, agricultural chelating agents and chemical sequestering agents for industrial use.

C. In 1970, Geigy Chemical Corporation merged with Ciba, the Chemical Industry in Basel, Switzerland, forming the Ciba-Geigy Corporation. The operations expanded to produce resins and additives used in the plastics industry, anti-oxidants and small volume specialty chemical products such as water treatment chemicals and fire fighting foams. By the end of 1990, Ciba-Geigy expected to employ approximately 1340 workers at this facility.

D. In August 1982, the EPA Region IV Environmental Services Division (ESD) of Athens, Georgia, conducted an investigation of the neighboring Olin Chemical Company which included taking samples from a drinking water well on the Ciba-Geigy property. The sample results indicated the presence of hazardous substances at concentrations in the shallow aquifer that warranted further investigation of the Ciba-Geigy property. The investigation resulted in a June 1983, Hazard Ranking System (HRS) survey. The HRS score for the Site was 53.42 and in September 1983, the Site was included on the National Priorities List.

E. The southeast corner of Ciba-Geigy's property consists of a floodplain along the west bank of the Tombigbee River. The floodplain, an extensive bottomland hardwood wetland, represents about 25% of the Ciba-Geigy property. Groundwater flow is to the southeast. All surface water flow and precipitation runoff from the Site is ultimately to the Tombigbee River.

F. In 1955, discharge from the original effluent impoundment at the Ciba-Geigy facility flowed eastward along the southern edge of the manufacturing facility toward a bluff line at the Site. The wastewater continued through an effluent ditch across the floodplain to the river. Additional wastewater storage and treatment impoundments and other facilities were constructed in the 1960s and 1970s, with treated wastewater continuing to be discharged, along with cooling water and stormwater, through the effluent ditch. Use of the effluent ditch across the floodplain as a conduit for treated wastewater was discontinued in December 1988. The effluent ditch continues in use for stormwater overflow.

G. Camp, Dresser, and McKee, Inc. (CDM) produced reports for EPA during the 1980s concerning Site contamination. They noted that no assessments of contamination in the floodplain or ecological threat had been conducted at that time, and suggested

the need for such work. CDM also mentioned water and soil sampling performed by EPA in 1981 that indicated contamination below the bluff and in the Tombigbee River by metals, DDT and its degradation products, BHC isomers, and Arochlor 1260.

H. Previous sampling reported by BCM Engineers Inc. (1988) in the vicinity of the production facility has documented groundwater contaminated by benzene, chlorobenzene, carbon tetrachloride, and chloroform. Surface water samples indicate the presence of as many as 29 analytes, mostly metals, volatile organics, and 17 manufactured pesticides. Soil samples also indicate the presence of as many as 43 analytes at the Site, mostly manufactured pesticides, metals, DDT, DDD, DDE, and volatile organics.

I. Ciba-Geigy installed pump and treat groundwater intercept wells at the facility near the southern boundary of the facility property in 1987, pursuant to the corrective action portion of the present RCRA operating permit. In addition, a Record of Decision (ROD) for Operable Unit One (groundwater) was signed in September 1989. This ROD identified "No Further Action" as the EPA selected remedy, recognizing that the pump and treat system was already being implemented pursuant to the operating permit. The pump and treat system has successfully intercepted the contaminant plume, preventing the off-site migration of the contaminants, and the concentrations of contaminants detected in the wells have stabilized at reduced concentrations.

J. A condition of Ciba-Geigy's 1985 operating permit required Ciba-Geigy to develop a Work Plan to conduct a Remedial Investigation/Feasibility Study (RI/FS) to investigate the source of groundwater contamination. Subsequent to EPA's approval of the Work Plan, Ciba-Geigy conducted the RI/FS to identify areas of contamination and develop the remedial strategies to address the areas identified. The second Operable Unit at the Site, source removal, is the subject of current Consent Decree negotiations.

K. Review of the RI/FS data indicated that elevated levels of DDT are present in the floodplain area and that further investigation would be necessary to define this contamination and develop a Record of Decision for the floodplain area. Operable Unit Three will focus on identifying and remediating contamination in the effluent ditch as it runs through the floodplain (formerly used to convey process wastewater), in the floodplain, and possibly in areas of the Tombigbee River in close proximity to the Site.

L. Ciba-Geigy has submitted a Work Plan for the conduct of an Ecological Assessment of the flood plain area of the Site, which has been approved by EPA and is attached as Exhibit 1 to

this Consent Order. EPA contemplates that the information to be generated pursuant to the Ecological Assessment will supplement the existing RI/FS for the Site such that EPA will be able to develop a Record of Decision for Operable Unit 3.

