

04-2000-0869

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 4

SCO 000332815

IN THE MATTER OF:
ATLANTIC PHOSPHATE WORKS
CHARLESTON, SOUTH
CAROLINA

ADMINISTRATION ORDER ON
CONSENT FOR REMOVAL ACTION

EXXON MOBIL CORPORATION

U.S. EPA Region
CERCLA
Docket No. 00-58-C

Proceeding Under Section 104, 106(a),
107 and 122 of the Comprehensive Respondent
Environmental Response, Compensation,
and Liability Act, as amended, 42 U.S.C.
Sections 9604, 9606(a), 9607 and 9622

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I. JURISDICTION AND GENERAL PROVISIONS

This Administrative Order on Consent ("Order" or "Consent Order") is entered into voluntarily by the United States Environmental Protection Agency ("EPA") and Exxon Mobil Corporation ("Respondent"). This Order provides for the performance of the removal action by Respondent and the reimbursement of response costs incurred by the United States in connection with the property located at Hagood Avenue, in Charleston, South Carolina. This Order requires Respondent to conduct the removal action described herein to abate an imminent and substantial endangerment to the public health, welfare or the environment that may be presented by the actual or threatened release of hazardous substances, pollutants, or contaminants at or from the Site.

This Order is issued pursuant to the authority vested in the President of the United States by Sections 104, 106(a), 107, and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9604, 9606(a), 9607, and 9622, as amended ("CERCLA"), and delegated to the Administrator of EPA by Executive Order No. 12580, January 23, 1987, 52 Federal Register 2923, and further delegated to the EPA Regional Administrators through the Director, Waste Management Division to the Chiefs of the Waste Program branches.

EPA has notified the State of South Carolina ("State") of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

This Order is the result of cooperative negotiations between Respondent and EPA. Respondent's participation in this Order shall not constitute or be construed as an admission of liability under any federal, state or local statute, regulation, order, ordinance or common law for any response costs, damages, penalties, or claims caused by or arising out of conditions at or arising from the Atlantic Phosphate Works Site or of EPA's findings or determinations contained in this Order nor be admissible in any legal action by any person or entity except in a proceeding by the EPA or the United States to enforce the terms of this Order. Respondent agrees to comply with and be bound by the terms of this Order. Respondent further agrees that it will not contest the basis or validity of this Order or its terms, except that Respondent reserves the right to dispute EPA's interpretation of the terms of the Order, as authorized in the Order.

II. PARTIES BOUND

This Order applies to and is binding upon EPA, and upon Respondent and successors and assigns. Any change in ownership or corporate status of Respondent including, but not limited to, any transfer of assets or real or personal property shall not alter Respondent's responsibilities under this Order.

Respondent shall ensure that its contractors, subcontractors, and representatives receive a copy of this Order and comply with this Order. Respondent shall be responsible for any noncompliance with this Order.

III. 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. "Future Response Costs" shall mean all costs not inconsistent with the NCP including, but not limited to, direct, indirect and annual allocation costs, that are incurred or paid by the United States at the Site after September 6, 2000.

E. "Hazardous Substance" shall mean any substance meeting the definition provided in Section 101 (14) of CERCLA, 42 U.S.C. § 9601(14).

F. "Matters Addressed" shall mean the Work performed by, and payments for Past Response Costs and future Response Costs made by Respondent as required under this Order.

G. "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.

H. "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 action, including, but not limited to, time and travel costs of EPA personnel and associated indirect costs, contractor cost, compliance monitoring, including the collection and analysis of split samples, inspection of 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, incurred after the effective date of this Order.

I. "Paragraph" shall mean a portion of this Order identified by a capital letter.

J. "Parties" shall mean the United States of America and Respondent.

- K. "Past Response 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 paid or incurred at the Site prior to September 6, 2000.
- L. "Pollutant or Contaminant" shall mean any substance defined in Section 101 (33) of CERCLA, 42 U.S.C. § 9601(33).
- M. "RCRA" shall mean the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901 et. seq. (also known as the Resource Conservation and Recovery Act).
- N. "Respondent" shall mean Exxon Mobil Corporation.
- O. "Section" shall mean a portion of this Order identified by a roman numeral.
- P. "Site" shall mean the former Atlantic Phosphate Works Fertilizer facility located at Hagood Avenue, 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.
- Q. "State" shall mean the State of South Carolina as represented by the South Carolina Department of Health and Environmental Control (SCDHEC).
- R. "United States" shall mean the United States of America, including the Department of Justice and EPA.
- S. "Work" shall mean all activities Respondent is required to perform under Sections VII, XIX, and XX and XXI of this Order.

