

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION X

IN THE MATTER OF:

FMC Operable Unit of the Eastern Michaud
Flats Superfund Site

FMC Corporation,

Respondent.

UNILATERAL ADMINISTRATIVE
ORDER FOR REMEDIAL DESIGN AND
REMEDIAL ACTION

EPA Docket No. CERCLA-10-2013-0116

Proceeding under Sections 106(a) of the
Comprehensive Environmental Response,
Compensation, and Liability Act, as
amended, 42 U.S.C. § 9606(a).

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I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Order (“Order”) is issued under the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended (“CERCLA”), 42 U.S.C. § 9606(a). This authority was delegated to the Administrator of the United States Environmental Protection Agency (“EPA”) by Executive Order No. 12580, 52 Fed. Reg. 2923 (Jan. 23, 1987), and further delegated to the Regional Administrators by EPA Delegation Nos. 14-14-A and 14-14-B, and by the Regional Administrator of EPA Region X to the Director, Office of Environmental Cleanup (ECL) by Regional Delegations Nos. 14-14-A and 14-14-B, and by the ECL Director to the ECL Associate Director and ECL Remedial Cleanup Program Manager by Regional Delegation Nos. 14-14-A(1) and 14-14-B(1).

2. This Order directs Respondent FMC Corporation to perform the remedial design and remedial action described in the Interim Record of Decision Amendment for FMC Operable Unit (“OU”) of the Eastern Michaud Superfund Site (“Site”), issued on September 27, 2012, near Pocatello, Idaho, and largely within the Fort Hall Indian Reservation of the Shoshone-Bannock Tribes (the “Tribes”).

3. EPA has consulted with the Shoshone Bannock Tribes of the Fort Hall Indian Reservation (the “Tribes”) and has notified both the Tribes and the State of Idaho (the “State”) of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

II. PARTIES BOUND

4. This Order applies to and is binding upon Respondent and its successors and assigns. Any change in ownership or control of the FMC OU or change in 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.

5. Respondent shall provide a copy of this Order to each contractor hired to perform the Work required by this Order and to each person representing Respondent with respect to the FMC OU or the Work, and shall condition all contracts entered into hereunder upon performance of the Work in conformity with the terms of this Order. Respondent or its contractors shall provide written notice of the Order to all subcontractors hired to perform any portion of the Work required by this Order. Respondent shall nonetheless be responsible for ensuring that its contractors and subcontractors perform the Work in accordance with the terms of this Order. With regard to the activities undertaken pursuant to this Order, each contractor and subcontractor shall be deemed to be in a contractual relationship with Respondent within the meaning of Section 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3).

III. DEFINITIONS

6. Unless otherwise expressly provided in this Order, terms used in this Order that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in

this Order or in its appendices, the following definitions shall apply solely for the purposes of this Order:

a. “CERCLA” shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601-9675.

b. “Day” or “day” shall mean a calendar day unless expressly stated to be a working day. The term “working day” shall mean a day other than a Saturday, Sunday, or federal or state holiday. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or federal or state holiday, the period shall run until the close of business of the next working day.

c. “Effective Date” shall mean the effective date of this Order as provided in Section XXXIV.

d. “EPA” shall mean the United States Environmental Protection Agency and its successor departments, agencies, or instrumentalities.

e. “EPA Hazardous Substance Superfund” shall mean the Hazardous Substance Superfund established by the Internal Revenue Code, 26 U.S.C. § 9507.

f. “FMC OU” shall mean the FMC Operable Unit of the Eastern Michaud Flats Superfund Site near Pocatello, Idaho, and largely within the Fort Hall Indian Reservation of the Shoshone-Bannock Tribes, as depicted generally on the map attached as Appendix B.

g. “IDEQ” shall mean the Idaho Department of Environmental Quality and any successor departments or agencies of the State.

h. “Institutional Controls” or “ICs” shall mean Proprietary Controls or other governmental controls or notices that: (i) limit land or resource use to minimize the potential for human exposure to Waste Material at or in connection with the FMC OU; (ii) limit land or resource use to implement, ensure non-interference with, or ensure the protectiveness of the Remedial Action pursuant to this Order; and/or (iii) provide information intended to modify or guide human behavior at or in connection with the FMC OU.

i. “Institutional Control Implementation and Assurance Plan” or “ICIAP” shall mean the plan for implementing, maintaining, monitoring, and reporting on the ICs set forth in the Interim ROD Amendment, prepared in accordance with this Order.

j. “Interest” shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.

k “Interim Record of Decision Amendment” or “Interim ROD Amendment” shall

mean the EPA Interim Record of Decision Amendment for the FMC Operable Unit of the Eastern Michaud Flats Superfund Site issued on September 27, 2012, by EPA Region X, and all attachments thereto. The Interim ROD Amendment is attached as Appendix A.

l. “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, and any amendments thereto.

m. “Operation and Maintenance” or “O&M” shall mean all activities required to maintain the effectiveness of the Remedial Action as required under the Operation and Maintenance Plan approved or developed by EPA pursuant to Section IX (Work to be Performed), and maintenance, monitoring, and enforcement of Institutional Controls as provided in the ICIAP.

n. “Order” shall mean this Unilateral Administrative Order, all appendices attached hereto and all documents incorporated by reference into this document including without limitation EPA-approved submissions. EPA-approved submissions (other than progress reports) are incorporated into and become a part of the Order upon approval by EPA. In the event of conflict between this Order and any appendix or other incorporated documents, this Order shall control.

o. “Paragraph” shall mean a portion of this Order identified by an Arabic numeral or an upper or lower case letter.

p. “Parties” shall mean EPA and Respondent.

q. “Performance Standards” shall mean the cleanup standards and other measures of the achievement of the goals set forth in the Interim ROD Amendment, or any other part of the Order, including any EPA-approved submission under the Order.

r. “Proprietary Controls” shall mean easements or covenants running with the land that (i) limit land or resource use and/or provide access rights and (ii) are created pursuant to common law or statutory law by an instrument that is recorded by the owner in the appropriate land records offices.

s. “RCRA” shall mean the Resource Conservation and Recovery Act, also known as the Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992.

t. “Remedial Action” shall mean all activities Respondent is required to perform under the Order to implement the Interim ROD Amendment, in accordance with this Order, the final approved remedial design submission, the approved Remedial Action Work Plan, and other plans approved by EPA, including implementation of Institutional Controls, until the Performance Standards are met, and excluding performance of the Remedial Design, O&M, and the activities required under Section XV (Record Retention).

u. “Remedial Action Work Plan” shall mean the document developed pursuant to

Paragraph 31 (Remedial Action) and approved by EPA, and any modifications thereto.

v. “Remedial Design” shall mean those activities to be undertaken by Respondents to develop the final plans and specifications for the Remedial Action pursuant to the Remedial Design Work Plan.

w. “Remedial Design Work Plan” shall mean the document developed pursuant to Paragraph 30 (Remedial Design) and approved by EPA, and any modifications thereto.

x. “Respondent” shall mean FMC Corporation.

y. “Response Costs” shall mean all costs, including, but not limited to, direct and indirect costs, the United States incurs in monitoring and supervising Respondent’s performance of the Work to determine whether such performance is consistent with the requirements of this Order, including costs incurred in reviewing plans, reports, and other deliverables submitted pursuant to this Order, as well as costs incurred in overseeing implementation of this Order, including, but not limited to, payroll costs, contractor costs, travel costs, costs of EPA cooperative agreements with the Tribes, and laboratory costs.

z. “Section” shall mean a portion of this Order identified by a Roman numeral.

aa. “Site” or “EMF Site” shall mean the Eastern Michaud Flats Superfund Site near Pocatello, Idaho.

bb. “State” shall mean the State of Idaho.

cc. “Supervising Contractor” shall mean the principal contractor retained by Respondent to supervise and direct the implementation of the Work under this Order.

dd. “Tribes” shall mean the Shoshone-Bannock Tribes of the Fort Hall Indian Reservation.

ee. “United States” shall mean the United States of America and each department, agency, and instrumentality of the United States, including EPA.

ff. “Waste Material” shall mean: (i) any “hazardous substance” under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (ii) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); [(iii) any “solid waste” under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27).

gg. “Work” shall mean all activities Respondent is required to perform under this Order, except those required by Section XV (Record Retention).

