APPENDIX A

STATEMENT OF WORK

FMC POND 16 S TIME CRITICAL REMOVAL ACTION
EASTERN MICHAUD FLATS SUPERFUND SITE
POCATELLO, IDAHO

I. PURPOSE

The purpose of this Statement of Work (SOW) is to fully implement the Administrative Order in accordance with the Action Memorandum issued on December 13, 2006, for a Time Critical Removal Action that includes installation of an interim gas removal and treatment system at Pond 16S (removal action).

The Work to be completed under this SOW shall include preparation, delivery and implementation of: 1) Gas Characterization Work Plan and Ambient Air Monitoring Plan; 2) Pre final and Final Removal Action Designs; and 3) Removal Action Work Plan. A Removal Action Completion Report is also required. Removal activities shall be completed in accordance with schedule in Table 1 of this SOW.

II. PERFORMANCE OBJECTIVES

The Removal Action shall be designed, constructed and implemented to satisfy the following performance objectives:

1. Design, construct and operate a gas extraction and treatment system for the removal of any gases found at levels of concern beneath the cap at Pond 16S, including but not limited to phosphine, hydrogen cyanide, and hydrogen sulfide, such that concentrations of gases at levels of concern beneath the cap are reduced to levels that are sustainable using the current perimeter gas extraction system or some other EPA approved long-term gas extraction/treatment system. At a minimum, gas concentrations must be reduced to below 10% of the lower explosive limit (LEL), as measured in every thermal monitoring point (TMP) well casing for a period of one year.

2. The system design and operation must include measures to ensure that additional air is not drawn in beneath the cap as gas is extracted. The design and operation must address the balancing of gas extracted and any inert gas injected to ensure that introduction of gas does not cause releases, if gas injection is included as part of the design.

3. The gas extraction and treatment system must be designed and operated such that gas concentration from any discharge point, including the treatment system exhaust, TMPs, and any other discharge points in the system, does not exceed levels that are protective of human health

and the environment, including workers and site visitors. The system must be designed and operated such that any discharge does not exceed such levels at any time, even during system upset or maintenance conditions. Discharge point(s) for the system must be designed using best engineering practices to protect on site workers from exposure to toxic gases.

4. The system must be designed so system malfunction or failure are detected and addressed in a timely manner.

5. The system design and work plan must provide for a monitoring and sampling/analysis plan that will include:

- Periodic monitoring and sample collection and analysis sufficient to demonstrate compliance with Performance Objectives 1 through 3 above.

- Monitoring and flow measurements sufficient to calculate the mass balance of the volume of air and other gases extracted, gas treated, gas discharged, any gas injected, and air introduced into the system, during system operation.

- Ambient air monitoring and/or sampling and analysis, to determine the nature and extent of any releases of gas at and around Pond 16S at levels that may endanger public health or the environment and to ensure that gas is not leaking out of the system or from Pond 16S.

III. WORK TO BE PERFORMED BY RESPONDENT

Respondent shall complete the following tasks:

Task 1 – Gas Characterization and Ambient Monitoring Plan

Respondent shall prepare a plan to characterize gases accumulating under Ponds 16S cap sufficient to identify gas contaminants that may endanger public health or the environment, including phosphine, hydrogen sulfide and hydrogen cyanide. Respondent shall also prepare an Ambient Air Monitoring Plan to determine the nature and extent of any releases of gas at and around Pond 16S at levels that may endanger public health or the environment, and to ensure that gas is not leaking out of the system or through the cap at Pond 16S .

Gas Characterization Work Plan

1) Respondent shall prepare a Gas Characterization Work Plan that provides for characterization of gas contaminants that may be present under the cap at Pond 16s at levels that may endanger human health or the environment. The Gas Characterization Work Plan must include:
a description of the sampling activities; schedule for conducting sampling, Sampling and Analysis Plan and QAPP as defined in Section IV of this SOW. Data collected from this sampling shall be assembled into a report and submitted to EPA in accordance with the schedule in the Gas Characterization Work Plan.

Ambient Monitoring Plan

2) Respondent shall prepare an Ambient Air Monitoring Plan to determine the nature and extent of any releases of gas at and around Pond 16S at levels that may endanger public health or the environment, and to ensure that gas is not leaking out of the system or through the cap at Pond 16S prior to and during implementation of the Removal Action. The Ambient Monitoring Plan must include: A description of the sampling activities; schedule for conducting sampling, Sampling and Analysis Plan and QAPP as defined in Section IV of this SOW. Data collected shall be assembled as it is collected and reported to EPA in accordance with the schedule in the Ambient Monitoring Plan for this Removal Action.