IV. STATEMENT OF PURPOSE

In entering into this Consent Order, the mutual objectives of EPA and Respondent are: 1) 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 2) Develop and evaluate alternatives for response action to prevent, mitigate or otherwise respond to the migration or the release or threatened release of hazardous substances and 3) Recover Past and Future Response Costs related to this Order. EPA and Respondent have agreed that, based on currently available information, use of CERCLA Non-Time Critical Removal Action authority at this Site is the most efficient mechanism to achieve the above stated objectives without compromising statutory requirements of the NCP and active public participation in the response action selected for this Site. While the present Order on Consent only requires a determination of the nature and extent of the contamination and the development of response alternatives, it is the present intention of

the parties to enter into a subsequent Order on Consent to implement a selected response, subject to their mutual agreement on the terms and conditions.

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 FACT

A. The former Atlantic Phosphate Works facility, hereinafter referred to as the "Site", is situated along the Ashley River at the end of Hagood Avenue in Charleston, South Carolina. The Site is bound to the north by tidal marsh, to the west by the Ashley River, and to the south and east by commercial/industrial areas. Specifically, the Site is located at 32°49'34.0" North latitude and 79°57'43.8" West longitude. Primary access to the Site is by Hagood Avenue, which enters the Site from the east. The Site is currently occupied by Plant Hagood, an electric peaking power plant operated by South Carolina Electric and Gas.

B. Phosphate-based fertilizer manufacturing was conducted at this Site from the late 1800's to the early 1940's. All structures related to fertilizer production were removed by 1945. Given the time of operation, detailed ownership history is not available in the Site file. However, Sanborn Fire Insurance Maps from the early 1900's identify this Site as Virginia-Carolina Chemical Company's Atlantic Phosphate Works. By way of a corporate merger in 1999, the Exxon Mobil Corporation is successor in interest to former VC Chemical Corporation phosphate-based fertilizer manufacturing activities conducted at the Site.

C. Phosphate-based fertilizer manufacturing conducted at the Site generally involved reacting phosphate ores with sulfuric acid to produce phosphoric acid, the building block of Nitrogen-Phosphorus-Potassium (N-P-K) agricultural fertilizers. Sulfuric acid was manufactured on-site using the lead-chamber process. Sulfur was burned in the presence of oxygen to produce sulfur trioxide gas (SO₃). Before 1935, pyrite ores (FeS₂) were a common source of sulfur. Elemental sulfur was later substituted in the process due to economic advantages in product purity. Sulfur trioxide gas (SO₃) was reacted with water mist (H₂O) by passing through a Glover Tower to produce sulfuric acid (H₂SO₄). Sulfuric acid was stored in lead-lined chambers for use in the production of superphosphate. Historical aerial photographs and Sanborn Fire Insurance Maps of the Site depict sulfuric acid chambers, sulfur storage bins, pyrite sheds and other structures common to the phosphate-based fertilizer manufacturing process.

D. Environmental impacts typically associated with the above described process include acidic pH conditions and elevated concentrations of lead and arsenic in soil, sediment, shallow groundwater, and surface water in close proximity to the former location of the acid chambers. Acidic pH conditions tend to increase the solubility of some inorganic constituents, thus facilitating contaminant transport pathways that may adversely impact human health and/or the environment.

E. In September 1999, EPA conducted an Expanded Site Inspection (ESI) at the Site to gather environmental characterization data needed to determine its potential eligibility for the National Priorities List (NPL). The ESI effort consisted of the collection and analysis of 20 surface/subsurface soil samples, 13 sediment samples, 4 groundwater samples and 12 surface water samples from and immediately adjacent to the Site.

F. Lead and arsenic were detected at elevated levels at points within the Site in surface and subsurface soil during the ESI. The maximum concentration of lead detected in surface soil and subsurface soil was 24,000 mg/kg and 93,000 mg/kg, respectively. The maximum concentration of arsenic detected in surface soil and subsurface was 430 mg/kg and 1,400 mg/kg, respectively. Moreover, refractory bricks and other construction/demolition debris from the mill infrastructure was observed in the intertidal zone of the Ashley River on the western side of the Site.

G. Sediment samples were collected during the ESI from depths of 0 to 6 inches in the tidal marsh system of the Ashley River, located immediately adjacent to the Site on the north, and from the intertidal zone on the western side of the Site. Lead and arsenic were detected in surficial sediments of these tidal marsh areas at concentrations that exceed NOAA's Effects Range Median (ER-M) ecological screening criteria. Lead was detected at a concentration of 8,900 mg/kg. Arsenic was detected at a maximum concentration of 1,200 mg/kg. NOAA's ERM for lead and arsenic is 218 mg/kg and 70 mg/kg, respectively.