IV. FINDINGS OF FACT

7. The FMC OU is the former FMC elemental phosphorus manufacturing plant,

consisting of approximately 1,450 acres in southeastern Idaho, northwest of Pocatello, most of which is on the Fort Hall Indian Reservation. This land has been zoned and used for industrial purposes since the 1940s.

8. FMC began processing phosphate ore and manufacturing elemental phosphorus at its plant in 1949 and continued until the plant ceased operations in December 2001, and was demolished. Plant processes included the use of surface impoundments as waste ponds for ignitable-reactive elemental phosphorus and other metals-containing and gamma-emitting wastes. Many of these impoundments are RCRA regulated units. Those that are not RCRA regulated units are part of the FMC OU. FMC also used Waste Material (predominately gamma-emitting slag) as fill to grade its property and expand its operations area. The Interim ROD Amendment (Appendix "A" to this Order) provides further plant operational and regulatory facts, conditions and history.

9. Ignitable-reactive elemental phosphorus and other hazardous substances containing wastes, including high concentrations of arsenic, along with gamma radiation are in FMC OU soils and groundwater.

10. Precipitation infiltration into FMC OU contaminated soils causes the migration of these hazardous substances toward and into the Portneuf River, and terrestrial exposure to these soils results in gamma radiation exposures as documented in Appendix "A." Exposure of buried pyrophoric elemental phosphorus-containing wastes to ambient air results in combustion and/or explosion, depending on the quantity and concentration exposed.

11. Pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the Site on the National Priorities List ("NPL"), set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on August 30, 1990, 55 Fed. Reg. 35502.

12. In response to a release or a substantial threat of a release of hazardous substances at or from the Site, Respondent and J.R. Simplot Company ("Simplot") commenced a Remedial Investigation and Feasibility Study ("RI/FS") for the Site pursuant to 40 C.F.R. § 300.430, in June 1990, pursuant to an Administrative Order on Consent issued by EPA on May 30, 1991. Respondent further commenced a Supplemental RI/FS for the FMC OU in October 2003, pursuant to an Administrative Order on Consent issued by EPA on October 16, 2003.

13. Respondent and Simplot completed a Remedial Investigation ("RI") Report and a Feasibility Study ("FS") Report for the Site in April 1997. Respondent further completed a Supplemental RI Report in November 2009, and a Supplemental FS Report in July 2011 for the FMC OU.

14. Pursuant to Section 117 of CERCLA, 42 U.S.C. § 9617, EPA published notice of the completion of the FS and of a proposed plan for remedial action for the Site on April 21, 1997, in a major local newspaper of general circulation. EPA provided an opportunity for written and oral comments from the public on the proposed plan for remedial action.

15. The decision by EPA on the remedial action to be implemented at the Site (for all three operable units, the FMC OU, the Simplot OU, and Off-Plant OU) is embodied in a Record of Decision ("ROD"), executed on June 8, 1998, on which the State gave its concurrence and on

which the Tribes concurred in part. The ROD includes a responsiveness summary to the public comments. Notice of the final plan was published in accordance with Section 117(b) of CERCLA, 42 U.S.C. § 9617(b).

16. Separate Remedial Design/Remedial Action Consent Decrees, with Respondent and Simplot, respectively, for implementation of all the remedial action selected in the ROD, were lodged in the United States District Court for the District of Idaho by the United States on July 21, 1999, along with the complaint initiating this action. Following public comment on these Consent Decrees, the United States filed a notice on August 3, 2000, that it was withdrawing from the Decrees. Settling Defendant and Simplot responded by filing motions for entry of the Decrees. The Court by its Memorandum Decision and Order of October 11, 2000, denied the motions for entry and permitted the United States' withdrawals.

17. A revised Remedial Design/Remedial Action Consent Decree with Simplot as the sole Settling Defendant was entered in the United States District Court for the District of Idaho on May 9, 2002, for the implementation of only those portions of the ROD that selected remedial action for the Simplot OU. Respondent ceased operations at its plant at the Site in December 2001, and commenced the Supplemental RI/FS for the FMC OU, described above in Paragraph 12, in October 2003.

18. Pursuant to Section 117 of CERCLA, 42 U.S.C. § 9617, EPA published notice of the completion of the Supplemental FS and of a proposed plan for interim remedial action for the FMC OU on September 26, 2011, in more than one major local newspaper of general circulation. EPA provided an opportunity for written and oral comments from the public on the proposed plan for interim remedial action. A copy of the transcripts of public meetings is available to the public as part of the administrative record upon which EPA Region X based the selection of the response action.

19. The decision by EPA on the interim remedial action to be implemented at the FMC OU is embodied in an Interim Record of Decision ("Interim ROD Amendment"), executed on September 27, 2012, on which the Tribes did not concur, and on which the State concurred. The Interim ROD Amendment includes a responsiveness summary to public comments, including all formal Tribal comments. Notice of the final plan was published in accordance with Section 117(b) of CERCLA, 42 U.S.C. § 9617(b).

20. Based on the information presently available to EPA, EPA believes that the Work will be properly and promptly conducted by Respondent if conducted in accordance with the requirements of this Order and its appendices.

21. Solely for the purposes of Section 113(j) of CERCLA, 42 U.S.C. § 9613(j), the remedy set forth in the Interim ROD Amendment and the Work to be performed by Respondent shall constitute a response action taken or ordered by the President for which judicial review shall be limited to the administrative record.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

22. Based on the Findings of Fact set forth above and the Administrative Record, EPA has determined that:

a. The FMC OU is a “facility” as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

b. Respondent is a “person” as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

c. Respondent is a liable party under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a). Respondent is the “owner” of the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1). Respondent was the “owner” and “operator” of the facility at the time of disposal of hazardous substances at the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2). Respondent arranged for disposal or treatment of hazardous substances at the facility, within the meaning of Section 107(a)(3) of CERCLA, 42 U.S.C. § 9607(a)(3).

d. The contamination including elemental phosphorous, radionuclides, arsenic and other metals found at the FMC OU, as identified in the Findings of Fact above, includes “hazardous substances” as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

e. The conditions described in Paragraphs 8 through 10 of the Findings of Fact above constitute an actual and/or threatened “release” of a hazardous substance from the facility as defined by Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

f. The conditions at the FMC OU may constitute a threat to public health or welfare or the environment, based on the factors set forth in the Interim ROD Amendment. These factors include, but are not limited to, the following:

- (1) actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances; this factor is present at the FMC OU due to the existence of gamma-emitting Waste Material, and buried ignitable-reactive Waste Material and toxic metals;
- (2) actual or potential contamination of drinking water supplies or sensitive ecosystems; this factor is present at the FMC OU due to the existence of buried ignitable-reactive Waste Material and toxic metals including arsenic;
- (3) high levels of hazardous substances in soils that may migrate; this factor is present at the FMC OU due to the existence of buried ignitable-reactive and gamma-emitting Waste Material, and other toxic metals including arsenic;
- (4) threat of fire or explosion; this factor is present at the FMC OU due to the existence of buried ignitable-reactive Waste Material.

g. EPA has determined that the conditions at the FMC OU may constitute an

imminent and substantial endangerment to public health or welfare or the environment.

h. The actions required by this Order are necessary to protect the public health, welfare, or the environment, are consistent with CERCLA and the NCP, and will expedite effective remedial action.

VI. ORDER

23. Based on the foregoing Findings of Fact, Conclusions of Law and Determinations, and the Administrative Record for the FMC OU, Respondent is hereby ordered to comply with all the provisions of this Order and any modifications hereto, including but not limited to all appendices to this Order and all documents incorporated by reference into this Order.

VII. NOTICE OF INTENT TO COMPLY

24. On or before the Effective Date, Respondent shall notify EPA in writing of Respondent's irrevocable intent to implement the Work required by this Order. Such written notice shall be sent to the EPA Project Coordinator (RPM) identified in Section VIII (Designation of Contractors and Project Coordinators). Respondent's written notice shall describe, using facts that exist on or prior to the Effective Date, any "sufficient cause" defenses asserted by Respondent under Sections 106(b) and 107(c)(3) of CERCLA, 42 U.S.C. §§ 9606(a) and 9607(c)(3). The absence of a response by EPA to the notice required by this Paragraph shall not be deemed to be acceptance of Respondent's assertions. Failure of Respondent to provide such notification within this time period shall, as of the Effective Date, be treated as a violation of this Order by Respondent.