Task 2 - Project Design Documents

Respondent shall prepare project design documents, including construction plans and specifications, to implement the time critical removal action as described in this SOW and shall demonstrate that the system performs to meet performance objectives and all the objectives of the Action Memorandum. Design documents, including plans and specifications, shall be submitted in accordance with the schedule set forth in Table 1 of this SOW.

Pre-final (60%) and Final (100%) Design

1) **Pre-final Design (60%)** shall include a Design Analysis Report, Construction Plans and Specifications (including any sketches and drawings), the proposed location of the process or construction activity, and a schedule for construction of the system.

   It shall also include the Pre-final Design Analysis Report, which shall include the following information:

   • Discussion of the data collected under task 1 and demonstration of the effectiveness of the proposed treatment system to satisfy performance objectives.

   • Technical parameters and supporting calculations upon which the design for the gas extraction and treatment system shall be based, including but not limited to:

      • The gas flow rate into the treatment unit, treatment efficiency of the treatment unit, gas flow rate and concentrations exiting the treatment unit, gas generation rate for gases found at levels of concern, including for phosphine, hydrogen cyanide and hydrogen sulfide.

   •The need to modifiy the leachate collection system to prevent the entrance of air into the leachate collection pipe under Pond 16S.

•Description of the analyses conducted to select the design approach, including a summary and detailed justification of design assumptions and verification that the design will meet performance objectives;

•Any applicable or relevant and appropriate (ARAR) substantive environmental requirements;

•Plan for minimizing effects on human health and the environment during the construction phase and implementation phase.

2) Final *(*100%) Design

The Final Design shall include:

.• Final Design Report addressing all EPA comments on the Pre Final Design including all elements identified above for Pre Final Design Report

• Final construction documents including final plans and specifications;

• Final cost estimate for the Removal Action;

• The construction schedule based on 100% design, including a schedule for construction activities that will proceed upon approval of the 100% Design Report.

• A Construction Quality Assurance Plan (CQAP) which is described in additional detail in Section IV of this SOW. The CQAP shall detail the verification method and approach to quality assurance during construction activities in the project area, including compliance with ARARs. The CQAP will describe measurement quality objectives and the methods used to measure compliance with them. The CQAP also will specify a quality assurance official (CQA), independent of the Respondent's Project Coordinator and independent of the project engineer/site supervisor, to conduct a quality assurance program during the construction phase of the project. The CQA is responsible for implementation and maintenance of the CQAP, and for maintaining awareness of the entire project to detect conditions that may adversely affect quality. The CQA shall, at a minimum, have knowledge, technical qualifications, and experience relating to hazardous waste landfill closure and gas collection and gas management and shall be in daily contact with the Respondent's Project Coordinator and project engineer/site supervisor.

• A Construction Quality Control Plan and Statement of Qualifications (by constructor);

• Estimated cost for monitoring and maintenance;

Task 3 - Removal Action Work Plan and Implementation

Respondent shall prepare a Removal Action Work Plan that describes the implementation of the removal action, including how activities are to be implemented by Respondent and coordinated with EPA. The Work Plan shall include the following elements, at a minimum:

● Description of the removal action and construction activities, including project organization; construction contractor selection; site mobilization and preparatory work; performance verification; and quality assurance;

● Schedule of activities for completion of the Removal Action, including inspections, meetings, reporting and preparation of documents referenced in this task;

● A Sampling and Analysis Plan and QAPP as defined in Section IV of this SOW for sampling conducted under the Removal Action Work Plan

● A Monitoring and Reporting Plan for the Removal Action to demonstrate that the performance objectives identified in Section II of the SOW have been met. The monitoring plan must describe the monitoring activities, including inspections, data analysis, schedules, specific reporting requirements, and the process to be followed for addressing any contingency or corrective actions.

● Procedures for processing design changes and securing EPA review and approval of such changes to ensure changes conform to performance objectives and requirements of this SOW, and are consistent with the objectives of this removal action;

The Removal Action Work Plan also shall include a schedule for implementation of all Removal Action tasks identified in the Final Design Report, as approved by EPA.

The Respondent shall prepare a Health and Safety Plan for EPA review and comment. The Health and Safety Plan shall ensure protection of the public health and safety during performance of on-site work under this Order. This plan shall be prepared in accordance with EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June 1992). In addition, the plan shall comply with all currently applicable Occupational Safety and Health Administration ("OSHA") regulations found at 29 C.F.R. Part 1910. If EPA determines that it is appropriate, the plan shall also include contingency planning. Respondent may utilize existing Health and Safety Plan (HASP) project documents or other company/contractor HASPs provided that Respondent demonstrates the HASP has been modified, as necessary, or is otherwise sufficient to address the activities covered by this SOW.

The Removal Action Work Plan shall be submitted to EPA for review and approval in accordance with the schedule set forth in Table 1 of this SOW.