H. Shallow groundwater samples were collected during the ESI from temporary monitoring wells. Field parameters from APW-GW-02, believed to be installed near the former location of the acid chambers, exhibited an acidic pH condition of 2.66 standard units. Elevated levels of lead and arsenic were also detected in APW-GW-02. Reported concentrations of lead and arsenic in this temporary well were 8.0 mg/L and 3.3 mg/L, respectively.

VI. CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set forth above supporting the need for the Work constituting the response action as required in this Order, EPA has made the following Conclusions of Law and Determinations:

A. Atlantic Phosphate Works Site 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 liable under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

E. The conditions described in the Findings of Fact above constitute an actual or threatened "release" of a hazardous substance from the Site as defined by Sections 101(22) of CERCLA, 42 U.S.C. § 9601(22).

F. The conditions present at the Site may constitute an imminent and substantial endangerment to public health, welfare, or the environment. Factors that may be considered are set forth in Section 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan, as amended, 40 CFR Part 300 ("NCP").

G. The actual or threatened release of hazardous substances at or from the Site may present an imminent and substantial endangerment to public health, welfare, or the environment within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

H. The removal actions required by this Order are necessary to protect the public health, welfare, or the environment, and are not inconsistent with the NCP or CERCLA.

VII. ORDER

Based upon the foregoing Findings of Fact, and Conclusions of Law and Determinations for this Site, it is hereby ordered and agreed that Respondent shall comply with the following provisions, including but not limited to all attachments to this Order, and all documents incorporated by reference into this Order, and perform the following actions:

A. Respondent shall perform the Work required by this Consent Order itself or retain a contractor to perform the Work. Respondent shall notify EPA of Respondent's qualifications or the name and qualifications of such contractor within fourteen (14) days of the effective date of this Order. Respondent shall also notify EPA of the names and qualifications of any other contractors or subcontractors retained to perform the Work under this Consent Order at least fourteen (14) days prior to commencement of such action. EPA retains the right to disapprove of any, or all, of the contractors and/or subcontractors retained by the Respondent, or of Respondent's choice of itself to conduct the Work. If EPA disapproves of a selected contractor, Respondent shall retain a different contractor or notify EPA that it will perform the removal action itself within fourteen (14) days following EPA's disapproval and shall notify EPA of that contractor's name and qualifications, or Respondent's qualifications within fourteen (14) days of EPA's disapproval.

B. Within twenty-one (21) days after the effective date of this Consent Order, Respondent shall designate a Project Coordinator who shall be responsible for administration of all the Respondent's actions required by this Order. Respondent shall submit the designated coordinator's name, address, telephone number, and qualifications to EPA. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during Site work. EPA retains the right to disapprove of any Project Coordinator named by Respondent. If EPA

disapproves of a selected Project Coordinator, Respondent shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number, and qualifications within fourteen (14) days following EPA's disapproval. Receipt by Respondent's Project Coordinator of any notice or communication from EPA relating to this Order shall constitute receipt by Respondent.

C. EPA has designated Craig Zeller, P.E. of the EPA Region 4 North Site Management Branch as its Remedial Project Manager (RPM). Respondent shall direct all submissions required by this Consent Order to the RPM at 61 Forsyth Street, SW, Atlanta, Georgia 30303. EPA and Respondent shall have the right, subject to the immediately preceding paragraph, to change their designated Project Coordinator. Respondent shall notify EPA fourteen (14) days before such a change is made. The initial notification may be orally made but it shall be promptly followed by a written notice.

D. Respondent shall conduct an Engineering Evaluation Cost Analysis (EE/CA) at the Site that is consistent with Section 300.415(b)(4) of the NCP and in accordance with reference document EPA/540-R-93-057, OSWER Directive 9360.0-32, August 1993; Guidance on Conducting Non-Time Critical Removal Actions Under CERCLA,