V. EPA's CONCLUSIONS OF LAW

A. The Site is a facility within the meaning of Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

B. The Respondent is a person as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

C. The Respondent is a responsible party under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

D. Contaminants found at the Site as described in Section IV above are hazardous substances within the meaning of Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), or constitute a pollutant or contaminant that may present an imminent and substantial danger to the public health or welfare under Section 104(a)(1) of CERCLA, 42 U.S.C. 9604(a)(1).

E. The hazardous substances described have been released into the environment and its potential migration pathways constitute both an actual release and threatened release within the meaning of Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

VI. DETERMINATIONS

Based on the Findings of Fact and Conclusions of Law set out above, EPA has determined that:

A. The actions required by this Consent Order are necessary to protect the public health and/or welfare and/or the environment.

B. In accordance with Section 104(a)(1) of CERCLA, 42 U.S.C. § 9604(a)(1), EPA has determined that the work to be performed pursuant to this Consent Order, if performed according to the terms of this Order, will be done properly and promptly by the Respondent. EPA has also determined that the Respondent is qualified to conduct such work.

VII. WORK TO BE PERFORMED

All aspects of the Work to be performed by Respondent pursuant to this Consent Order shall be under the direction and supervision of a qualified contractor who shall be a qualified professional engineer or geologist with expertise in hazardous site cleanup, the selection of which shall be subject to approval by EPA. Within fifteen (15) days after the effective date of this Consent Order, Respondent(s) shall submit to EPA in writing the name, title, and qualifications of any supervising contractor proposed to be used in carrying out the RI/FS (Ecological Assessment) to be performed pursuant to this Consent Order. EPA shall notify the Respondent of its approval or disapproval in writing, within twenty (20) calendar days of its receipt of this submission by the Respondent.

If EPA disapproves of the selection of any contractor, Respondent shall submit a list of alternate contractors to EPA within fifteen (15) days of receipt of EPA's disapproval of the contractor previously selected. EPA shall, within twenty (20) calendar days of receipt of the list, provide written notice of the names of the contractors that it approves. The Respondent may at their election select any one from that list. Respondent shall notify EPA of the name of the contractor selected within fifteen (15) calendar days of EPA's notice of the approved contractors.

If, at any time thereafter, Respondent proposes to change any contractor, Respondent shall give written notice to EPA and shall obtain approval from EPA before the new contractor performs any work under this Consent Order.

Based on the foregoing, it is hereby AGREED TO AND ORDERED that the following work will be performed:

A. Within forty-five (45) days after the effective date of this Consent Order, the Respondent shall submit a schedule for the completion of work and the submission to EPA of deliverables required by this Consent Order. Such schedule shall be subject to review and approval by EPA in accordance with Section VIII of this Consent Order. Upon approval of the schedule by EPA, the schedule (the Schedule) will be incorporated as part of this Consent Order.

B. Promptly after weather conditions permit (i.e., after flood conditions in the flood plain have ceased), Respondent will commence work to implement the Work Plan for Ecological Assessment attached as Exhibit 1 to this Consent Order, which is hereby incorporated as part of this Consent Order, together with any EPA approved amendments thereto (the Work Plan). Respondent

will provide at least two weeks advance notice to EPA of the commencement of work, and work shall thereafter continue according to the Schedule to be submitted by Respondent and approved by EPA .

C. Deliverables to be reflected on the Schedule shall include (1) an Ecological Assessment Report, and (2) an Addendum to the existing Feasibility Study for the Site, addressing remedial alternatives for the flood plain area.

D. The Ecological Assessment Report submitted by Respondent pursuant to this Consent Order shall include contaminant identification, exposure assessment, toxicity assessment, and human health and ecological risk characterization.

The Respondent will include with the Ecological Assessment Report, a Baseline Risk Assessment Report based on the data collected by Respondent during the Ecological Assessment. EPA will release the final Baseline Risk Assessment Report to the public at the same time it releases the final Ecological Assessment Report. Both reports will be put into the administrative record for the Site.

E. For each month after work is commenced under the Work Plan, respondent shall submit to EPA written monthly progress reports which: (1) describe the actions which have been taken toward achieving compliance with this Consent Order during the previous month; (2) include all plans and procedures completed under the Work Plan during the previous month; (3) describe all actions, data, and plans which are scheduled for the next month, and provide other information relating to the progress of the work as deemed necessary by EPA; and (4) include information regarding percentage of completion, unresolved delays, encountered or anticipated, that may affect the future schedule for implementation of the Work Plan, and a description of efforts made to mitigate those delays or anticipated delays. These progress reports are to be submitted to EPA by the fifth day of every month following the effective date of this Consent Order.

F. Deliverables, including reports, plans or other correspondence to be submitted pursuant to this Consent Order, shall be sent by regular certified mail, express mail or overnight delivery to the following addresses or to such other addresses as the EPA hereafter may designate in writing.

Charles King
Remedial Project Manager
EPA - Region IV
Waste Management Division
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Respondent will submit 10 copies of each deliverable to be submitted to EPA pursuant to this Consent Order.