As specified in Table 1, Respondent shall provide notification to EPA fifteen (15) days prior to initiation of fieldwork to allow EPA to coordinate field oversight activities.

Respondent shall complete the removal action in accordance with the approved documents, including Gas Characterization Work Plan, Ambient Monitoring Plan, Final Design documents and Removal Action Work Plan.

Written weekly reports shall be prepared and submitted to EPA during the removal action. Weekly reports shall include work performed, problems encountered and solutions proposed; analytical data received during the period, system monitoring results, and work to be performed during the following week. Respondent shall inform EPA of the disposal facility proposed to receive any treatment media for disposal.

Within seven (7) days after Respondent makes a preliminary determination that construction is complete, Respondent shall orally notify EPA for the purposes of scheduling a final inspection and/or meeting. Within fourteen (14) days after the final inspection and/or meeting, Respondent shall send a letter to EPA stating that construction is complete and respond to any outstanding issues that were raised by EPA during the final inspection/meeting. Within 14 days of the final inspection the Respondent shall submit for EPA review and approval a Construction Completion Report. This report shall contain a description of the work described in the Final Design and Removal Action Work Plan and the work that was actually performed. In the report a registered professional engineer and Respondent shall state that the removal action has been constructed in accordance with EPA approved design and specifications. The report shall provide as-built drawings, signed and stamped by a professional engineer, showing the location of extraction and treatment system components and modifications to the existing gas extraction system.

Task 4 - Removal Action Completion Report

Within 30 days after completion of the removal action Respondent shall submit for EPA review and approval a Removal Action Completion Report. The Removal Action Completion Report shall include a good faith estimate of total costs or a statement of actual costs incurred in complying with the Order, a listing of quantities and types of materials removed off-site or handled on-site, a listing of the ultimate destination(s) of those materials, a presentation of the analytical results of all sampling and analyses performed (including a map showing the locations of any confirmatory samples), and accompanying appendices containing all relevant documentation generated during the removal action (e.g., manifests, invoices, bills, contracts, and permits). All analytical data collected under this Order shall be provided electronically to EPA in a format compatible with Microsoft Office 2003 data format (i.e., Access, Excel).

When submitting the final Removal Action Completion Report to EPA, the Respondent shall identify the Work that has been fully performed in accordance with this Order, and shall identify all continuing obligations, including monitoring, required by the Order.

The final Removal Action Completion Report shall also include the following certification signed by a person who supervised or directed the preparation of that report:

"Under penalty of perjury under the laws of the United States, I certify that to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of the report, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Task 5 - Community Involvement Activities

As requested by EPA, Respondent shall provide information supporting EPA's community involvement programs related to the Work performed pursuant to this Order. The Respondent shall participate in public meetings that may be held or sponsored by EPA to discuss activities concerning Work performed pursuant to this Order. Respondent shall coordinate with EPA on any other community involvement activities they take related to the Work performed pursuant to this Order.

IV. CONTENT OF SUPPORTING PLANS

Sampling and Analysis Plan

Respondent shall develop project-specific Sampling and Analysis Plans (SAPs), comprised of a Field Sampling Plan (FSP) and project-specific Quality Assurance Project Plan (QAPP) for sample analysis and data handling for any samples collected. The SAP [s] shall be based upon the SOW and EPA guidance, including but not limited to: "Guidance for Monitoring at Hazardous Waste Sites: Framework for Monitoring Plan Development & Implementation", (OSWER No. 9355.4-28, January 2004), and "Guidance for Choosing a Sampling Design for Environmental Data Collection (EPA QA/G-5S)" (EPA/240/R-02/005, December 2002).

The FSP will define in detail the sampling and data-gathering methods that will be used on the project. It will include sampling objectives, a detailed description of sampling activities, sample locations, sample analysis, sampling equipment and procedures, sampling schedule, station positioning, and sample handling (e.g., sample containers and labels, sample preservation).

The QAPP will describe the quality assurance and quality control protocols necessary to achieve required data quality objectives. The QAPP will be prepared in accordance with "EPA Requirements for Quality Assurance Project Plans (QA/R-5)" (EPA/240/B-01/003, March 2001) and "Guidance on Quality Assurance Project Plans (QA/G-5)" (EPA/600/R-98/018, February 1998), "Quality Assurance/Quality Control Guidance for Removal Activities: Sampling QA/QC Plan and Data Validation Procedures")OSWER Directive No. 9360.4-01, April 1,1990). The QAPP will address sampling procedures, sample custody, analytical procedures, and data reduction, validation, reporting, and personnel qualifications. The laboratory performing the work must have and follow an approved Quality Assurance (QA) program, which complies with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01-002, March 2001) or equivalent documentation as determined by EPA. If a laboratory not in the EPA

Contract Laboratory Program (CLP) is selected, the QAPP shall be consistent with the requirements of the CLP for laboratories proposed outside the CLP. Respondent shall use laboratories that have a documented Quality System that complies with ANSI/ASCQ E-4 1994, "Specification and Guidance for Quality Systems for Environmental Data Collection and Environmental Technology Programs" (American National Standard, January 5, 1995), and "EPA Requirements for Quality Management Plans (QA/R-2) (EPA/240/B-01/002, March 2001)," or equivalent documentation as determined by EPA. Respondent will provide assurances that EPA has access to laboratory personnel, equipment and records for sample collection, transportation, and analysis.