E. Within forty-five (45) days after the effective date of this Consent Order, Respondent shall submit to EPA for review a Draft EE/CA Work Plan. The EE/CA Work Plan shall provide an outline of the major components of the EE/CA process which includes Site characterization, identification of removal action objectives, identification and analysis of removal option alternatives, comparative analysis of removal action alternatives, and the recommended removal action alternative. The EE/CA Work Plan shall focus on Site characterization and present a comprehensive strategy to: 1) fully determine the nature/extent of contamination present; and 2) evaluate potential current/future risks posed to human health and the environment. The EE/CA Work Plan shall also include a comprehensive project schedule for completion of each major activity required by this Consent Order and the submission of each required deliverable. The project schedule shall reflect completion of the EE/CA process, or submittal of the Final EE/CA Report within 365 days from the effective date of this Consent Order. The EPA approved schedule contained in the EE/CA Work Plan shall become an enforceable component of this Consent Order. Modifications to the EE/CA project schedule may be made with mutual consent between the designated Project Coordinators of the Respondent and EPA. It is anticipated by EPA and Respondent that one combined EE/CA Work Plan will be prepared for the Site and two other Sites, Stono Phosphate Works and Swift Agri-Chem (AOC's Docket numbers _____ and _____). The combined EE/CA Work Plan shall apply to all work activities at the three Sites, and any other Sites as mutually agreed upon by EPA and Respondent. It shall identify any Site-specific work activities applicable to a particular Site, and such Site specific requirements shall control in the event of any conflicts with the general requirements of the EE/CA Work Plan.

F. The EE/CA Work Plan shall present a field sampling and analysis program designed to provide data of sufficient quality and quantity to evaluate alternatives that achieve the identified Removal

Action Objectives. The sampling and analysis plan shall present a comprehensive approach for the media to be investigated (surface/subsurface soils, groundwater, sediments, surface water, etc.), propose sample locations and frequency, and delineate required sample equipment, sampling procedures, sample handling and decontamination procedures for sampling equipment. In an effort to eliminate duplicity and to streamline Site characterization efforts, the proposed sampling strategy shall utilize previous data collected by EPA and Respondents, where available. All sampling and analysis conducted under this Consent Order shall be consistent with reference document Environmental and Investigations Standard Operating Procedures and Quality Assurance Manual (EISOPQAM), U.S. EPA - Region 4, Science and Ecosystems Support Division, Enforcement and Investigations Branch, May 1996 (as revised), or explain and provide rationale for deviations.

G. The EE/CA Work Plan shall present Site specific quality assurance and quality control protocols that will be utilized by the Respondent to generate data that achieves desired data quality objectives. Respondent shall ensure that the laboratory used to perform the analysis is certified in the State of South Carolina and participates in a QA/QC program that complies with appropriate EPA guidance.

H. The EE/CA Work Plan shall include a Site specific Health and Safety Plan that conforms with the Respondent's health and safety program and current applicable Occupational Safety and Health Administration (OSHA) regulations found at 29 CFR Part 1910.

I. Respondent shall implement the EPA approved EE/CA Work Plan in accordance with the schedule contained therein. Within thirty (30) days of EPA approval of the EE/CA Plan, Respondent shall mobilize to the Site for sample collection activities.

J. Following completion of the EE/CA field characterization efforts, Respondent shall submit the Draft EE/CA Report for EPA review and technical comment. The Draft EE/CA Report shall summarize available analytical data to spatially evaluate the nature/extent of contaminant(s) present in the media of concern, and to identify potential source(s) of such contaminant(s). The Draft EE/CA Report shall include a streamlined risk assessment to evaluate potential risks posed to human health and the environment under the assumption that no response action(s) would be taken at the Site. The streamlined risk assessment should focus on the specific Removal Action Objectives and should be consistent with established EPA protocols delineated in EPA's Risk Assessment Guidance for Superfund and other appropriate supplements or addenda thereto. The results of the streamlined risk assessment will be utilized by EPA to determine whether a CERCLA response action is warranted at the Site, what exposures need to be addressed by the response action, and define appropriate cleanup goals. The Draft EE/CA Report shall identify and analyze Removal Action Alternatives based on the response action evaluation criteria of effectiveness, implementability, and cost. Subsequent to a comparative analysis of identified Removal Action Alternatives, the Draft EE/CA Report shall conclude with a refined conceptual description of the recommended Removal Action Alternative.

K. EPA may determine, based on review of the Draft EE/CA Report, that other tasks, including supplemental investigation work and/or engineering evaluation are necessary as part of the EE/CA process that are in addition to EPA-approved tasks and deliverables, including reports which may have been completed pursuant to this Consent Order and the Final EE/CA Work Plan. The Respondent shall implement any additional tasks which EPA determines are necessary to sufficiently complete the EE/CA and to select a response action that is adequately protective of human health and the environment. The additional tasks, if any, shall be completed in accordance with the standards, specifications and schedule determined or approved by EPA.