VIII. DESIGNATION OF CONTRACTORS AND PROJECT COORDINATORS

25. Selection of Supervising Contractor.

a. All aspects of the Work to be performed by Respondent pursuant to Sections IX (Work to be Performed), X (Remedy Review), XI (Quality Assurance, Sampling, and Data Analysis), XIII (Access and Institutional Controls), and XXI (Emergency Response) shall be under the direction and supervision of the Supervising Contractor, the selection of which shall be subject to disapproval by EPA. Within 10 days after the Effective Date, Respondent shall notify EPA and the Tribes and State in writing of the name, title, and qualifications of any contractor proposed to be the Supervising Contractor. With respect to any contractor proposed to be Supervising Contractor, Respondent shall demonstrate that the proposed contractor has a quality assurance system that complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs" (American National Standard, January 5, 1995), by submitting a copy of the proposed contractor's Quality Management Plan ("QMP"). The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001, reissued May 2006) or equivalent documentation as determined by EPA. EPA will issue a notice of disapproval or an authorization to proceed regarding hiring of the proposed contractor.

If at any time thereafter, Respondent proposes to change a Supervising Contractor, Respondent shall give such notice to EPA and the Tribes and State and must obtain an authorization to proceed from EPA before the new Supervising Contractor performs, directs, or supervises any Work under this Order.

b. If EPA disapproves a proposed Supervising Contractor, EPA will notify Respondent in writing. Respondent shall submit to EPA and the Tribes and State a list of contractors, including the qualifications of each contractor that would be acceptable to it, within 30 days after receipt of EPA's disapproval of the contractor previously proposed. EPA will provide written notice of the names of any contractor(s) that it disapproves and an authorization to proceed with respect to any of the other contractors. Respondent may select any contractor from that list that is not disapproved and shall notify EPA and the Tribes and State of the name of the contractor selected within 21 days after EPA's authorization to proceed.

26. Within 10 days after the Effective Date, Respondent shall designate a Project Coordinator and an Alternative Project Coordinator who shall be responsible for administration of the Work required by this Order and shall submit in writing to EPA and the Tribes and State the designated Project Coordinator's name, address, telephone number, email address, and qualifications. To the greatest extent possible, the Project Coordinator shall be readily available during the Work. Respondent's Project Coordinator shall be subject to disapproval by EPA and shall have the technical expertise sufficient to adequately oversee all aspects of the Work. Respondent's Project Coordinator shall not also represent Respondent as an attorney in this matter.

27. EPA has designated Kevin Rochlin of the Region X Office of Environmental Cleanup, as its Remedial Project Manager ("RPM") or Project Coordinator. EPA will notify Respondent of a change of its designated RPM/Project Coordinator. Except as otherwise provided in this Order, Respondent shall direct all submissions required by this Order to the EPA Project Coordinator at 1200 Sixth Avenue, Suite 900, Seattle, WA 98101, 206-553-2106, rochlin.kevin@epa.gov. Communications between Respondent and EPA, and all documents concerning the activities performed pursuant to this Order, shall be directed to the Parties' respective Project Coordinator with copies to the Tribes (addressed to the Environmental Waste Management Program Manager, currently Kelly Wright) and State (addressed to Bruce Olenick, Regional Administrator, SE Idaho Regional Office of the IDEQ). Receipt by Respondent's Project Coordinator of any notice or communication from EPA relating to this Order shall constitute receipt by Respondent. All deliverables will be submitted as mailed paper copies and as PDF files in Electronic Data Deliverable format. At EPA request, technical documents shall also be submitted electronically as Word documents.

28. EPA's Project Coordinator shall have the authority lawfully vested in a Remedial Project Manager ("RPM") and an On-Scene Coordinator ("OSC") by the NCP, 40 C.F.R. Part 300. EPA's Project Coordinator shall have authority, consistent with the NCP, to halt any Work required by this Order and to take or direct any necessary response action when he or she determines that conditions at the FMC OU constitute an emergency situation or may present an immediate threat to public health or welfare or the environment.

29. EPA's Project Coordinator and Respondent's Project Coordinator will meet, at a minimum, every two weeks by phone or in person, unless otherwise agreed upon by the Parties.

IX. WORK TO BE PERFORMED

30. Remedial Design.

- a. As set forth in the remedial design schedule in Appendix C to this Order, Respondent shall submit a work plan for the design of the Remedial Action at the FMC OU ("Remedial Design Work Plan" or "RDWP") to EPA and to the Tribes and State as required for all submissions by Paragraph 30b immediately below. The Remedial Design Work Plan shall provide for design of the remedy set forth in the Interim ROD Amendment, in accordance with this Order, and for achievement of the Performance Standards and other requirements set forth in this Order, including the Interim ROD Amendment. Upon its approval by EPA, consistent with the definition of this Order in Section III, Paragraph n, the Remedial Design Work Plan shall be incorporated into and enforceable under this Order. In accordance with the schedule in Appendix C, Respondent shall submit a Health and Safety Plan to EPA for EPA review (EPA does not approve Health and Safety Plans but may comment or offer revisions) for field activities required to perform remedial design activities that conforms to the applicable Occupational Safety and Health Administration and EPA requirements including, but not limited to, 29 C.F.R. § 1910.120.
- b. Upon approval of the Remedial Design Work Plan by EPA, and submission of the Health and Safety Plan, Respondent shall implement the RDWP. Respondent shall submit all plans, reports, and other deliverables required under the approved RDWP to EPA and the Tribes and State in accordance with the approved schedule for review and approval pursuant to Section XVII (EPA Approval of Plans, Reports, and Other Deliverables). Unless otherwise directed by EPA, Respondent shall not commence further Remedial Design ("RD") activities for the FMC OU prior to approval of the Remedial Design Work Plan. At a minimum, the RDWP shall include the following elements:
 - i. Design and Construction Elements
 1. Placement of evapotranspiration caps
 2. Placement of soil caps
 3. Excavation of soil from Parcel 3
 4. Cleaning underground concrete piping
 5. Installation of the groundwater extraction system
 6. Installation of engineering controls
 7. Integration of existing RCRA pond caps with new caps
 - ii. Monitoring Elements
 1. Implementation and monitoring of institutional controls
 2. Implementation of a long-term groundwater monitoring plan
 3. Implementation of a gas monitoring program

4. Implementation of a FMC OU-wide storm water runoff monitoring plan
- iii. Operation and Maintenance Elements
 1. Implementation of an operation and maintenance plan
- c. The RDWP shall include plans and schedules for implementation of all RD and pre-design tasks identified in this Order, including but not limited to, the following:
 1. Plans for implementing all design activities identified in this Order, in the RDWP or required by EPA to be conducted in order to develop the RD;
 2. A description of Respondent's proposed Remedial Action ("RA") contracting strategy (e.g., a conventional "design/bid/build" approach or a "design/build" approach, in which a design/build team works under a single contract to provide design and construction services);
 3. A description of the overall management strategy for performing the RD, and the proposed general approach to contracting, construction, operation, maintenance, and monitoring of the RA as necessary to implement the Work. This includes a determination of whether Respondent will perform a 60% Intermediate Remedial Design. EPA does not believe a 60% Intermediate Remedial Design is necessary for this Remedial Action, but will not prevent Respondent from preparing and submitting a 60% Remedial Design if Respondent considers it necessary;
 4. A proposal for phasing of design and construction, if applicable;
 5. A description of the responsibility and authority of all organizations and key personnel involved with the development of the RD;
 6. Descriptions of any design elements requiring clarification and/or anticipated problems (e.g., data gaps);
 7. A schedule for preparation and implementation of the following deliverables within the schedule for the RD/RA set out in Appendix "C" of this Order:
 - aa. Construction Quality Assurance/Quality Control Plan, consistent with Section XI below. The purpose of the CQAP is to describe planned and systemic activities that provide confidence that the RA construction will satisfy all plans, specifications, and related requirements, including quality objectives. The purpose of the CQCP is to describe the activities to verify that RA construction has satisfied all plans, specifications, and related requirements, including quality objectives. The CQA/QCP must:
 - (i) Identify, and describe the responsibilities of, the organizations and personnel implementing the quality assurance/quality control ("QA/QC");