For informational purposes documents (two copies) shall be sent to:

Mr. Joe Downey
Special Projects
Alabama Department of Environmental Management
1751 Congressman W. L. Dickinson Drive
Montgomery, Alabama 36130

Documents to be submitted to the Respondent Project Coordinator should be sent to:

Sherman C. Williams
Project Manager
Ciba-Geigy Corporation
P. O. Box 113
McIntosh, Alabama 36553

G. EPA may determine that other tasks, including remedial investigatory work and/or engineering evaluation, are necessary as part of an RI/FS in addition to EPA-approved tasks and deliverables, including reports, which have been completed pursuant to this Consent Order. The Respondent shall implement any additional tasks which EPA determines are necessary as part of the RI/FS for this Ecological Assessment and which are in addition to the tasks detailed in the Ecological Assessment Work Plan. The additional work shall be completed in accordance with the standards, specifications, and schedule determined or approved by EPA.

VIII. SUBMISSIONS REQUIRING AGENCY APPROVAL

A. EPA reserves the right to comment on, modify and direct changes for all deliverables. Upon receipt of any plan, report or other item which is required to be submitted for approval pursuant to this Consent Order, EPA shall either: (1) approve the submission; or (2) disapprove the submission, notifying Respondent of deficiencies. If such submission is disapproved, EPA shall either: (1) notify the Respondent that EPA will modify the submission to cure the deficiencies; or (2) direct the Respondent to modify the submission to cure the deficiencies.

B. Upon receipt of a notice of disapproval and notification directing modification of the submission, Respondent shall, within thirty (30) days, cure the deficiencies and resubmit the plan, report, or other item for approval. Notwithstanding the notice of disapproval, Respondent shall proceed to take any action required by any nondeficient portion of the submission.

C. In the event of approval or modification of the submittal by EPA, Respondent shall proceed to take any action required by the plan, report, or other item, as approved or modified.

D. If, upon resubmission, the plan, report, or item is not approved, Respondent shall be deemed to be in violation of this Consent Order and stipulated penalties shall begin to accrue pursuant to Section XVI of this Consent Order. EPA retains the right to seek stipulated or statutory penalties, to require the amendment of the document, to perform additional studies, to conduct a complete RI/FS pursuant to its authority under CERCLA, and to take any other action, including, but not limited to, enforcement action to recover its costs pursuant to its authority under CERCLA.

E. Neither failure of EPA to expressly approve or disapprove of Respondent's deliverables within a specified time period, nor the absence of comments, shall be construed as approval by EPA. Respondent is responsible for preparing and submitting deliverables acceptable to EPA.

F. Respondent shall make presentations at, and participate in, meetings at the request of EPA during the initiation, conduct and completion of the RI/FS. In addition to the discussion of the technical aspects of the RI/FS, topics will include anticipated problems or new issues. Meetings will be scheduled at EPA's discretion upon reasonable notice to Respondent.

G. The provisions of this Consent Order shall govern all proceedings regarding the RI/FS and work conducted pursuant to this Consent Order. In the event of any inconsistency between

this Consent Order and any required deliverable submitted by Respondent, the inconsistency will be resolved in favor of this Consent Order.

IX. DESIGNATED PROJECT COORDINATORS

A. Within ten days after the effective date of this Consent Order, EPA and Respondent will each designate a Project Coordinator and an Alternate Project Coordinator. The "Project Coordinator" for EPA will be the Remedial Project Manager (RPM) or the On-Scene Coordinator (OSC) responsible for this Site. Each Project Coordinator will be responsible for overseeing the implementation of this Consent Order. The EPA Project Coordinator will be EPA's designated representative at the Site. To the maximum extent possible, communications between Respondent and EPA, including all documents, reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Consent Order, will be directed through the Project Coordinators.

B. EPA and Respondent each have the right to change their respective Project Coordinator. Such a change will be accomplished by notifying the other party in writing at least five (5) calendar days prior to the change.

C. The EPA designated Project Coordinator will have the authority vested in an RPM or OSC by the National Contingency Plan, 40 C.F.R. Part 300, as amended. This includes the authority to halt, conduct, or direct any work required by this Consent Order, or any response actions or portions thereof when he or she determines that conditions may present an immediate risk to public health or welfare or the environment.

D. The absence of the EPA Project Coordinator from the Site shall not be cause for the stoppage or delay of work.

E. EPA shall arrange for a qualified person to assist in its oversight and review of the conduct of the RI/FS, as required by Section 104(a) of CERCLA, 42 U.S.C. 9604(a). The oversight assistant may observe work and make inquiries in the absence of EPA, but is not authorized to modify the work plan.

X. QUALITY ASSURANCE, SAMPLING AND DATA ANALYSIS

A. Respondent shall use quality assurance, quality control, and chain of custody procedures in accordance with EPA's "Interim Guidelines and Specifications For Preparing Quality Assurance Project Plans" (QAMS-005/80) and the "EPA Region IV Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual (U.S. EPA Region IV, Environmental Services Division, February 1, 1991), and subsequent amendments to such

guidelines. Respondent shall conduct all sampling and analysis activities in accordance with the Quality Assurance Project Plan (QAPP) previously submitted by Respondent and approved by EPA during the initial RI/FS for the Site. Sampling data generated consistent with the QAPP(s) shall be admissible as evidence, without objection, in any proceeding under Section XIV of this Consent Order. Respondent shall assure that EPA personnel or authorized representatives are allowed access to any laboratory utilized by Respondent in implementing this Consent Order.

B. Respondent shall make available to EPA the results of all sampling and/or tests or other data generated by Respondent with respect to the implementation of this Consent Order and shall submit these results in monthly progress reports as described in Section VII.E. of this Consent Order.

C. At the request of EPA, Respondent shall allow split or duplicate samples to be taken by EPA, and/or their authorized representative, of any samples collected by Respondent pursuant to the implementation of this Consent Order. Respondent shall notify EPA not less than fourteen (14) days in advance of any sample collection activity. In addition, EPA shall have the right to collect any additional samples that EPA deems necessary.

D. Respondent shall ensure that the laboratory utilized by Respondent for analyses participates in a EPA quality assurance/quality control program equivalent to that which is followed by EPA and which is consistent with EPA document QAMS-005/80. In addition, EPA may require submittal of data packages equivalent to those generated in the EPA Contract Laboratory Program (CLP) and may require laboratory analysis of performance samples (blank and/or spike samples) in sufficient number to determine the capabilities of the laboratory.

E. Notwithstanding any provision of this Consent Order, the EPA hereby retains all of its information gathering, inspection and enforcement authorities and rights under CERCLA, RCRA, and any other applicable statute or regulation.

XI. ACCESS

A. From the date of execution of this Consent Order until EPA provides written notice of satisfaction of the terms of the Order, the EPA and its authorized representatives and agents shall have access at all times to the Site and any property to which access is required for the implementation of this Consent Order, to the extent access to the property is controlled by or available to Respondent, for the purposes of conducting any activity authorized by or related to this Consent Order, including, but not limited to:

1. Monitoring the RI/FS work or any other activities

taking place on the property;

2. Verifying any data or information submitted to the United States;

3. Conducting investigations relating to contamination at or near the Site;

4. Obtaining samples;

5. Evaluating the need for or planning and implementing additional remedial or response actions at or near the Site; and

6. Inspecting and copying records, operating logs, contracts, or other documents required to assess Respondent's compliance with this Consent Order.

B. To the extent that the Site or any other area where work is to be performed under this Consent Order is owned or controlled by persons other than Respondent, Respondent shall use best efforts to secure from such persons access for Respondent, as well as for EPA and authorized representatives or agents of EPA, as necessary to effectuate this Consent Order. Copies of such access agreements will be provided to EPA prior to Respondent's initiation of field activities. If access is not obtained within thirty (30) days after the effective date of this Consent Order, Respondent shall promptly notify the EPA. The United States may thereafter assist Respondent in obtaining access. Respondent shall, in accordance with Section XVII herein, reimburse the United States for all costs incurred by it in obtaining access, including but not limited to, attorneys' fees and the amount of just compensation and costs incurred by the United States in obtaining access.

C. Notwithstanding any provision of this Consent Order, the EPA retains all of its access authorities and rights under CERCLA, RCRA and any other applicable statute or regulations.

XII. CONFIDENTIALITY OF SUBMISSIONS

A. Respondent may assert a confidentiality claim, if appropriate, covering part or all of the information requested by this Consent Order pursuant to 40 C.F.R. § 2.203(b). Such an assertion will be adequately substantiated when the assertion is made. Analytical data will not be claimed as confidential by Respondent. Information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no such claim accompanies the information when it is submitted to EPA, it may be made available to the public by EPA without further notice to Respondent.

B. Respondent waives any objection to the admissibility into evidence (without waiving any objection as to weight) of the results of any analyses of sampling conducted by or for them at the Site or of other data gathered pursuant to this Consent Order that has been verified by the quality assurance/quality control procedures established pursuant to Section X.

XIII. RECORD PRESERVATION

EPA and Respondent agree that each will preserve, during the pendency of this Consent Order and for a minimum of six (6) years after its termination, all nonprivileged records and documents in their possession or in the possession of their divisions, employees, agents, accountants, contractors, or other persons which relate in any way to the implementation of this Administrative Order or the work to be performed pursuant hereto, despite any document retention policy to the contrary. After this six year period, Respondent will notify EPA within ninety (90) calendar days prior to the destruction of any such documents. Upon request by EPA, Respondent will make available to EPA such records or copies of any such records. Additionally, if EPA requests that documents be preserved for a longer period of time, Respondent will comply with that request.

XIV. DISPUTE RESOLUTION

Any disputes arising under this Consent Order shall be resolved as follows: If the Respondent objects to any EPA notice of disapproval, decision or demand made pursuant to this Consent Order, the Respondent shall notify EPA's Project Coordinator in writing of its objections within 14 calendar days after receipt of the decision. Respondent's written objections shall define the dispute, state the basis of Respondent's objections, and be sent certified mail, return receipt requested. EPA and the Respondent, upon receipt of such written objections by EPA, shall then have an additional fourteen (14) calendar days to reach agreement. If agreement cannot be reached within the fourteen (14) calendar day period, the EPA Waste Management Division Director shall provide a written statement of the decision and the reasons supporting that decision to Respondent. The Division Director's determination is EPA's final decision. If Respondent does not agree to perform or does not actually perform the task in dispute as determined by EPA's Division Director, EPA reserves the right to conduct the work itself, to seek reimbursement from the Respondent, and/or to seek other appropriate relief.

Respondent is not relieved of its obligations to perform and conduct any work required by this Consent Order while a matter is pending in dispute resolution.

XV. FORCE MAJEURE

A. "Force Majeure" is defined for the purposes of the Consent Order as an event arising from causes entirely beyond the control of Respondent and of any entity controlled by Respondent including its contractors and subcontractors, which could not have been overcome by due diligence which delays or prevents the performance of any obligation under this Consent Order. Examples of events which may constitute force majeure events include extraordinary weather events, natural disasters, and national emergencies. Examples of events that are not force majeure events include, but are not limited to, normal inclement weather (but not unusually severe weather, or flooding), increased costs or expenses of the Work to be performed under this Consent Order, the financial difficulty of Respondent to perform such tasks, the failure of the Respondent to satisfy its obligation under this Consent Order, acts or omissions not otherwise force majeure attributable to Respondent's contractors or representatives, and the failure of Respondent or Respondent's contractors or representatives to make complete and timely application for any required approval or permit.

B. When circumstances occur which may delay or prevent the completion of any phase of the Work Plan or access to the Site or to any property on which part of the Work Plan is to be performed, whether or not caused by a force majeure event, Respondent shall notify the EPA Project Coordinator verbally of the circumstances within forty-eight (48) hours of when Respondent first knew or should have known that the event might cause delay. If the EPA Project Coordinator is unavailable, Respondent shall notify the designated alternate or the Director of the Waste Management Division, EPA Region IV. Within seven (7) calendar days after Respondent first became aware of such circumstances, Respondent shall supply to EPA in writing: (1) the reasons for the delay; (2) the anticipated duration of the delay; (3) all actions taken or to be taken to prevent or minimize the delay; (4) a schedule for implementation of any measures to be taken to mitigate the effect of the delay; and (5) a statement as to whether, in the opinion of the Respondent, such event may cause or contribute to an endangerment to public health, welfare, or the environment. Respondent shall exercise best efforts to avoid or minimize any delay and any effects of a delay. Failure to comply with the above requirements shall preclude Respondent from asserting any claim of force majeure.

C. If EPA agrees that a delay is or was caused by a force majeure event, the time for performance of the obligations under this Consent Order that are directly affected by the force majeure event shall be extended by agreement of the parties, pursuant to Section XXIII, for a period of time not to exceed the actual duration of the delay caused by the force majeure event. An extension of the time for performance of the obligation

directly affected by the force majeure event shall not necessarily justify an extension of time for performance of any subsequent obligation.

D. If EPA does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, or does not agree with Respondent on the length of the extension, the issue shall be subject to the dispute resolution procedures set forth in Section XIV of the Consent Order. In any such proceedings, to qualify for a force majeure defense, Respondent shall have the burden of proof that the delay or anticipated delay was or will be caused by a force majeure event, that the duration of the delay was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Respondent complied with the requirements of paragraph B of this Section. Should Respondent carry this burden, the delay at issue shall be deemed not to be a violation by Respondent of the affected obligation of the Consent Order.

XVI. STIPULATED PENALTIES

Unless excused under the provisions of Sections XIV or XV, the Respondent shall pay into the Hazardous Substance Superfund administered by EPA, the sums set forth below as stipulated penalties.

Stipulated penalties shall accrue as follows:

A. For each day during which Respondent fails to perform, in accordance with the Schedule submitted by Respondent and approved by EPA pursuant to this Consent Order, and modifications, if any, thereto which have been approved by EPA, and in accordance with the requirements of this Consent Order and the various plans and reports required under this Consent Order and incorporated by reference herein, any of the following activities:

1. for failure to timely submit the Ecological Assessment Report and FS Addendum required under this Consent Order;

2. for failure to timely submit any modifications requested by EPA or its representatives to the Ecological Assessment Report and FS Addendum as required under this Consent Order;

3. for failure to timely submit payment of oversight costs as provided in Section XVII.

Respondent shall be liable to EPA for stipulated penalties in the following amounts:

<u>Period of Failure to Comply</u>	<u>Penalty Per Violation Per Day</u>
1st through 14th day	\$1,000
15th through 44th day	\$3,000
45th day and beyond	\$5,000

B. If Respondent fails to submit a monthly progress report by its due date, Respondent shall be liable to EPA for stipulated penalties in the amount of \$500 per violation for each day during which Respondents fail to submit and, if necessary, modify monthly reports.

C. Respondent shall be liable to EPA for stipulated penalties in the amount of \$1000 per violation for each day during which Respondent fails to comply with all other requirements of this Consent Order including, but not limited to, any implementation schedule, payment requirement, notification requirement or completion deadline.

All stipulated penalties begin to accrue on the day the violation occurs or on the day following Respondent's failure to comply with any schedule or deadline or the terms, conditions, or requirements contained in this Consent Order and/or Work Plan. Stipulated penalties shall continue to accrue until Respondent's violation ends or until Respondent complies with the particular schedule or deadline.

Payment of stipulated penalties shall be due and owing within fifteen (15) days from the receipt of a written notice from EPA notifying Respondent that penalties have been assessed. Interest shall accrue on any unpaid amounts, beginning at the end of the fifteen day period, at the rate established by the Department of Treasury under 31 U.S.C. § 3717. Respondent shall pay a handling charge of one percent to be assessed at the end of each 31 day period, and a six percent per annum penalty charge, to be assessed if the penalty is not paid in full within 90 days after it is due. The check and transmitted letter shall identify the Name of the Site, the Site identification number and the title of this Order. A copy of the transmittal letter should be sent simultaneously to the EPA Project Coordinator.

Payment shall be made to:

U. S. Environmental Protection Agency
Region IV
Superfund Accounting
P. O. Box 100142
Atlanta, Georgia 30384
ATTENTION: (Collection Officer for Superfund)

Respondent may dispute EPA's right to the stated amount of penalties by invoking the Dispute Resolution procedures under Section XIV of this Order. Penalties shall accrue but need not be paid during the dispute resolution period. If Respondent does not prevail upon resolution, all penalties shall be due to EPA within 30 days of resolution of the dispute. If Respondent prevails upon resolution, no penalties shall be paid.

In the event that EPA provides for corrections to be reflected in the next deliverable and does not require resubmission of that deliverable, stipulated penalties for that interim deliverable shall cease to accrue on the date of such decision by EPA.

Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Consent Order.

The stipulated penalties set forth in this Section do not preclude EPA from electing to pursue any other remedies or sanctions which may be available to EPA by reason of the Respondent's failure to comply with any of the requirements of this Consent Order. Such remedies and sanctions may include a suit for statutory penalties up to the amount authorized by law, a federally-funded response action, and a suit for reimbursement of costs incurred by the United States.

XVII. REIMBURSEMENT OF OVERSIGHT AND RESPONSE COSTS

In accordance with Section 104(a)(1) of CERCLA, as amended, 42 U.S.C. § 9604(a)(1), Respondent agrees to reimburse the Hazardous Substance Superfund for all response and oversight costs incurred by EPA or its authorized representatives in oversight of Respondent's performance of work under the Consent Order.

At the end of each fiscal year, EPA will submit to Respondent an accounting of all response and oversight costs incurred by the U.S. Government with respect to this Consent Order. Oversight costs shall include all direct and indirect costs of EPA's oversight arrangement for the RI/FS, including, but not limited to, time and travel costs of EPA personnel and associated indirect costs, contractor costs, compliance monitoring, including the collection and analysis of split samples, inspection of RI/FS activities, site visits, interpretation of

Consent Order provisions, discussions regarding disputes that may arise as a result of this Consent Order, review and approval or disapproval of reports, the costs of redoing any of Respondent's tasks, and any assessed interest.

EPA's certified Agency Financial Management System Summary data (SPUR Reports) and any other necessary documents shall serve as the basis for payment demands.

Failure to submit an accounting in one fiscal year does not prevent EPA from submitting an accounting for that year in a subsequent fiscal year. Respondent shall, within thirty (30) calendar days of receipt of each accounting, remit a certified or cashiers check for the amount of those costs made payable to the Hazardous Substance Superfund. Interest shall begin to accrue on the unpaid balance from that date. Checks should specifically reference the identity of the Site and should be sent to:

U. S. Environmental Protection Agency
Region IV
Superfund Accounting
P. O. Box 100142
Atlanta, Georgia 30384
ATTENTION: Collection Officer for Superfund

A copy of the transmittal letter should be sent simultaneously to the EPA Project Coordinator.

Respondent agrees to limit any disputes concerning costs to accounting errors and the inclusion of costs outside the scope of this Consent Order. Respondent shall identify any contested costs and the basis of its objection. All undisputed costs shall be remitted by Respondent in accordance with the schedule set out above. Interest will accrue on disputed costs while the dispute is pending. Respondent bears the burden of establishing an EPA accounting error and the inclusion of costs outside the scope of this Consent Order.

EPA reserves the right to bring an action against the Respondent pursuant to Section 107 of CERCLA to enforce the response and oversight cost reimbursement requirements of this Consent Order and to collect stipulated penalties assessed pursuant to section XVI of this Consent Order.

XVIII. RESERVATION OF RIGHTS

Notwithstanding compliance with the terms of this Consent Order, the Respondent is not released from liability, if any, for any actions beyond the terms of this Consent Order taken by EPA regarding this Site. EPA reserves the right to take any enforcement action pursuant to CERCLA or any other available

legal authority, including the right to seek injunctive relief, monetary penalties, and punitive damages for any violation of law or this Consent Order.

Except as otherwise provided herein, EPA and Respondent expressly reserve all rights and defenses that they may have, including EPA's right both to disapprove of work performed by Respondent and to require that Respondent perform tasks in addition to those detailed in the RI/FS Work Plan, as provided in this Consent Order. In the event that Respondent declines to perform any additional or modified tasks, EPA will have the right to undertake any RI/FS work. In addition, EPA reserves the right to undertake removal actions and/or remedial actions at any time. In either event, EPA reserves the right to seek reimbursement from Respondent thereafter for such costs which are incurred by the United States and Respondent reserves all rights to contest or defend against such claims or actions.

Following satisfaction of the requirements of this Consent Order, Respondent shall have resolved its liability to EPA for the performance of the RI/FS that is the subject of this Order. The Respondent is not released from liability, if any, for any actions taken beyond the terms of this Order regarding removals, other operable units, remedial design/remedial action (RD/RA), or activities arising pursuant to section 121(c) of CERCLA.

By entering into this Consent Order, or by taking any action in accordance with it, Respondent does not admit any of the findings of fact, conclusions of law, determinations or any of the allegations contained in this Consent Order, nor does Respondent admit liability for any purpose or admit any issues of law or fact or any responsibility for the alleged release or threat of release of any hazardous substance into the environment. The participation of Respondent in this Consent Order shall not be admissible against Respondent in any judicial or administrative proceeding, except for an action by EPA to enforce the terms of this Consent Order or actions to which EPA is a party which allege injury based, in whole or in part, on acts or omissions of Respondent in connection with performance under this Consent Order.

It is the intent of the parties hereto that neither the terms of this Consent Order, including any allegation, finding, conclusion or determination set forth herein, nor the act of performance hereunder, shall be used against Respondent as a collateral estoppel in any other proceeding with EPA, the Alabama Department of Environmental Management, or with any other government agency, or with any other person.

By signing and consenting to this Consent Order or by taking any actions pursuant to this Consent Order, Respondent does not concede that the RI/FS or any other investigation at the Site is

necessary to protect the public health or welfare or the environment, or for any other reason; that the methodologies or protocols prescribed by applicable EPA guidance or described or noted herein or otherwise required by EPA for performance of work pursuant to this Consent Order are the only ones appropriate for the proper conduct of this RI/FS; or that a release or threatened release of a hazardous waste or substance at or from the Site, or any disposal of a hazardous waste or substance at the Site, may present an imminent and substantial endangerment to the public health or welfare or the environment. Respondent has agreed to this Consent Order to provide assistance to EPA and to avoid unnecessary conflict or litigation.

XIX. OTHER CLAIMS

Nothing in this Consent Order constitutes a release from any claim, cause of action or demand in law or equity against any person, firm, partnership, or corporation for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken from the Site.

EPA reserves the right to bring an action against the Respondent pursuant to Section 107 of CERCLA for recovery of all response and oversight costs incurred by the United States related to this Consent Order and not reimbursed by Respondent, as well as any other past and future costs incurred by the United States in connection with response activities conducted pursuant to CERCLA at this site.

This Consent Order does not constitute a preauthorization of funds under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2).

In entering into this Consent Order, Respondent waives any right to seek reimbursement under Section 106(b)(2) of CERCLA, 42 U.S.C. § 9606(b)(2), for any past costs associated with this Site, or any costs incurred in complying with this Order.

Respondent shall bear its own costs and attorney fees.

XX. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to this Consent Order will be undertaken in accordance with the requirements of all applicable local, state, and federal laws and regulations unless an exemption from such requirements is specifically provided in this Consent Order, or made a part of this Consent Order by being incorporated herein at some later date.

XXI. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT

Respondent agrees to indemnify and save and hold harmless the United States, its agencies, departments, officials, agents, employees, contractors, or representatives, from any and all claims or causes of action arising from or on account of acts or omissions of Respondent, its officers, employees, receivers, trustees, agents, or assigns, in carrying out the activities pursuant to this Consent Order. The United States Government or any agency or authorized representative thereof shall not be held to be a party to any contract involving Respondent at or relating to the Site.

XXII. PUBLIC COMMENT

Upon submittal to EPA of the final Addendum to the Feasibility Study, EPA will make both the Remedial Investigation Final Report and the Feasibility Study Final Report, together with the Ecological Assessment Final Report, Addendum to the Feasibility Study and EPA's Proposed Plan available to the public for review and comment for, at a minimum, a thirty (30) day period, pursuant to EPA's Community Relations Plan and the NCP. Following the public review and comment period, EPA will notify Respondent of the remedial action alternative selected for Operable Unit 3 (the flood plain area).

XXIII. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION

In consideration of the communications between Respondent and EPA prior to the issuance of this Consent Order concerning its terms, Respondent agrees that there is no need for a settlement conference prior to the effective date of this Consent Order. Therefore, the effective date of this Consent Order will be the date on which it is signed by EPA. This Consent Order may be amended by mutual agreement of EPA and Respondent. Such amendments will be in writing and will have, as the effective date, that date on which such amendments are signed by EPA. EPA Project Coordinators do not have the authority to sign amendments to the Consent Order.

Any reports, plans, specifications, schedules, and attachments required by this Consent Order are, upon approval by EPA, incorporated into this Consent Order. Any noncompliance with such EPA approved reports, plans, specifications, schedules, and attachments will be considered a failure to achieve the requirements of this Consent Order and will subject the Respondent to the provisions included in the "Force Majeure" and "Stipulated Penalties" sections (Sections XV and XVI) of this Consent Order.

No informal advice, guidance, suggestions, or comments by EPA regarding reports, plans, specifications, schedules, and any other writing submitted by Respondent will be construed as relieving Respondent of its obligation to obtain such formal approval of EPA as may be required by this Consent Order.

XXIV. NOTICE TO THE STATE

EPA has notified the State of Alabama regarding the requirements of this Consent Order.

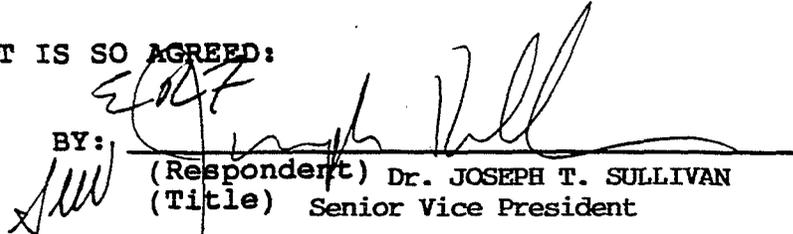
Upon completion of the work required by this Order, including the Ecological Assessment and Addendum to the Feasibility Study, pursuant to the requirements of Section 104(c)(2) of CERCLA, 42 U.S.C. § 9604(c)(2), EPA will notify the State of Alabama before determining the appropriate remedial action to be taken at the Operable Unit 3 at the Site.

XXV. TERMINATION AND SATISFACTION

This Consent Order shall terminate when the Respondent demonstrates in writing and certifies to the satisfaction of EPA that all activities required under this Consent Order, including any additional work, payment of past costs, response and oversight costs, and any stipulated penalties demanded by EPA, have been performed and EPA has approved the certification. This notice shall not, however, terminate Respondent's obligation to comply with Sections XIII, XVII, and XXI of this Consent Order.

The certification shall be signed by a responsible official representing the Respondent. Each representative shall make the following attestation: "I certify that the information contained in or accompanying this certification is true, accurate, and complete." For purposes of this Consent Order, a responsible official is a corporate official who is in charge of a principal business function.

IT IS SO AGREED:

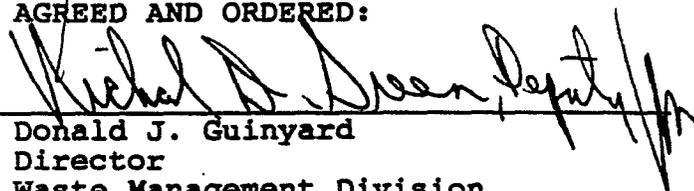
BY:  _____

(Respondent) Dr. JOSEPH T. SULLIVAN
(Title) Senior Vice President

3/24/92

Date

IT IS SO AGREED AND ORDERED:

BY:  _____

Donald J. Guinyard
Director
Waste Management Division
Region IV
U.S. Environmental Protection Agency

3/31/92

Date