L. EPA will compile all documents generated pursuant to this Consent Order and other Site specific information in an Administrative Record for the Site. Upon EPA approval of the Final EE/CA Report, EPA will publish a public notice of availability of the Administrative Record. Pursuant to NCP requirements, a 30-day public comment period will be held on EPA's recommended Removal Action and other supporting documentation in the Administrative Record, EPA will respond to all significant comments received during the formal comment period and include a written response to comments received in the Administrative Record. EPA will prepare the Action Memorandum for the Site which will substantiate the need for a Removal Action, identify the proposed Removal Action, and explain the rationale for the Removal Action selected. Issuance of the Action Memorandum by EPA will complete the EE/CA process and fulfill the obligations of the Respondent under this Consent Order.

M. Deliverables, including reports, plans or other correspondence to be submitted per 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. Three (3) copies of each document or deliverable shall be submitted to the EPA Project Manager below:

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

N. 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 results of sampling and tests and any 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 month; (4) 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 (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 EE/CA 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 tenth day of every month following the effective date of this Consent Order.

VIII. AUTHORITY OF THE EPA REMEDIAL PROJECT MANAGER

The Remedial Project Manager shall be responsible for overseeing the Respondent's implementation of this Order. The Remedial Project Manager shall have the authority to halt, conduct, or direct any Work required by this Order, or to direct any other removal action undertaken at the Site. Absence of the Remedial Project Manager from the Site shall not be cause for stoppage of work unless specifically directed by the Remedial Project Manager.

IX. REIMBURSEMENT OF COSTS

Within forty-five (45) days after the effective date of the Order Respondents shall pay \$57,017.46 in the manner detailed below, for reimbursement of Past Response Costs paid by the United States. Past Response Costs are all costs, including, but not limited to, direct and indirect costs and interest, that the United States, its employees, agents, contractors, consultants, and other authorized representatives incurred or paid with regard to the Site prior to September 6, 2000.

In addition, Respondents shall reimburse EPA for all Future Response Costs, not inconsistent with the NCP, incurred by the United States. Future Response Costs are all costs, including, but not limited to, direct and indirect costs, that the United States incurs in reviewing or developing plans, reports and other items pursuant to this AOC, verifying the Work, or otherwise implementing, overseeing, or enforcing this AOC. Future Response Costs shall also include all costs, including direct and indirect costs, paid by the United States in connection with the Site after September 6, 2000.

On a periodic basis, EPA shall send to Respondent a bill for Future Response Costs that includes a cost summary. At Respondent's request, EPA shall furnish Respondent documentation of specific items of the United States' or its contractors' costs or descriptions of the work performed to allow Respondent to determine any accounting errors or inconsistencies with the NCP. Respondent shall within forty-five (45) days of receipt of the bill, remit a cashier's or certified check for the amount of the bill made payable to the "Hazardous Substance Superfund," to the following address:

U.S. EPA, Region 4
Superfund Accounting
P.O. Box 100142
Atlanta, GA 30384
Attn.: Collection Officer of Superfund

Respondent shall simultaneously transmit a copy of the check to Ms. Paula V. Batchelor at:

U.S. EPA Region 4
Program Services Branch, 11th Floor
Waste Management Division
61 Forsyth St. SW
Atlanta, GA 30303

Payments shall be designated as "Response Costs -Swift Fertilizer Site" and shall reference the payor's name and address, the EPA Site identification number A4F3, and the docket number of this Order.

In the event that the payment for Past Response Costs is not made within forty-five (45) days of the effective date of this AOC or the payments for Future Response Costs are not made within forty-five (45) days of the Respondent's receipt of the bill Respondent shall pay interest on the unpaid balance. Interest is established at the rate specified in Section 107(a) of CERCLA. The interest to be paid for Respondent's failure to make timely payments on Past Response Costs shall begin to accrue on the effective date of the Order. The interest for Respondent's failure to make timely payments on Future Response Costs shall begin to accrue on the date of the Respondent's receipt of the bill. Interest shall accrue at the rate specified through the date of the payment. Payments of interest made under this paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondent's failure to make timely payments under this Section.

Respondent may dispute all or part of a bill for Future Response Costs submitted under this Order, if Respondent alleges that EPA has made an accounting error, or if Respondent alleges that a cost item is inconsistent with the NCP.

If any dispute over costs is resolved before payment is due, the amount due will be adjusted as necessary. If the dispute is not resolved before payment is due, Respondent shall pay the full amount of the uncontested costs into the Hazardous Substance Fund as specified above on or before the due date. Within the same time period, Respondent shall pay the full amount of the contested costs into an interest-bearing escrow account. Respondent shall simultaneously transmit a copy of both checks to the RPM. Respondent shall ensure that the prevailing party or parties in the dispute shall receive the amount upon which they prevailed from the escrow funds plus interest within ten (10) days after the dispute is resolved.