- (ii) Describe verification activities, such as inspections, sampling, testing, monitoring, and production controls, under the QA/QC;
- (iii) Describe industry standards and technical specifications used in implementing the QA/QC;
- (iv) Describe procedures for tracking construction deficiencies from identification through corrective action;
- (v) Describe procedures for documenting all QA/QC activities; and

bb. Emergency Response Plan (“ERP”), consistent with Section XXI (Emergency Response). The ERP must describe procedures to be used in the event of an accident or emergency at the FMC OU or Site (for example, power outages, water impoundment failure, treatment plant failure, slope failure, uncontrolled ignition or reactions of Waste Material, etc). The ERP must include:

- (i) Name of the person or entity responsible for responding in the event of an emergency incident;
- (ii) Plan and date(s) for meeting(s) with all appropriate authorities under the circumstances, including emergency response personnel and hospitals if relevant;
- (iii) Spill Prevention, Control, and Countermeasures (SPCC) Plan;
- (iv) Notification activities in accordance with Paragraph 57 of this Order in the event of a release of hazardous substances requiring reporting under Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of the Emergency Planning and Community Right-to-know Act (“EPCRA”), 42 U.S.C. § 11004; and
- (v) A description of all necessary actions to ensure compliance with Section XXI (Emergency Response) of this Order in the event of an occurrence during the performance of the Work that causes or threatens a release of Waste Material from the FMC OU or Site that constitutes an emergency or may present an immediate threat to public health or welfare or the environment.

cc. Field Sampling Plan and Remedial Design Quality Assurance Project Plan. The FSP supplements the QAPP and addresses all sample collection activities. The FSP must be written so that a field sampling team unfamiliar with the project would be able to gather the samples and field information required. Respondent shall develop the FSP consistent with *Guidance for Conducting Remedial Investigations and Feasibility Studies*, EPA/540/G-89/004 (--- 1988), and in accordance with Section XI (Quality Assurance, Sampling, and Data Analysis);

dd. Institutional Controls Implementation and Assurance Plan in accordance with Paragraph 46c. of this Order.

ee. O&M Plan. The O&M Plan describes the long-term operation and maintenance of the RA. The plan must provide for all operation and maintenance activities required for the Remedial Action to achieve Performance Standards, and all activities required to maintain the effectiveness of the Remedial Action after Performance Standards are met. The O&M Plan must include:

- (i) Description of and schedule for each operation task and maintenance task;
- (ii) Description of and schedule for periodic inspections of equipment and components;
- (iii) Description of O&M requirements;
- (iv) Description of instrumentation and monitoring;
- (v) Sample checklists and periodic reports;
- (vi) Description and analysis of potential operating problems, including common and/or anticipated remedies;
- (vii) Description of routine monitoring and laboratory testing;
- (viii) Description of required data collection, laboratory tests and their interpretation;
- (ix) Schedule of monitoring frequency and procedures;
- (x) Description of verification sampling procedures, if Performance Standards are exceeded during routine monitoring;
- (xi) Description of alternative operations and maintenance in case of systems failure, including: (1) alternative procedures to prevent the release or threatened release of Waste Material which may endanger public health and the environment or exceed Performance Standards; (2) analysis of vulnerability and additional resource requirements should a failure occur; and, (3) notification and reporting requirements should O&M systems fail or be in danger of imminent failure;
- (xii) Description of corrective action to be implemented in the event that Performance Standards are exceeded, and a schedule for implementing these corrective actions;

(xiii) Description of monitoring equipment and monitoring components, including identifying information, maintenance requirements and schedule, and replacement requirements and schedule; and

(xiv) Description of records and reports that will be generated during O&M, such as daily operating logs, laboratory records, records of operating costs, reports regarding emergencies, personnel and maintenance records; and provisions for preparation and submission of monthly and annual O&M summary reports to EPA.

ff. Performance Standards Verification Plan (“PSVP”). The PSVP describes activities to verify that all Performance Standards are satisfied, and a schedule for performing these activities. The PSVP must include the following elements:

- (i) A description of each of the Performance Standards required by the Interim ROD Amendment;
- (ii) A description of plans to ensure that each Performance Standard will be met; and
- (iii) A description of activities to be performed to determine whether performance standards have been met.

gg. Transportation and Off-Site Disposal Plan (“TODP”). The TODP describes plans to ensure compliance with Paragraph 35 (Off-Site Shipments of Waste Material) of this Order. The TODP must include:

- (i) Proposed locations and routes for off-site shipment of waste material;
- (ii) Identification of communities affected by shipment of waste material; and
- (iii) Description of plans to minimize impacts on affected communities.

hh. Provisions for continuing groundwater monitoring, sampling, analysis and reporting will continue pursuant to Respondent’s Interim CERCLA Groundwater Monitoring Plan (FMC, July 2010) until the Final CERCLA Groundwater Monitoring Plan, as a component of the Remedial Action Work Plan, is approved by EPA.

ii. A schedule for completion of the Remedial Action Work Plan.

d. Performance Testing

1. Respondent shall submit a Performance Testing Work Plan (“PTWP”) for EPA approval. Respondent shall prepare the PTWP consistent with relevant EPA guidance. Respondent will consult with the EPA RPM if Respondent is unsure which guidance documents should be reviewed. Once the Work Plan(s) are approved, Respondent will conduct the testing described in the Work Plan(s).

2. FMC shall perform the following Performance Tests:

aa. Groundwater Remedy Water Treatment Testing

If discharge of extracted groundwater to a permitted Publically Owned Treatment Works (POTW) for treatment is determined not to be a viable option, a groundwater remedy water treatment test will be required. The purpose of the groundwater remedy water treatment test would be to determine the effectiveness of water treatment technologies as set forth in the Interim ROD Amendment (on-site treatment and discharge to an on-site percolation / evaporation basin(s) located in the western undeveloped portion of the FMC OU). The work plan shall describe the water treatment technologies to be tested, test objectives, experimental procedures, performance conditions to be tested, measurements and performance, analytical methods, data quality objectives, data management and analysis, and residual waste management. The work plan shall also include a sampling and analysis plan and health and safety plan. A schedule for performing the performance testing shall be included with specific dates for the tasks, including, but not limited to, the procurement of contractors and the completion of sample collection, performance testing and sample analysis. Following completion of the performance testing, Respondent shall analyze and interpret the testing results and shall prepare a report of the results. The report shall include an evaluation of each technology's effectiveness, implementability, and actual results as compared with predicted results. The report shall provide recommendations for implementation of technologies and design criteria for those technologies recommended.

bb. Gamma Cap Thickness Effectiveness Test

The purposes of the Gamma Cap Thickness Effectiveness Test are to 1) determine whether the one foot of native soil cap or “gamma” cap meets the external gamma radiation Performance Standard (and remedial action objective) in the Interim ROD Amendment, or whether more material is required, and 2) develop construction QA/QC methods to demonstrate achievement of the Performance Standard. A Gamma Cap Thickness Effectiveness Test Work Plan shall describe the test objectives, test pad construction procedures and quality control, sampling and analytical and/or field measurement methods, data management and analysis, and health and safety. The Data Quality Objectives for the test shall be included. A schedule for performing this test shall be included with specific dates for the tasks, including, but not limited to, the procurement of any contractors, construction of the test pad, data collection and analysis, and report preparation.

3. Following completion of each Performance Test, Respondent shall submit a Performance Test (“PT”) Evaluation Report for EPA approval. EPA may require Respondent to supplement the PT Evaluation Report and/or to perform additional performance tests.

e. Preliminary (30%) RD

1. Respondent shall submit a Preliminary (30%) RD for EPA comment. The Preliminary RD must include, at a minimum:

- aa. Design analysis, including assumptions and parameters, design restrictions, design calculations, process performance criteria, appropriate unit processes for the treatment train, and expected removal or treatment efficiencies for both the process and waste (concentration and volume);
- bb. Preliminary drawings and specifications;
- cc. Preliminary description of access requirements and proposed easements;
- dd. Preliminary O&M Plan and O&M Manual;
- ee. A description of how the Remedial Action will be implemented in a manner that minimizes environmental impacts consistent with EPA's *Principles for Greener Cleanups*, OSWER (Aug. 2009) and Region 10's Clean and Green Policy (Aug. 2009); and
- ff. Preliminary RA Schedule.

f. Intermediate (60%) RD

If Respondent determines during RD planning that a 60% Intermediate RD is necessary, Respondent shall submit the Intermediate (60%) RD for EPA comment. The Intermediate RD must: 1) be a continuation and expansion of the preliminary design; 2) address all EPA's comments regarding the Preliminary RD; and 3) include the same elements as are required for the Preliminary RD.

g. Final RD

1. Respondent shall submit the Pre-final (95%) RD for EPA comment. The Pre-final Design must be a continuation and expansion of the Intermediate RD (if one was submitted) and must address EPA's comments regarding the Intermediate RD, as well as all Preliminary RD comments. The Pre-final RD will serve as the approved Final RD if EPA approves the Pre-final RD without comments. The Pre-final RD must include, at a minimum:

- aa. A complete set of construction drawings and specifications that are: (i) certified by a Professional Engineer registered in the State; (ii) suitable for bid advertisement; and (iii) follow the Construction Specifications Institute's Master Format 2012;
- bb. A survey and engineering drawings showing existing FMC OU elements, conditions, borders, and easements;

cc. Pre-Final (95%) versions of the same elements and deliverables as are required for the previously submitted (Preliminary and Intermediate, if developed) RD;

dd. A specification for photographic documentation of the RA;

ee. A description of Respondent's method for selecting the construction contractor(s); and

2. Respondent shall submit the Final (100%) RD for EPA approval. The Final RD must address EPA's comments on the Pre-final RD and must include final versions of all Pre-Final deliverables.

31. Remedial Action.

a. As set forth in the Remedial Action schedule in Appendix C to this Order, Respondent shall submit a work plan for the performance of the Remedial Action at the FMC OU ("Remedial Action Work Plan" or "RAWP") to EPA and the Tribes and State. The Remedial Action Work Plan shall provide for construction and implementation of the remedy set forth in the Interim ROD Amendment and achievement of the Performance Standards in accordance with this Order, including the Interim ROD Amendment and the design plans and specifications developed in accordance with the RDWP and approved by EPA. Upon its approval by EPA, the RAWP, consistent with the definition of this Order in Section III, Paragraph n, shall be incorporated into and enforceable under this Order. At the same time as it submits the RAWP, Respondent shall submit a Health and Safety Plan to EPA and the Tribes and State for field activities required by the RAWP that conforms to the applicable Occupational Safety and Health Administration and EPA requirements including, but not limited to, 29 C.F.R. § 1910.120.

b. The Remedial Action Work Plan shall include the following: 1) a schedule for completion of the Remedial Action; 2) the method for selection of the contractor; 3) a schedule for developing and submitting other required Remedial Action plans; 4) a Final CERCLA Groundwater Monitoring Plan; 5) methods for satisfying access requirements; 6) methodology for implementing the Operation and Maintenance Plan; 7) methodology for implementing the Emergency Response Plan,; 8) a tentative formulation of the Remedial Action team; 9) the Construction Quality Assurance Plan (by the construction contractor); 10) the Performance Standards Verification Plan and 11) procedures and plans for the decontamination of equipment and the disposal of contaminated materials. The Remedial Action Work Plan also shall include the methodology for implementing the CQAP and a schedule for implementing all Remedial Action tasks identified in the final design submission and shall identify the initial formulation of Respondent's Remedial Action project team (including, but not limited to, the Supervising Contractor).

1. The Final CERCLA Groundwater Monitoring Plan will provide for the following:

aa. An EPA Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems (EPA 600/R-08/003, 2008) will be used to

evaluate the effectiveness of the Pump and Treat System. An evaluation of the groundwater monitoring network will be conducted to confirm that it is adequate to monitor the FMC OU.

bb. Consistent with the Interim CERCLA Groundwater Monitoring Plan, implementation of the Final CERCLA Groundwater Monitoring Plan will be coordinated with Respondent's RCRA and Caliner Pond remedy groundwater monitoring programs. The Final CERCLA Groundwater Monitoring Plan also will specify methods for evaluation of potential changes and/or trends in FMC facility-related groundwater constituents and groundwater conditions on an FMC facility-wide basis.

cc. Once installation of the groundwater extraction system has been completed and the annual average pumping rate has been achieved, an addenda to the plan will specify the appropriate monitoring locations at the FMC OU and Off-Plant OU, as determined by EPA, to measure progress toward achieving the Performance Standards for the groundwater extraction and treatment system, including the types of statistical tools to be used to evaluate the groundwater data, and the system's effectiveness.

c. Upon approval of the Remedial Action Work Plan by EPA, Respondent shall implement the activities required under the RAWP. Respondent shall submit all reports and other deliverables required under the approved RAWP to EPA and the Tribes and State in accordance with the approved schedule for review and approval pursuant to Section XVII (EPA Approval of Plans, Reports, and Other Deliverables). Unless otherwise directed by EPA, Respondent shall not commence physical Remedial Action activities at the FMC OU prior to approval of the Remedial Action Work Plan.

d. Respondent shall continue to implement the Remedial Action until the Performance Standards are achieved. Respondent shall implement O&M for so long thereafter as is required by this Order.

32. Modification of Work or Related Work Plans.

a. If EPA determines that it is necessary to modify the Work specified in this Order and/or in work plans developed pursuant to this Order to achieve and/or maintain the Performance Standards or to carry out and maintain the effectiveness of the remedy set forth in the Interim ROD Amendment, EPA may issue such modification and notify Respondent of such modification.

b. Respondent shall modify any related work plans in accordance with the modification issued by EPA. The modification shall be incorporated into and enforceable under this Order, and Respondent shall implement all Work required by such modification. Respondent shall incorporate the modification into the Remedial Design or Remedial Action Work Plan under Paragraph 30 (Remedial Design) or Paragraph 31 (Remedial Action), as appropriate.

33. Nothing in this Section shall be construed to limit EPA's authority to require performance of further response actions.

34. Nothing in this Order, including the Remedial Design or Remedial Action Work Plans constitutes a warranty or representation of any kind by EPA that compliance with the work requirements set forth in this Order and the Work Plans will achieve the Performance Standards.

35. Off-Site Shipment of Waste Material.

a. Respondent may ship Waste Material from the Site to an off-site facility only if it verifies, prior to any shipment, that the off-site facility is operating in compliance with the requirements of Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440, by obtaining a determination from EPA that the proposed receiving facility is operating in compliance with 42 U.S.C. § 9621(d)(3) and 40 C.F.R. § 300.440.

b. Respondent may ship Waste Material from the Site to an out-of-state waste management facility only if, prior to any shipment, it provides written notice to the appropriate state environmental official in the receiving facility's state and to the EPA Project Coordinator. This notice requirement shall not apply to any off-site shipments when the total quantity of all such shipments will not exceed ten cubic yards. The written notice shall include the following information, if available: (1) the name and location of the receiving facility; (2) the type and quantity of Waste Material to be shipped; (3) the schedule for the shipment; and (4) the method of transportation. Respondents also shall notify the state environmental official referenced above and the EPA Project Coordinator of any major changes in the shipment plan, such as a decision to ship the Waste Material to a different out-of-state facility. Respondent shall provide the written notice after the award of the contract for Remedial Action construction and before the Waste Material is shipped.

X. REMEDY REVIEW

36. Periodic Review. Respondent shall conduct any studies and investigations that EPA requests in order to permit EPA to conduct reviews of whether the Remedial Action is protective of human health and the environment at least every five years as required by Section 121(c) of CERCLA, 42 U.S.C. § 9621(c), and any applicable regulations.

XI. QUALITY ASSURANCE, SAMPLING, AND DATA ANALYSIS

37. Respondent shall use quality assurance, quality control, and other technical activities and chain of custody procedures for all performance, design, compliance, and monitoring samples consistent with "EPA Requirements for Quality Assurance Project Plans (QA/R5)" (EPA/240/B-01/003, March 2001, reissued May 2006), "Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/240/R-02/009, December 2002), and subsequent amendments to such guidelines upon notification by EPA to Respondent of such amendment. Amended guidelines shall apply only to procedures conducted after such notification.

38. Prior to the commencement of any monitoring project under this Order, Respondent shall submit a Quality Assurance Project Plan (“QAPP”) to EPA for approval, that is consistent with this Order, the NCP, and applicable guidance documents. Respondent shall ensure that EPA, including its authorized representatives, and the Tribes and State when accompanied by EPA, are allowed access at reasonable times to all laboratories utilized by Respondent in implementing this Order. In addition, Respondent shall ensure that such laboratories shall analyze all samples submitted by EPA pursuant to the QAPP for quality assurance, quality control, and technical activities that will satisfy the stated performance criteria. Respondent shall ensure that the laboratories it utilizes for the analysis of samples taken pursuant to this Order perform all analyses according to accepted EPA methods. Accepted EPA methods consist of, but are not limited to, methods that are documented in the EPA’s Contract Laboratory Program (<http://www.epa.gov/superfund/programs/clp/>), SW 846 “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” (<http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm>), “Standard Methods for the Examination of Water and Wastewater” (<http://www.standardmethods.org/>), 40 C.F.R. Part 136, “Air Toxics - Monitoring Methods” (<http://www.epa.gov/ttnamti1/airtox.html>),” and any amendments made thereto during the course of the implementation of this Order. However, upon approval by EPA, Respondent may use other appropriate analytical method(s), as long as (a) Quality Assurance/Quality Control (“QA/QC”) criteria are contained in the method(s) and the method(s) are included in the QAPP, (b) the analytical method(s) are at least as stringent as the methods listed above, and (c) the method(s) have been approved for use by a nationally recognized organization responsible for verification and publication of analytical methods, e.g., EPA, ASTM, NIOSH, OSHA, etc. Respondent shall ensure that all laboratories it uses for analysis of samples taken pursuant to this Order have a documented Quality System that complies with ANSI/ASQC E4-1994, “Specifications and Guidelines 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, reissued May 2006), or equivalent documentation as determined by EPA. EPA may consider Environmental Response Laboratory Network (“ERLN”) laboratories, laboratories accredited under the National Environmental Laboratory Accreditation Program (“NELAP”), or laboratories that meet International Standardization Organization (ISO 17025) standards or other nationally recognized programs (<http://www.epa.gov/fem/accredit.htm>) as meeting the Quality System requirements. Respondent shall ensure that all field methodologies utilized in collecting samples for subsequent analysis pursuant to this Order are conducted in accordance with the procedures set forth in the QAPP approved by EPA.

39. Upon request, Respondent shall allow split or duplicate samples to be taken by EPA or its authorized representatives. Respondent shall notify EPA and the Tribes and State not less than 28 days in advance of any sample collection activity unless shorter notice is agreed to by EPA. In addition, EPA shall have the right to take any additional samples that EPA deems necessary.

40. Respondent shall submit copies to EPA and the Tribes and State of the results of all sampling and/or tests or other data obtained or generated by or on behalf of Respondent with respect to the FMC OU and/or the implementation of this Order unless EPA agrees otherwise.

41. Notwithstanding any provision of this Order, the United States retains all of its information gathering and inspection authorities and rights, including enforcement actions related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

XII. NOTICE TO SUCCESSORS-IN-TITLE AND TRANSFERS OF REAL PROPERTY

42. Respondent shall, at least 60 days prior to any Transfer of any real property located at the FMC OU, give written notice: (a) to the transferee regarding the Order and any Institutional Controls regarding the real property; and (b) to EPA and the Tribes and State regarding the proposed Transfer, including the name and address of the transferee and the date on which the transferee was notified of the Order and any Institutional Controls.

43. Respondent may Transfer any real property located at the FMC OU only if: (a) the Proprietary Controls required by Paragraph 46.c have been recorded with respect to the real property; or (b) Respondent has obtained an agreement from the transferee, enforceable by Respondent and the United States, to (1) allow access and restrict land or resource use, pursuant to Paragraphs 46.a and 46.b, (2) record the Proprietary Controls on the real property, pursuant to Paragraph 46.c, and (3) subordinate its rights to any such Proprietary Controls, pursuant to Paragraph 46.c, and EPA has approved the agreement in writing. If, after a Transfer of the real property, the transferee fails to comply with the agreement provided for in this Paragraph, Respondent shall take all reasonable steps to obtain the transferee's compliance with such agreement. The United States may seek the transferee's compliance with the agreement and/or assist Respondent in obtaining compliance with the agreement.

44. EPA reserves the right to seek payment from Respondent for all costs, including cost of attorney's time, incurred by the United States in obtaining compliance with such agreement.

45. In the event of any Transfer of real property located at the FMC OU, unless the United States otherwise consents in writing, Respondent shall continue to comply with its obligations under this Order, including, but not limited to, its obligation to provide and/or secure access, to implement, maintain, monitor, and report on any Institutional Controls, and to abide by any such Institutional Controls.

XIII. ACCESS AND INSTITUTIONAL CONTROLS

46. a. Respondent shall, commencing on the Effective Date, provide EPA, including its authorized representatives, and the Tribes and State when accompanied by EPA with access at all reasonable times to the FMC OU, and to any other real property it may own or acquire within the Site, to conduct any activity regarding the Order, including, but not limited to, the following activities:

- (1) Monitoring the Work;
- (2) Verifying any data or information submitted to EPA;
- (3) Conducting investigations regarding contamination at or near the FMC

- OU;
- (4) Obtaining samples;
 - (5) Assessing the need for, planning, or implementing additional response actions at or near the FMC OU;
 - (6) Assessing implementation of quality assurance and quality control practices;
 - (7) Implementing the Work pursuant to the conditions set forth in XXIII (Enforcement/Work Takeover);
 - (8) Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by Respondent or its agents, consistent with Section XIV (Access to Information);
 - (9) Assessing Respondent's compliance with the Order;
 - (10) Determining whether the FMC OU or other real property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted under the Order; and
 - (11) Implementing, monitoring, maintaining, reporting on, and enforcing any Institutional Controls and the requirements of the ICIAP.

b. Commencing on the Effective Date, Respondent shall not use the FMC OU, or such other real property, in any manner that EPA determines will pose an unacceptable risk to human health or to the environment due to exposure to Waste Material or interfere with or adversely affect the implementation, integrity, or protectiveness of the Work. Further:

- (1) EPA and/or its authorized representatives shall conduct periodic inspections of the Remedial Action. EPA may be accompanied by the Tribes and/or State. At EPA's request, the Supervising Contractor or other designee shall accompany EPA and/or its representatives during inspections.
- (2) Respondent shall provide office space for EPA and/or its authorized representatives to perform their oversight duties. The minimum office requirements are a locking private office with at least 150 square feet of floor space, an office desk with chair, a four-drawer file cabinet, and sanitation facilities.
- (3) At EPA's request, Respondent shall provide personal protective equipment for EPA and its authorized representatives, and the Tribes and/or State when accompanied by EPA, who have received the necessary training under 29 C.F.R. Part 1910.120 to access all portions of the FMC OU in order to perform oversight duties.
- (4) Upon notification by EPA of any deficiencies in the performance of the RA, Respondent shall take all necessary steps to correct the deficiencies and/or bring its performance of the Interim RA into compliance with the approved Final RD, any approved design changes, and/or the approved RAWP. If applicable, Respondent shall comply with any schedule provided by EPA in its notice of deficiency.

c. Respondent shall:

- (1) Within 90 days after the Effective Date, submit a proposed ICIAP. The ICIAP shall be a plan to implement the ICs set forth in the Interim ROD Amendment. The ICIAP shall include, but shall not be limited to: (a) a description of the pathways for potential human exposure to Waste Material that may remain during and/or after completion of construction of the Remedial Action; (b) a description of the areas where human activities should be restricted, including legal descriptions for such areas, sample maps, and a plan for preparing final survey maps (e.g., survey of hazardous waste cap); (c) a list of properties where Proprietary Controls are needed; (d) a description of the proposed ICs and their purpose; (e) a description of the proposed duration of each IC and an explanation for such duration; (f) a schedule for implementing each IC; (g) a schedule for completing title work; (h) draft enforceable Proprietary Controls to implement the proposed land or resource use restrictions; (i) a description of the authority of each affected property owner to implement each Proprietary Control, including title insurance commitments or other title evidence acceptable to EPA for proposed Proprietary Controls; (j) a description of all prior liens and encumbrances existing on any real property that may affect the Proprietary Controls or the protectiveness of the remedy, and a plan for the release or subordination of any such liens and encumbrances (unless EPA waives the release or subordination of such liens or encumbrances); (k) a plan for monitoring, maintaining, reporting on, and ensuring the continued efficacy of the ICs and a contingency plan in the event ICs are ineffective; and (l) a schedule for annual certifications regarding whether the ICs remain in place, regarding whether the ICs have been complied with, and regarding enforcement of the Institutional Controls. The ICIAP shall be effective upon EPA's approval, and shall become an enforceable requirement of the Order.
- (2) In accordance with the schedule set forth in the ICIAP, submit to EPA for review and approval regarding such real property: (i) draft enforceable Proprietary Controls; and (ii) a current title insurance commitment or other evidence of title acceptable to EPA, that shows title to the land affected by the Proprietary Controls to be free and clear of all prior liens and encumbrances (except when EPA waives the release or subordination of such prior liens or encumbrances or when, despite best efforts, Respondent is unable to obtain release or subordination of such prior liens or encumbrances). The Proprietary Controls shall: (i) grant a right of access to conduct any activity regarding the Order including, but not limited to, those activities listed in subparagraph a. of this Paragraph; and (ii) grant the right to enforce the land or resource use restrictions set forth in sub paragraph b of this Paragraph, including, but not limited to, the specific restrictions listed therein, as further specified in this subparagraph c. The Proprietary Controls shall be granted to one or more of the following persons, as determined by EPA: (i) the United

States, on behalf of EPA, and its representatives; (ii) Respondent and its representatives; and/or (iii) other appropriate grantees. The Proprietary Controls, other than those granted to the United States, shall include a designation that EPA is a third-party beneficiary, allowing EPA to maintain the right to enforce the Proprietary Controls without acquiring an interest in real property. If any Proprietary Controls are granted to Respondent pursuant to this Paragraph, Respondent shall monitor, maintain, report on, and enforce such Proprietary Controls.

- (3) Within 15 days after EPA's approval and acceptance of the Proprietary Controls and the title evidence, update the title search and, if it is determined that nothing has occurred since the effective date of the commitment, or other title evidence, to affect the title adversely, execute and record the Proprietary Controls with the appropriate land records offices, including state political subdivision and Tribal offices as directed by EPA, to afford the broadest possible notice. Within 30 days after recording the Proprietary Controls, Respondent shall provide EPA with a final title insurance policy, or other final evidence of title acceptable to EPA, and a certified copy of the original recorded Proprietary Controls showing the clerk's recording stamps. If the Proprietary Controls are to be conveyed to the United States, the Proprietary Controls and title evidence (including final title evidence) shall be prepared in accordance with the U.S. Department of Justice Title Standards 2001, and approval of the sufficiency of title shall be obtained as required by 40 U.S.C. § 3111.

47. If any real property where access is needed, is owned or controlled by any persons other than Respondent, Respondent shall use its best efforts to secure from such persons, in accordance with the schedule approved in writing by the EPA Project Coordinator/RPM, all necessary access agreements. Any such access agreement shall provide reasonable access for Respondent and its representatives, for the purpose of conducting any activity related to this Order, and for EPA, including its authorized representatives, and the Tribes and State when accompanied by EPA, to move freely on the property in order to conduct actions that EPA determines to be necessary. Respondent shall immediately notify EPA if after using its best efforts it is unable to obtain such agreements.

48. For purposes of this Section, "best efforts" includes the payment of reasonable sums of money in consideration of access or to obtain an agreement to release or subordinate a prior lien or encumbrance. If, within 90 days after EPA's request for Proprietary Controls, Respondent has not: (a) obtained agreements to provide access as required by Paragraph 47; or (b) obtained, pursuant to Paragraph 46.c(1), agreements from the holders of prior liens or encumbrances to release or subordinate such liens or encumbrances to the Proprietary Controls, Respondent shall promptly notify EPA in writing, and shall include in that notification a summary of the steps Respondent has taken, including the dates, thereof, to attempt to comply with Paragraphs 46 or 47.

49. EPA may assist Respondent in obtaining access, or the release or subordination of a

prior lien or encumbrance, using such means as EPA deems appropriate. EPA reserves the right to seek payment from Respondent for all costs, including cost of attorneys' time, incurred by the United States in obtaining such access and/or the release or subordination of prior liens or encumbrances.

50. Notwithstanding any provision of this Order, EPA retains all of its access authorities and rights, as well as all of its rights to require Institutional Controls, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations. Further, nothing in this Order in any way affects any independent right of access tribal or state personnel may have under tribal or state law.

XIV. ACCESS TO INFORMATION

51. a. Respondent shall provide to EPA upon request, copies of all records, reports, documents, and other information (including records, reports, documents, and other information in electronic form) (hereinafter referred to as "Records") within its possession or control or that of its contractors or agents relating to activities at the FMC OU or to the implementation of this Order, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information regarding the Work. Respondent shall also make available to EPA, for purposes of investigation, information gathering, or testimony, its employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

b. Respondent may assert business confidentiality claims covering part or all of the Records submitted to EPA under this Order to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Records determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies Records when they are submitted to EPA], or if EPA has notified Respondent that the Records are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such Records without further notice to Respondent. Respondent shall segregate and clearly identify all Records submitted under this Order for which Respondent asserts business confidentiality claims.

c. Respondent may assert that certain Records are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondent asserts such a privilege in lieu of providing Records, Respondent shall provide EPA with the following: (i) the title of the Record; (ii) the date of the Record; (iii) the name, title, affiliation (e.g., company or firm), and address of the author of the Record; (iv) the name and title of each addressee and recipient; (v) a description of the contents of the Record; (vi) a description of the contents of the Record; and (vii) the privilege asserted by Respondent. If a claim of privilege applies only to a portion of a Record, the Record shall be provided to EPA in redacted form to mask the privileged portion only. Respondent shall retain all Records that they claim to be privileged until EPA has had a reasonable opportunity to challenge the privilege claim and any such challenge has been resolved in Respondent's favor.

d. No Records created or generated pursuant to the requirements of this Order shall be withheld on the grounds that they are privileged or confidential.

e. No claim of confidentiality or privilege shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or information evidencing conditions at or around the FMC OU or the Site.

f. Copies of all Records provided to EPA in accordance with subparagraph a. above of this Paragraph shall be provided to the Tribes and State by EPA, upon request by the Tribes or State, except to the extent they are asserted as privileged by Respondent or found to be confidential by EPA as described in subparagraph b. of this Paragraph.

XV. RECORD RETENTION

52. Until ten years after Respondent's receipt of EPA's notification pursuant to Paragraph 75.b that the Work has been completed, Respondent shall preserve and retain all non-identical copies of Records (including Records in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to the liability of any person under CERCLA with respect to the FMC OU or the Site. Respondent must also retain, and instruct its contractors and agents to preserve, for the same period of time specified above, all non-identical copies of the last draft or final version of any Records (including Records in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to the performance of the Work, provided, however, that Respondent (and its contractor and agents) must retain, in addition, copies of all data generated during performance of the Work and not contained in the aforementioned Records to be retained. Each of the above record retention requirements shall apply regardless of any corporate retention policy to the contrary.

53. At the conclusion of this document retention period, Respondent shall notify EPA at least 90 days prior to the destruction of any such Records, and, upon request by EPA, Respondent shall deliver any such Records to EPA which may provide copies to the Tribes and/or State. Respondent may assert that certain Records are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondent asserts such a privilege, it shall provide EPA with the following: (a) the title of the Record; (b) the date of the Record; (c) the name, title, affiliation (e.g., company or firm) of the author of the Record; (d) the name and title of each addressee and recipient; (e) a description of the subject of the Record; and (f) the privilege asserted by Respondent. If a claim of privilege applies only to a portion of a Record, the Record shall be provided to EPA in redacted form to mask the privileged portion only. Respondent shall retain all Records that it claims to be privileged until EPA has had a reasonable opportunity to challenge the privilege claim and any such challenge has been resolved in Respondent's favor. However, no Records created or generated pursuant to the requirements of this Order shall be withheld on the grounds that they are privileged or confidential.

54. Within 90 days after the Effective Date, Respondent shall submit a written certification to EPA's Project Coordinator that, to the best of its knowledge and belief, after

thorough inquiry, it has not altered, mutilated, discarded, destroyed, or otherwise disposed of any Records (other than identical copies) relating to its potential liability regarding the FMC OU or the Site since the earlier of notification of potential liability by EPA or the filing of suit against it regarding the Site and that it has fully complied with any and all EPA requests for information regarding the FMC OU or the Site pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927 [, or state law]. If Respondent is unable to so certify it shall submit a modified certification that explains in detail why it is unable to certify in full with regard to all Records.

XVI. REPORTING REQUIREMENTS

55. In addition to the other deliverables set forth in this Order, Respondent shall submit monthly progress reports to EPA and the Tribes and State with respect to actions undertaken pursuant to this Order by the 15th day of the following month. At a minimum, with respect to the preceding month, these progress reports shall: (a) describe the actions that have been taken to comply with this Order during the previous month; (b) include a summary of all results of sampling and tests and all other data received or generated by Respondent or its contractors or agents; (c) identify all plans, reports, and other deliverables required by this Order completed and submitted; (d) describe all actions, including, but not limited to, data collection and implementation of work plans, that are scheduled for the next two months and provide other information relating to the progress of construction, including, but not limited to, critical path diagrams, Gantt charts and Pert charts; (e) include information regarding percentage of completion, unresolved delays encountered or anticipated that may affect the future schedule for implementation of the Work, and a description of efforts made to mitigate those delays or anticipated delays; and (f) include any modifications to the work plans or other schedules that Respondent has proposed to EPA or that have been approved by EPA. Respondent shall submit these progress reports to EPA following the Effective Date of this Order until EPA notifies Respondent pursuant to Paragraph 75 .b that the Work has been completed. If requested by EPA, Respondent shall also provide briefings for EPA to discuss the progress of the Work to which EPA may invite the Tribes and State.

56. Respondent shall notify EPA of any change in the schedule described in the monthly progress report for the performance of any activity, including, but not limited to, data collection and implementation of work plans, no later than fourteen days prior to the performance of the activity.

57. Upon the occurrence of any event during performance of the Work that Respondent is required to report pursuant to Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of the Emergency Planning and Community Right-to-know Act (“EPCRA”), 42 U.S.C. § 11004, Respondent shall within 24 hours of the onset of such event orally notify the EPA Project Coordinator as well as the Tribes and State, to ensure safety to the maximum extent. If the EPA Project Coordinator is unavailable, Respondent shall notify the Emergency Management Program, Region X, United States Environmental Protection Agency. These reporting requirements are in addition to the reporting required by CERCLA Section 103 or EPCRA Section 304. Within 20 days after the onset of such an event, Respondent shall furnish a written report to EPA and the Tribes and State setting forth the events that occurred and the

measures taken, and to be taken, in response thereto. Within 30 days after the conclusion of such an event, Respondent shall submit a report to EPA and the Tribes and State setting forth all actions taken in response thereto.

58. Respondents shall submit 4 copies of all plans, reports, data, and other deliverables required by this Order, including the Remedial Design Work Plan, the Remedial Action Work Plan, or any other approved plans to EPA in accordance with the schedules set forth in such plans. Respondents shall simultaneously submit 2 copies of all such plans, reports, data, and other deliverables to Tribes and 2 copies to the State.

59. All deliverables submitted by Respondent to EPA that purport to document Respondent's compliance with the terms of this Order shall be signed by an authorized representative of Respondent.

XVII. EPA APPROVAL OF PLANS, REPORTS, AND OTHER DELIVERABLES

60. Initial Submissions.

a. After review of any plan, report, or other deliverable that is required to be submitted for approval pursuant to this Order, EPA shall: (1) approve, in whole or in part, the submission; (2) approve the submission upon specified conditions; (3) disapprove, in whole or in part, the submission; or (4) any combination of the foregoing, including providing comment to which Respondent must respond.

b. EPA also may modify the initial submission to cure deficiencies in the submission and approve the submission as modified if: (1) EPA determines that disapproving the submission and awaiting a resubmission would cause substantial disruption to the Work; or (2) previous submission(s) have been disapproved due to material defects and the deficiencies in the initial submission under consideration indicate a bad faith lack of effort to submit an acceptable plan, report, or deliverable.

61. Resubmissions. Upon receipt of a notice of disapproval under subparagraph a(3) of the preceding Paragraph or (4), or if required by a notice of approval upon specified conditions under subparagraph a(2), Respondents shall, within 14 days or such longer time as specified by EPA in such notice, correct the deficiencies and resubmit the plan, report, or other deliverable for approval. After review of the resubmitted plan, report, or other deliverable, EPA may: (a) approve, in whole or in part, the resubmission; (b) approve the resubmission upon specified conditions; (c) modify the resubmission and approve it as modified; (d) disapprove, in whole or in part, the resubmission, requiring Respondent to correct the deficiencies; or (e) any combination of the foregoing.

63. Material Defects. If an initially submitted or resubmitted plan, report, or other deliverable contains a material defect, and the plan, report, or other deliverable is disapproved or modified by EPA under this Section due to such material defect, then the material defect shall constitute a violation of this Order and may subject Respondent to penalties in accordance with Section XXIV (Reservation of Rights by EPA).

64. Implementation. Upon approval, approval upon conditions, or modification by EPA under this Section of any plan, report, or other deliverable, or any portion thereof: (a) such plan, report, or other deliverable, or portion thereof, shall be incorporated into and enforceable under this Order; and (b) Respondent shall take any action required by such plan, report, or other deliverable, or portion thereof with respect to the modifications or conditions made by EPA. The implementation of any non-deficient portion of a plan, report, or other deliverable submitted or resubmitted under this Section shall not relieve Respondent of any penalties for violations under Section XXIII (Enforcement/Work Takeover).

65. Tribal and State Comments on Deliverables and Submissions. The Tribes and State will be given a reasonable opportunity to review and comment on all plans, reports or other deliverables or other written submissions to EPA prior to any EPA decision thereon. Tribal and State comments on any deliverables will be carefully considered by EPA which may adopt some or all of them as EPA comments to which Respondent must respond pursuant to this Order.

XVIII. INSURANCE

66. Not later than 15 days before commencing any Work on-site under this Order, Respondent shall secure, and shall maintain for the duration of this Order, commercial general liability insurance with limits of 10 million dollars, for any one occurrence, and automobile insurance with limits of 5 million dollars, combined single limit, naming EPA as an additional insured with respect to all liability arising out of the activities performed by or on behalf of Respondent pursuant to this Order. Within the same time period, Respondent shall provide EPA with certificates of such insurance and a copy of each insurance policy. Respondent shall submit such certificate and copies of policies each year on the anniversary of the Effective Date. In addition, for the duration of the Order, Respondent shall satisfy, or shall ensure that its contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing Work on behalf of Respondent in furtherance of this Order. 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.

XIX. PERFORMANCE GUARANTEE

67. In order to ensure the completion of the Work, Respondent shall establish and maintain a performance guarantee, initially in the amount of \$57,200,000 (hereinafter "Estimated Cost of the Work"), for the benefit of EPA. Respondent shall also establish and maintain a standby trust fund into which funds from financial assurance mechanisms can be deposited if the issuer of the performance guarantee is directed to do so by EPA pursuant to Paragraph 69. The performance guarantee, which must be satisfactory in form and substance to EPA, shall be in the form of one or more of the following mechanisms (provided that, if Respondent intends to use multiple mechanisms, such multiple mechanisms shall be limited to surety bonds, letters of credit, trust funds, and insurance policies):

a. A surety bond that provides EPA with acceptable rights as a beneficiary thereof unconditionally guaranteeing payment and/or performance of the Work;

b. An irrevocable letter of credit, payable to or at the direction of EPA, that is issued by an entity that has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency;

c. A trust fund established for the benefit of EPA that is administered by a trustee acceptable in all respects to EPA;

d. A policy of insurance that provides EPA with acceptable rights as a beneficiary thereof, issued by an insurance carrier acceptable in all respects to EPA, which ensures the payment and/or performance of the Work;

e. A demonstration by Respondent that it meets the financial test criteria of 40 C.F.R. § 264.143(f) with respect to the Estimated Cost of the Work (plus the total amount of any other federal, state, or tribal environmental obligations financially assured through the use of a financial test or guarantee), provided that all other requirements of 40 C.F.R. § 264.143(f) and this Section are satisfied; and/or

f. A written guarantee to fund or perform the Work executed in favor of EPA provided by one or more of the following: (1) a direct or indirect parent company of Respondent, or (2) a company that has a “substantial business relationship” (as defined in 40 C.F.R. § 264.141(h)) with Respondent; provided, however, that any company providing such a guarantee must demonstrate to the satisfaction of EPA that it satisfies the financial test and reporting requirements for owners and operators set forth in subparagraphs (1) through (8) of 40 C.F.R. § 264.143(f) and this Section with respect to the Estimated Cost of the Work (plus the total amount of any other federal, state, or tribal environmental obligations financially assured through the use of a financial test or guarantee).

68. Within 90 days after the Effective Date, