

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

IN THE MATTER OF:

Macalloy Facility Site

Macalloy Corporation,
Respondent

Proceeding under Sections 104,
122(a) and 122(d)(3) of the Comprehensive
Environmental Response Compensation and
Liability Act of 1990, as amended,
42 U.S.C. §§ 9604 and 9622.

EPA Docket No.: 00-19-C

ADMINISTRATIVE ORDER BY CONSENT
FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY

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ADMINISTRATIVE ORDER BY CONSENT
FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY**I. JURISDICTION**

This Administrative Order by Consent (Consent Order) is entered into by the United States Environmental Protection Agency (EPA) and Macalloy Corporation, (Macalloy), (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 further delegated to the EPA Regional Administrators through the Director, Waste Management Division to the Chiefs of the Waste Programs branches.

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

II. DEFINITIONS

Unless noted to the contrary, the terms of this Order shall have the meaning assigned to those terms pursuant to CERCLA or any regulation promulgated under CERCLA. Whenever the terms listed below are used in this Order and Appendices attached hereto, the following definitions shall apply:

- A. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. § 9601 *et seq.*
- B. "Day" shall mean a calendar day unless expressly stated to be a working day. "Working day" shall mean a day other than a Saturday, Sunday, or federal holiday. In computing any period of time under this Order, where the last day would fall on a Saturday,

Sunday, or federal holiday, the period shall run until the end of the next working day.

- C. "EPA" shall mean the United States Environmental Protection Agency.
- D. "Hazardous Substance" shall mean any substance meeting the definition provided in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).
- E. "National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, including any amendments thereto.
- F. "Oversight Costs" or "Response Costs" shall mean all costs not inconsistent with the NCP, including 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 Respondents tasks, and any assessed interest, incurred after the effective date of this Order.
- G. "Paragraph" shall mean a portion of this Order identified by a capital letter.
- H. "Parties" shall mean the United States of America and Respondent.
- I. "Past Costs" shall mean all costs not inconsistent with the NCP, including, but not limited to, direct, indirect and annual allocation costs, that the United States incurred at the Site prior to the effective date of this Order.
- J. "Pollutant or Contaminant" shall mean any substance defined in Section 101(33) of CERCLA, 42 U.S.C. § 9601(33).
- K. "Respondent" shall mean Macalloy Corporation..
- L. "Section" shall mean a portion of this Order identified by a roman numeral.
- M. "Site" shall mean the Macalloy facility located at 1800 Pittsburgh Avenue, North Charleston, South Carolina. Notwithstanding the Site boundaries, the Site includes the areal extent of hazardous substances contamination, and all areas in close proximity to the contamination that are necessary for implementation of the Work.
- N. "State" shall mean the State of South Carolina as represented by the South Carolina Department of Health and Environmental Control. (SCDHEC).
- O. "United States" shall mean the United States of America, including the Department of Justice and EPA.

- P. "Work" shall mean all activities Respondent is required to perform under this Order.

III. PARTIES BOUND

This Consent Order shall apply to and be binding upon EPA and the Respondent, their agents, successors, assigns, officers, directors, and principals. Respondent is responsible for carrying out all actions required of them by this Consent Order. The signatory to this Consent Order certifies that they are authorized to execute and legally bind the party 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.

IV. STATEMENT OF PURPOSE

In entering into this Consent Order, the mutual objectives of EPA and Respondent are: (A) with respect to the 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 Feasibility Study (FS), 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; and (C) to recover response and oversight costs incurred by EPA with respect to this consent order, not otherwise recovered from non-participating responsible parties.

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.

V. FINDINGS OF FACTS

For the purposes of this Order, EPA finds that:

- A. Respondent is the Macalloy Corporation, doing business at 1800 Pittsburgh Avenue, North Charleston, Charleston County, South Carolina, incorporated under the laws of the State of Delaware.

B. The Site is the Macalloy Corporation Facility at 1800 Pittsburgh Avenue, North Charleston, Charleston County, South Carolina, and the areal extent of contamination and all suitable areas in close proximity of the contamination necessary for the implementation of the response action. The Site is bounded on the west by CSX Railroad, on the east by Shipyard Creek, a tributary of the Cooper River, on the south by Pittsburgh Avenue and the City of Charleston, and on the north by a waste-to-energy plant operated by Foster Wheeler, Inc.

C. The Facility is currently owned by Respondent Macalloy, and has been owned by Macalloy since 1979. Respondent Macalloy ceased producing ferrochrome alloy at the facility in July of 1998. From 1962 to 1979, the Facility was owned and operated by AIRCO Corporation which was acquired by BOC. From 1947 to 1962, the Facility was owned and operated by the Pittsburgh Metallurgical Company, which was acquired by AIRCO. The property where the Facility is now located was used as a lumber mill and a rice plantation prior to 1941. At various times from 1942 to the present, the United States has owned, operated or otherwise used portions of the Facility for storage of ferrochromium alloy, and may have produced ferrochrome alloy at the facility. Portions of the property have been owned and operated by various railroads over the years.

D. Ferrochromium alloy manufacturing activities were conducted at the Facility from 1941 until July, 1998. Respondent produced ferrochromium alloy by smelting ore in submerged arc furnaces. Other operators also produced ferrochrome at the Facility. These activities have resulted in the generation of slag, fine particulate matter, ashes, and dust (PMAD), gas conditioning tower sludge and associated wastewater ("GCT sludge"), electrostatic precipitator dust ("ESP dust"), and bag house dust.

E. From 1941 until 1998, manufacturing activities at the Facility resulted in the generation of slag. Slag, which contains chromium, has been deposited at many locations at the Site. The slag was also used to construct a portion of the wall of the Unlined Surface Impoundment.

F. From 1941 to 1970, prior to the existence of regulatory requirements for air pollution control, PMAD generated during the manufacturing process was discharged directly to the atmosphere. This PMAD, containing chromium, lead, zinc, and manganese, was deposited throughout the Site through fallout from the atmosphere during those years.

G. Review of historical aerial photographs indicate that tidal marsh areas in the central and northern portions of the Site were transformed into filled land prior to 1977.

H. From approximately 1970 to closing, Air Pollution Control (APC) equipment was operated at the Facility which removed contaminants from plant air emissions prior to their discharge to the atmosphere. ESP dust was generated as part of the operation of the APC equipment at a rate of approximately 7 tons per day. ESP dust contains cadmium, chromium, lead, zinc, mercury, and manganese.

1. From 1970 to approximately 1988, untreated ESP dust was stockpiled in numerous areas around the Site.
 2. From 1988 to 1997, Respondent placed stabilized ESP dust on the Site, primarily in the Unlined Surface Impoundment at the Site.
- I. From approximately 1970 to 1993 GCT sludge and associated wastewater were generated as part of the operation of the APC equipment. GCT sludge contains chromium, lead, cadmium, mercury, nickel, and zinc. GCT sludge was used in the construction of the Unlined Surface Impoundment.
 - J. From 1977 to 1993, a bag house particulate matter collector was in operation at the Facility and bag house dust was produced. The bag house dust, which contains cadmium, chromium, and lead, was previously mixed with the GCT sludge in the settling basins. Prior to closing, the bag house dust was stabilized with the ESP dust in the on-Site treatment process.
 - K. Contaminants contained in the slag, PMAD, GCT sludge, ESP dust, and bag house dust may have migrated from the Facility via surface water run-off and groundwater and may have accumulated in marsh sediments and sediments in Shipyard Creek.
 - L. Sediment samples collected by several EPA and other regulatory agencies from Shipyard Creek adjacent to the Respondent's Facility revealed elevated levels of chromium and other site related contaminants above applicable or relevant and appropriate ecological screening criteria.
 - M. The Macalloy Corporation is currently performing a RCRA corrective action through a RCRA Section 7003 Administrative Order on Consent (AOC) effective March 24, 1999, and a South Carolina Department of Health and Environmental Control (SCDHEC) RCRA Consent Order, effective October 7, 1998.
 - N. On September 20, 1999, U.S. EPA, SCDHEC, and the Macalloy Corporation, determined that CERCLA would be a more appropriate mechanism for the remediation of the Macalloy Site.
 - O. The above cited RCRA Orders remain in effect until the effective date of this Administrative Order to perform a Remedial Investigation/Feasibility Study (RI/FS).

VI. CONCLUSIONS OF LAW

- A. The Macalloy Corporation property is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

- B. The contaminants found at the Site, as identified in the Findings of Fact above, include "hazardous substances" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).
- C. Respondent is a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).
- D. Respondent may be a responsible party under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), for all costs specified in that Section.
- E. The conditions described in the Findings of Fact above constitute a release or threatened release of a hazardous substance from the Facility as defined by Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

VII. DETERMINATIONS

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

- A. The release and/or threatened release of hazardous substances from the Site may present an imminent and substantial endangerment to the public health or welfare or the environment.
- B. The actions required by this Consent Order are necessary to protect the public health and/or welfare and/or the environment.
- C. 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.
- D. As per prior agreement regarding the RCRA deferral to CERCLA, between EPA and SCDHEC, upon the effective date of this Order, all prior RCRA orders will cease to have any effect.