X. DISPUTE RESOLUTION

The parties to this Order shall attempt to resolve, expeditiously and informally, any disagreements concerning this Order.

If the Respondent objects to any EPA action taken pursuant to this Order, including billings for Future Response Costs, the Respondent shall notify EPA in writing of its objections within ten (10) days of receipt of notice of such action, unless the objections have been informally resolved.

EPA and Respondent shall within ten (10) days from EPA's receipt of the Respondent's written objections attempt to resolve the dispute through formal negotiations ("Negotiation Period"). The Negotiation Period may be extended at the sole discretion of EPA. EPA's decision regarding an extension of the Negotiation Period shall not constitute an EPA action subject to dispute resolution or a final agency action giving rise to judicial review.

Any agreement reached by the parties pursuant to this Section shall be in writing, signed by both parties, and shall upon the signature by both parties be deemed an amendment to, and incorporated into and become an enforceable element of, this Order. If the parties are unable to reach an agreement within the Negotiation Period, an EPA management official at the Branch Chief level or higher will issue a written decision on the dispute to the Respondent. The decision of EPA shall be deemed an amendment to, and incorporated into and become an enforceable element of, this Order upon Respondent's receipt of the EPA decision regarding the dispute. Respondent's obligations under this Order shall not be tolled by submission of any objection for dispute resolution under this Section, unless EPA agrees to toll the obligation pending the resolution of the dispute.

Following resolution of the dispute, as provided by this section, Respondent shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs earlier. No EPA decision made pursuant to this Section shall constitute a final agency action giving rise to judicial review prior to a judicial action brought by the United States to enforce the decision, but Respondent reserves its rights to challenge the validity of any EPA decision under this Section if the United States brings an enforcement action.

XI. FORCE MAJEURE

Respondent agrees to perform all requirements under this Order within the time limits established under this Order, unless the performance is delayed by a *force majeure*. For purposes of this Order, a *force majeure* is defined as any event arising from causes beyond the control of Respondent or of any entity controlled by Respondent, including but not limited to its contractors and subcontractors, that delays or prevents performance of any obligation under this Order despite Respondent's best efforts to fulfill the obligation. *Force majeure* does not include financial inability to complete the Work or increased cost of performance. *Force majeure* includes the Respondent's inability to acquire access to the Site to perform the Work despite Respondent's good faith efforts to do so, and in such event, the EPA or the United States may, as they deem appropriate, assist Respondent in obtaining access to the Site.

Respondent shall notify EPA orally within 24 hours after the event, and in writing within 3 days after Respondent becomes or should have become aware of events which constitute a *force majeure*. Such notice shall: identify the event causing the delay or anticipated delays; estimate the anticipated length of delay, including necessary demobilization and re-mobilization; state the measures taken or to be taken to minimize the delay; and estimate the timetable for implementation of the measures. Respondent shall take all reasonable measures to avoid and

minimize the delay. Failure to comply with the notice provision of this Section shall waive any claim of *force majeure* by the Respondent.

If EPA determines a delay in performance of a requirement under this Order is or was attributable to a *force majeure*, the period for performance of that requirement shall be extended as deemed necessary by EPA. Such an extension shall not alter Respondent's obligation to perform or complete other tasks required by the Order which are not directly affected by the *force majeure*. If a *force majeure* results in an inability of Respondent to obtain access to the Site or otherwise to comply with any requirements under this Order, Respondent may seek permission from EPA under Section XIX to deviate from such requirement and propose modifications to the approved Work Plan, schedule, or Statement of Work, as appropriate.

XII. STIPULATED AND STATUTORY PENALTIES

For each day, or portion thereof, that Respondent fails to perform, fully, any requirement of this Order in accordance with the schedule established pursuant to this Order after receipt of written notice from EPA of such non-compliance, Respondent shall be liable as follows,

Period of Failure to Comply Penalty Per Violation Per Day

1st through 14th day	\$250
15th through 44th day	\$500
45th day and beyond	\$750

Upon receipt of written demand by EPA Respondent shall make payment to EPA within 30 days. Interest shall accrue on late payments as of the date the payment is due which is the date of the violation or act of non-compliance triggering the stipulated penalties.

Even if violations are simultaneous, separate penalties shall accrue for separate violations of this Order. Penalties accrue and are assessed per violation per day. The payment of penalties shall not alter in any way Respondent's obligations to complete the performance of the Work required under this Order.

Violation of any provision of this Order may subject Respondent to civil penalties of up to twenty-seven thousand, five hundred dollars (\$27,500) per violation per day, as provided in Section 106(b)(1) of CERCLA, 42 U.S.C. § 9606(b)(1). Respondent may also be subject to punitive damages in an amount up to three times the amount of any cost incurred by the United States as a result of such violation as provided in Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Should Respondent violate this Order or any portion hereof, EPA may carry out the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Order pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606, in which event, Respondent reserves its rights to challenge, and assert all defenses, to the imposition of the above-described statutory penalties and punitive damages.

XIII. RESERVATION OF RIGHTS

Except as specifically provided in this Order, nothing herein shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants or hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Order, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring the Respondent in the future to perform additional activities pursuant to CERCLA or any other applicable law. EPA reserves the right to bring an action against Respondent under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States related to this Order or the Site and not reimbursed by Respondent. Except as otherwise provided in this Order, Respondent reserves all its rights to assert all defenses regarding any orders, legal or equitable proceedings or other actions brought by EPA or the United States against Respondent, or its predecessors, successors, assigns, affiliates, present or former officers, directors, agents, representatives, or shareholders.

XIV. OTHER CLAIMS

By issuance of this Order, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent and not caused or contributed to by any acts or omissions of the United States and the EPA. Neither the United States nor EPA shall be deemed a party to any contract entered into by the Respondent or its directors, officers, employees, agents, successors, representatives, assign, contractor, or consultants in carrying out actions pursuant to this Order.

Except as expressly provided in Section XV - Covenant Not To Sue, nothing in this Order constitutes a satisfaction of or release from any claim or cause of action against the Respondent or any person not a party to this Order, for any liability such person may have under CERCLA, other statutes, or the common law, including but not limited to any claims of the United States for costs, damages and interest under Sections 106(a) and 107(a) of CERCLA, 42 U.S.C. §§ 9606(a) and 9607(a).

This Order does not constitute a preauthorization of funds under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2). The Respondent waives any claim to payment under Sections 106(b), 111, and 112 of CERCLA, 42 U.S.C. §§ 9606(b), 9611, and 9612, against the United States or the Hazardous Substance Superfund arising out of any action performed under this Order.

No action or decision by EPA pursuant to this Order shall give rise to any right to judicial review except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XV. COVENANT NOT TO SUE

Upon issuance of the EPA notice referred to in Section XXI - Notice of Completion, EPA covenants not to sue Respondent for judicial imposition of damages or civil penalties or to take administrative action against Respondent for any failure to perform removal actions agreed to in this Order except as otherwise reserved herein.

Except as otherwise specifically provided in this Order, in consideration and upon Respondent's payment of the response costs specified in Section IX of this Order, EPA covenants not to sue or to take administrative action against Respondent under Section 107(a) of CERCLA for recovery of Past and Future Response Costs incurred by the United States in connection with this removal action or this Order. This covenant not to sue shall take effect upon the receipt by EPA of the payments required by Section IX - Reimbursement of Costs.

These covenants not to sue are conditioned upon the complete and satisfactory performance by Respondent of its obligations under this Order. These covenants not to sue extend only to the Respondent and its predecessors, successors, assigns, affiliates, present or former officers, directors, shareholders, agents, or representatives and do not extend to any other person.

XVI. CONTRIBUTION PROTECTION

With regard to claims for contribution against Respondent for Matters Addressed in this Order, the Parties hereto agree that the Respondent and its predecessors, successors, assigns, affiliates, present or former officers, directors, shareholders, agents, or representatives are entitled to protection from contribution actions or claims to the full extent provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4).

Nothing in this Order precludes the United States or the Respondent from asserting any claim, causes of action or demands against any persons not parties to this Order for indemnification, contribution, cost recovery, or other legal or equitable claims.

XVII. INDEMNIFICATION

Respondent agrees to indemnify, save and hold harmless the United States, its officials, agents, contractors, subcontractors, employees and representatives from any and all claims or causes of action: (A) arising from, or on account of, acts or omissions of Respondent, Respondent's officers, heirs, directors, employees, agents, contractors, subcontractors, receivers, trustees, successors or assigns, in carrying out actions pursuant to Order; and (B) for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between Respondent, and any persons for in performance of work, on or relating to the Site, including claims on account of construction delays. In addition, Respondent agrees to pay the United States all costs incurred by the United States, including litigation costs arising from or on account of claims made against the United States based on any of the acts or omissions referred to in this

Section. The requirements of this Section do not apply to the extent that any claim or cause of action results from any act or omission of the indemnified parties.