For methods/analytes that are not currently CLP methods/analytes, applicable requirements of the CLP will apply and where necessary, acceptance criteria and/or further quality control measures specific to the method/analyte will be specified in the QAPP.

All sampling and analyses performed pursuant to this Order shall conform to EPA direction, approval, and guidance regarding sampling, quality assurance/quality control (QA/QC), data validation, and chain-of-custody procedures

Upon request by EPA, Respondent shall have Respondent's laboratory analyze samples submitted by EPA for quality-assurance monitoring. Upon request by EPA, Respondent shall arrange for EPA personnel to audit any laboratory that performs analytical work under this Order. Prior to awarding any work to an analytical laboratory, Respondent will inform the laboratory that an audit may be performed, and that the laboratory agrees to coordinate with EPA prior to performing analyses. Respondent shall provide to EPA the quality assurance/quality control procedures followed by all sampling teams and laboratories performing data collection and/or analysis.

Upon request by EPA, Respondent shall allow EPA or its authorized representatives to take split and/or duplicate samples. Respondent shall notify EPA not less than 15 days in advance of any sample collection activity, unless shorter notice is agreed to by EPA. EPA shall have the right to take any additional samples that EPA deems necessary. Upon request, EPA shall allow Respondent to take split or duplicate samples of any samples it takes as part of its oversight of Respondent's implementation of the Work.

All analytical data collected under this Order shall be provided electronically to EPA.

Construction Quality Assurance Plan

The Construction Quality Assurance Plan (CQAP) describes the project-specific components of the performance methods and quality assurance program to ensure that the completed project meets or exceeds all design criteria, plans, and specifications. The CQAP Plan shall be submitted with the Final 100% design and shall be submitted prior to the start of construction in accordance with the approved construction schedule and Table 1. The Plan shall provide the following:

- Responsibilities and authorities of all organization and key personnel involved in the Removal Action construction, including EPA and other agencies.

- Qualifications of the Construction Quality Assurance (CQA) Officer. Establish the minimum training and experience of the CQA Officer and supporting inspection personnel.

- Inspection and verification activities. Establish the observations and tests that will be required to monitor the construction and/or installation of the components of the Removal Action. The plan shall include the scope and frequency of each type of inspection to be conducted. Inspections shall be required to verify compliance with environmental requirements and ensure compliance with all health and safety procedures.

- Performance standards and methods. Describe all performance standards and methods necessary to ensure implementation of the Removal Action. Performance monitoring requirements shall be stated to demonstrate that best management practices have been implemented.

- Sampling activities. Establish requirements for quality assurance sampling activities, including the sampling protocols, sample size, sample locations, frequency of testing, and acceptance/rejection criteria.

- Plans for correcting problems as addressed in the project specifications.

- Documentation. Establish the reporting requirements for construction quality assurance activities. This shall include such items as daily and weekly summary reports, inspection data sheets, problem identification and corrective measures reports, design acceptance reports, and final documentation. A description of the provisions for final storage of all records consistent with the requirements of the Order shall be included.

- Location and name of disposal facilities that will receive any waste.

V. SUMMARY OF MAJOR DELIVERABLES/SCHEDULE

The schedule for submission to EPA of deliverables described in the SOW is presented in Table 1.

TABLE 1 - Project Schedule

Task 1	1.1 Gas Characterization Work Plan	Due 7 days after the effective date of the Order.
	1.2 Ambient Monitoring Plan	Due 7 days after the effective date of the Order.
Task 2	2.1 Pre-Final (60%) Design	Within 30 days after EPA approval of Gas Characterization Work Plan
	2.2 Final (100%) Design	Within 21 days after receipt of EPA comments on the Pre-final Design, Task 2.1
Task 3	3.1 Removal Action Work Plan	Within 14 days after EPA approval of the Final (100%) Design.
	3.2 Notification of Removal Action Start	Provide notification to EPA 15 days prior to initiation of removal action fieldwork to allow EPA to coordinate field oversight activities.
Task 4	4.1 Removal Action Completion Report	Within 30 days after completion of removal action.