VIII. 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. EnSafe Environmental and Management Consultants of Memphis, TN has conducted a considerable amount of work at the Macalloy facility under the Resource Conservation and Recovery Act (RCRA) and under a CERCLA Section 106 Removal Action AOC. In consideration of EnSafe's historical involvement at the Site and demonstrated knowledge of the CERCLA process and requirements, ENSAFE has

been approved by EPA to be the supervising contractor for carrying out the RI/FS and other work to be performed pursuant to this Consent Order. EPA has made this determination in the interest of expediting the RI/FS process and completion of the work to be conducted under this Consent Order.

If 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. All days referenced in deadlines under the Order shall be calendar days, except for recognized holidays.

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

A. Respondent shall prepare and submit to EPA a plan for a complete Remedial Investigation and Feasibility Study (RI/FS Work Plan). The revised Draft RCRA Facility Investigation/Confirmatory Sampling Investigation Work Plan (RFI Work Plan), dated November 30, 1999, that was prepared by EnSafe, on behalf of Macalloy, shall form the basis of the RI/FS Work Plan. The revised Draft RFI Work Plan shall be converted to a CERCLA RI/FS Work Plan pursuant to comments received from EPA. The RI/FS Work Plan shall include a comprehensive description of the work to be performed, a sampling and analysis plan for the media to be investigated (i.e. surface/subsurface soils, groundwater, sediments, surface water, air, etc.), the methodologies to be employed, and the rationale for the selection of each methodology. The RI/FS Work Plan shall be developed in accordance with the National Contingency Plan and applicable or relevant and appropriate EPA Guidance regarding RI/FS activities conducted under CERCLA. The RI/FS Work Plan shall also include a comprehensive schedule for completion of each major activity required by this Consent Order and the submission of each required deliverable. The EPA approved schedule contained in the RI/FS Work Plan shall become an enforceable component of this Consent Order. Modifications to the RI/FS project schedule may be made with mutual consent between the EPA Project Coordinator and Respondent's Project Coordinator designated pursuant to Section X of this Consent Order.

B. The RI/FS Work Plan shall include procedures to ensure that the sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that the data generated will meet the Data Quality Objectives (DQOs) established for the Site. The RI/FS Work Plan shall include a sampling and analysis plan which describes the sample objectives, sample locations and frequency, sampling equipment and procedures, sample handling and analyses, and decontamination procedures for sampling equipment.

C. The RI/FS Work Plan shall include a site specific Quality Assurance/Project Plan. The QAPP shall describe the project objectives and organization, functional activities, and quality assurance and quality control (QA/QC) protocols that shall be used to achieve the desired DQOs.

- D. The RI/FS Work Plan shall include a site specific Health and Safety Plan that conforms with the Respondent's health and safety program and OSHA regulations and protocols.
- E. Respondent shall perform a Human Health Baseline Risk Assessment using data generated during implementation of the RI/FS Work Plan. The Human Health Baseline Risk Assessment shall be prepared in accordance with established EPA protocols delineated in EPA's *Risk Assessment Guidance for Superfund* and other appropriate supplements or addenda thereto.
- F. Respondent shall perform an Ecological Baseline Risk Assessment using data generated during implementation of the RI/FS Work Plan and other supplemental field characterization activities. The Ecological Baseline Risk Assessment shall be prepared in accordance with established EPA protocols delineated in *Ecological Risk Assessment Guidance for Superfund; Process for Designing and Conducting Ecological Risk Assessments (EPA 1997)* and other applicable or relevant and appropriate EPA Guidance regarding the performance of an ecological risk assessment under CERCLA.
- G. Results of the work described in the RI/FS Work Plan shall be presented in a Phase I RI Report and submitted to EPA in accordance with the approved project schedule contained therein. It is anticipated that a supplemental Phase II RI field investigation will be needed to fill data gaps from the Phase I RI effort and to generate characterization data to support remedy development in the Feasibility Study phase of this project. A project management meeting shall be held between EPA, the Respondent and other stakeholders after the Respondent has had adequate time to review EPA comments submitted on the Draft Phase I RI Report. The purpose of this meeting shall be to discuss necessary revisions to the Draft Phase I RI Report and the scope of work for supplemental field investigations conducted under the Phase II RI. Respondent shall prepare and submit a Draft Phase II RI Work Plan to EPA thirty (30) calendar days from this project meeting. The Draft Phase II RI Work Plan shall describe all necessary supplemental data collection activities and methodologies, and include a project schedule to implement the work delineated in the Phase II field effort.
- H. Concurrent with performance of the Phase II RI work, Respondent shall begin drafting appropriate sections of the Feasibility Study Report that are not potentially affected by supplemental data collection activities. The Feasibility Study Report shall be developed to evaluate adequately protective remedial alternatives to address potentially unacceptable risks to human health and the environment as quantified in the Baseline Human Health and Ecological Risk Assessments. The Feasibility Study Report shall be prepared in accordance with the National Contingency Plan and utilize the remedy selection criteria specified therein.
- I. EPA will compile all documents generated pursuant to this Order and other site specific information in an Administrative Record for the Site. The Administrative Record

shall contain all information EPA utilized in compiling a proposed cleanup plan (Proposed Plan) for the Macalloy Site. EPA will respond to all significant comments received on the Proposed Plan during the formal public comment period in the Responsiveness Summary of the Record of Decision.

J. Respondent shall implement the EPA approved RI/FS Work Plan in accordance with the schedule contained therein. Within thirty (30) calendar days of EPA's approval of the RI/FS Work Plan, Respondent shall mobilize to the Site for sample collection activities.

K. Respondent shall submit to EPA written quarterly progress reports which: (1) describe the actions which have been taken toward achieving compliance with this Consent Order during the previous quarter; (2) include all results of sampling and tests and all other data received by Respondent during the course of the work; (3) include all plans and procedures completed under the Work Plan during the previous quarter; (4) describe all actions, data, and plans which are scheduled for the next quarter, and provide other information relating to the progress of the work as deemed necessary by EPA; and (5) include information regarding percentage of completion, unresolved delays, encountered or anticipated, that may affect the future schedule for implementation of the Scope of Work and/or RI/FS Work Plans, and a description of efforts made to mitigate those delays or anticipated delays. These progress reports are to be submitted to EPA by the first month of every quarter following the effective date of this Consent Order.

L. Deliverables, including reports plans, or other correspondence to be submitted 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. Five (5) copies of each document or deliverable shall be submitted to the EPA Project Manager below, and three (3) copies shall be submitted to the SCDHEC Project Manager.

Craig Zeller, P.E.
Remedial Project Manager
U.S. EPA Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303

Richard Haynes, P.E.
Bureau of Land and Waste Management
SC Department of Health and Environmental Control
2600 Bull Street
Columbia, SC 29201

M. 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 and which are in addition to the tasks detailed in the RI/FS Work Plan. The additional work shall be completed in accordance with the standards, specifications, and schedule determined or approved by EPA.

N. Respondent shall maintain the storm water management plan as provided by in the "Storm Water Management Final Report" dated September 2, 1999, that was prepared by EnSafe on behalf of Macalloy, pursuant to the June 13, 1998 CERCLA Removal Action AOC. All Best Management Practices contained in the Storm Water Management Plan shall be maintained and operated to maximize removal of contaminant sources from the Site, and to mitigate the impacted storm water discharges at the Site.

IX. SUBMISSIONS REQUIRING AGENCY APPROVAL

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.

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.

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.

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.

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.

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.

The provisions of this Consent Order shall govern all proceedings regarding the RI/FS 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.

X. DESIGNATED PROJECT COORDINATORS

On or before 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, identified in Section VIII.L. 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.

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.

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.

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

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.

XI. QUALITY ASSURANCE, SAMPLING AND DATA ANALYSIS

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 "Environmental Investigations Standard Operating Procedures and Quality Assurance Manual," (US EPA Region 4 Science and Ecosystems Support

Division, May 1996), and subsequent amendments to such guidelines. Prior to the commencement of any monitoring project under this Consent Order, Respondent shall submit for review, modification and/or approval by EPA, a Quality Assurance Project Plan ("QAPP") that is consistent with applicable guidelines. Sampling data generated consistent with the QAPP shall be admissible as evidence, without objection, in any proceeding under Section XV 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.

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 quarterly progress reports as described in Section VIII.K. of this Consent Order.

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.

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.

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.

XII. ACCESS

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 reasonable 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:

- A. Monitoring the RI/FS work or any other activities taking place on the property;
- B. Verifying any data or information submitted to the United States;
- C. Conducting investigations relating to contamination at or near the Site;

- D. Obtaining samples;
- E. Evaluating the need for or planning and implementing additional remedial or response actions at or near the Site; and
- F. Inspecting and copying records, operating logs, contracts, or other documents required to assess Respondent's compliance with this Consent Order.

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 its 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 of determining a need for access, Respondent shall promptly notify the EPA. The United States may thereafter assist Respondent in obtaining access. Respondent shall, in accordance with Section XVIII 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.

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.

XIII. CONFIDENTIALITY OF SUBMISSIONS

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.

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 XI.

XIV. RECORD PRESERVATION

EPA and Respondent agree that each will preserve, during the pendency of this Consent Order and for a minimum of three (3) years after its termination, all records and documents in their possession or in the possession of their divisions, employees, agents, accountants, contractors, or attorneys which relate in any way to the Site, despite any document retention policy to the

contrary. After this three (3) 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.

XV. DISPUTE RESOLUTION

Any disputes arising under this Consent Order shall be resolved as follows: If the Respondent objects to any EPA notice of disapproval or decision made pursuant to this Consent Order, the Respondent shall notify EPA's Project Coordinator in writing of their 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 then have an additional fourteen (14) calendar days to reach agreement. If agreement cannot be reached within 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 their obligations to perform and conduct any work required by this Consent Order while a matter is pending in dispute resolution.

XVI. FORCE MAJEURE

"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 their 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, increased costs or expenses of the Work to be performed under this Consent Order, the financial difficulty of Respondent to perform such tasks, 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.

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 orally 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 4. 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.

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 XXIV, 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.

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 XV 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 Respondents complied with the requirements of paragraph B of this Section. Should Respondents carry this burden, the delay at issue shall be deemed not to be a violation by Respondents of the affected obligation of the Consent Order.

XVII. STIPULATED PENALTIES

Unless excused under the provisions of Sections XV or XVI, the Respondents 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 Respondents fail to perform, in accordance with the schedules contained in this Consent Order and in the various plans and reports required under this Consent Order incorporated by reference herein, any of the following activities:

1. for failure to timely submit the RI/FS Work Plan, Sampling and Analysis Plan, draft RI Report and draft FS Report required under this Consent Order;
2. for failure to timely submit any modifications requested by EPA or its representatives to the RI/FS Work Plan, Sampling and Analysis Plan, draft RI Report and draft FS Report as required under this Consent Order; and

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

Respondents 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	\$250
15th through 44th day	\$500
45th day and beyond	\$750

B. If Respondents fail to submit a progress report by its due date, Respondents shall be liable to EPA for stipulated penalties in the amount of \$100 per violation for each day during which Respondents fail to submit and, if necessary, modify monthly reports.

C. Respondents shall be liable to EPA for stipulated penalties in the amount of \$250 per violation for each day during which Respondents fail 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 Respondents' 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 Respondents' violation ends or until Respondents comply with the particular schedule or deadline.

Payment of stipulated penalties shall be due and owing within ninety (90) 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 ninety day period, at the rate established by the Department of Treasury under 31 U.S.C. § 3717. 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 4
 Superfund Accounting
 P. O. Box 100142
 Atlanta, Georgia 30384
 ATTENTION: Collection Officer for Superfund

Respondents may dispute EPA's right to the stated amount of penalties by invoking the Dispute

Resolution procedures under Section XV of this Order. Penalties shall accrue but need not be paid during the dispute resolution period. If Respondents does not prevail upon resolution, all penalties shall be due to EPA within 30 days of resolution of the dispute. If Respondents 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 Respondents' 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.

XVIII. 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 not otherwise recovered from non-participating responsible parties.

At the end of each fiscal year, EPA will submit to Respondents 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 Respondents tasks, and any assessed interest.

SCORES Reports, or 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. Respondents 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 4
Superfund Accounting
P. O. Box 100142
Atlanta, Georgia 30384
ATTENTION: Collection Officer for Superfund

A copy of the check should be sent to:

Ms Paula V. Batchelor
U.S. EPA Region 4
CERCLA Program Services Branch, 11th Floor
Waste Management Division
61 Forsyth Street, S.W.
Atlanta, GA 30303

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

Respondents agree to limit any disputes concerning costs to accounting errors and the inclusion of costs outside the scope of this Consent Order. Respondents shall identify any contested costs and the basis of its objection. All undisputed costs shall be remitted by Respondents in accordance with the schedule set out above. Disputed costs shall be paid by Respondents into an escrow account while the dispute is pending. Respondents bear 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 Respondents 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 XVII of this Consent Order.

XIX. RESERVATION OF RIGHTS

Notwithstanding compliance with the terms of this Consent Order, the Respondents are 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 Respondents expressly reserve all rights and defenses that they may have, including EPA's right both to disapprove of work performed by Respondents and to require that Respondents perform tasks in addition to those detailed in the RI/FS Work Plan, as provided in this Consent Order. In the event that Respondents decline 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 Respondents thereafter.

for such costs which are incurred by the United States and Respondents reserves all rights to contest or defend against such claims or actions.

Following satisfaction of the requirements of this Consent Order, Respondents shall have resolved its liability to EPA for the performance of the RI/FS that is the subject of this Order. The Respondents are 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.

XX. 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 Respondents 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 Respondents, 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 not otherwise recovered from non-participating responsible parties . . .

This Consent Order does not constitute a preauthorization of funds under Section 113(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2).

In entering into this Consent Order, Respondents waive 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.

Respondents shall bear their own costs and attorney fees.

XXI. 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.

XXII. INDEMNIFICATION OF THE UNITED STATES EPA

Respondents agree to indemnify and save and hold harmless the United States Environmental Protection Agency, its agencies, departments, officials, agents, employees, contractors, or representative, from any and all claims or causes of action arising from or on account of acts or

omissions of Respondents, their officers, employees, receivers, trustees, agents, or assigns, in carrying out the activities pursuant to this Consent Order. The United States Environmental Protection Agency or any agency or authorized representative thereof shall not be held to be a party to any contract involving Respondents at or relating to the Site for work performed under this Order. For purposes of this Order, it is agreed that the "United States Environmental Protection Agency" does not include any other agency, administration, department, or subdivision of the United States, and expressly does not include, among others, the United States Department of Defense, United States Defense Logistics Agency, General Services Administration, Defense Plant Corporation, Reconstruction Finance Corporation, or their predecessor or successor entities.

XXIII. PUBLIC COMMENT

Upon submittal to EPA of the Feasibility Study Final Report, EPA will make both the Remedial Investigation Final Report and the Feasibility Study Final Report 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 Respondents of the remedial action alternative selected for the Site.

XXIV. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION

In consideration of the communications between Respondents and EPA prior to the issuance of this Consent Order concerning its terms, Respondents agree 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 Respondents. 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 XVI and XVII) of this Consent Order.

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

XXV. NOTICE TO THE STATE

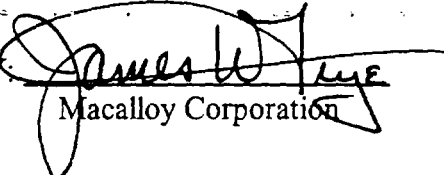
EPA has notified the State of South Carolina regarding the requirements of this Consent Order. Upon completion of the RI/FS, pursuant to the requirements of Section 104(c)(2) of CERCLA, 42 U.S.C. § 9604(c)(2), EPA will notify the State of South Carolina before determining the appropriate remedial action to be taken at the Site.

XXVI. TERMINATION AND SATISFACTION

This Consent Order shall terminate when the Respondents demonstrate 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 if required, and any stipulated penalties demanded by EPA, have been performed and EPA has approved the certification. This notice shall not, however, terminate Respondents' obligation to comply with Sections XIV, XVIII, and XIX of this Consent Order.

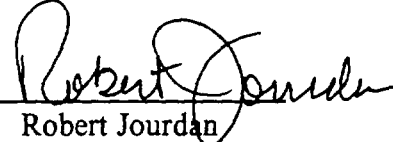
The certification shall be signed by a responsible official representing each Respondent. Each representative shall make the following attestation: "I certify that the information contained in or accompanying this certification is true, accurate, and complete." For purposes of this Consent Order, a responsible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

IT IS SO AGREED:

BY: 
Macalloy Corporation

3/23/00
Date

IT IS SO AGREED AND ORDERED:

BY: 
Robert Jourdan
Chief, North Site Management Branch
Waste Management Division
Region 4
U.S. Environmental Protection Agency

3/29/00
Date