XVIII. INSURANCE

At least seven days prior to commencing any on-site work under this Order, Respondent shall secure, and shall maintain for the duration of this Order, comprehensive general liability insurance and automobile insurance with limits of one million dollars, combined single limit. Within the same time period, Respondent shall provide EPA with certificates of such insurance. If Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondent need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor or otherwise demonstrate sufficient financial responsibility by Respondent to comply with the Order.

XIX. MODIFICATIONS

Modifications to any plan, schedule or Statement of Work may be made in writing by the RPM or at the RPM's oral direction. If the RPM makes an oral modification, it will be memorialized in writing within 7 days; provided, however, that the effective date of the modification shall be the date of the RPM's oral direction. Any other requirements of the Order may be modified in writing by mutual agreement of the parties.

If Respondent seeks permission to deviate from any approved Work Plan or schedule or Statement of Work, Respondent's Project Coordinator shall submit a written request to EPA for approval outlining the proposed Work Plan modification and its basis.

No informal advice, guidance, suggestion, or comment by EPA regarding reports, plans, specifications, schedules, or any other writing submitted by Respondent shall relieve Respondent of its obligations to obtain such formal approval as may be required by this Order, and to comply with all requirements of this Order unless it is formally modified. The Respondent shall propose a procedure in the EE/CA Work Plan for obtaining EPA's formal approval of any modifications to plans, schedules, or the Statement of Work (including without limitation, additional work, interim response actions, and treatability studies).

XX. ADDITIONAL REMOVAL ACTION

EPA and Respondent recognize that the purpose of this Order is to conduct an EE/CA at the Site, which will determine the nature and extent of the threat to the public health, 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 to develop and evaluate alternatives for response action to prevent, mitigate or otherwise respond to the migration or the release or threatened release of hazardous substances. However, both parties recognize that it may be

beneficial to immediately address Site conditions discovered during the course of the investigation. To that end, and to avoid unnecessary delay, if EPA determines that a removal action not included within the original scope of this Order may be necessary to protect public health, welfare, or the environment, EPA will notify Respondent of that determination. If Respondent agrees, Respondent shall submit for approval by EPA a Work Plan for the removal action. The plan shall conform to the applicable requirements of Section VII of this Order. Upon EPA's approval of the plan, Respondent shall implement the plan for additional removal action in accordance with the provisions and schedule contained therein. If Respondent does not agree that such an action is necessary, the terms of the performance of any such work shall be negotiated by Respondent and EPA outside of the authority of this Order, or such action may be taken by EPA. This section does not alter or diminish the RPM's authority to make oral modifications to any plan or schedule pursuant to Section XIX - Modifications.

XXI. NOTICE OF COMPLETION

When EPA determines, after EPA's review of the Final Report, that all removal actions have been fully performed in accordance with this Order, with the exception of any continuing obligations required by this Order, EPA will provide notice to the Respondent ("Notice of Completion"). If EPA determines that any removal actions have not been completed in accordance with this Order, EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent modify the Work Plan if appropriate in order to correct such deficiencies ("Notice of Deficiencies"). Respondent shall implement the modified and approved Work Plan and shall submit a modified Final Report in accordance with the EPA Notice of Deficiencies. Failure by Respondent to implement the approved modified Work Plan shall be a violation of this Order. If EPA determines that Respondent has corrected the matters in the Notice of Deficiencies, EPA will provide the Notice of Completion to Respondent.

XXII. SEVERABILITY

If a court issues an order that invalidates any provision of this Order or finds that Respondent has sufficient cause not to comply with one or more provisions of this Order, Respondent shall remain bound to comply with all provisions of this Order not invalidated or determined to be subject to a sufficient cause defense by the court's order.

XXIII. EFFECTIVE DATE

This Order shall be effective 5 days after the Order is signed by the Chief, North Site Management Branch of EPA, Region 4.

The undersigned representatives of Respondent certifies that they are fully authorized to enter into the terms and conditions of this Order and to bind the party they represents to this document.

Agreed this _____ day of _____, 2000.

BY _____

Title _____

It is so ORDERED and Agreed this _____ day of _____, 2000.

BY: Robert Jourdan DATE: 9/29/00

Robert Jourdan
Chief, North Superfund Management Branch
Region 4
U.S. Environmental Protection Agency

EFFECTIVE DATE: _____

Agreed this 29 day of September, 2000.

BY *[Signature]*

Title manages major projects Remediation Services

It is so ORDERED and Agreed this _____ day of _____, 2000.

BY: _____ DATE: _____

Robert Jourdan
Chief, North Superfund Management Branch
Region 4
U.S. Environmental Protection Agency

EFFECTIVE DATE: _____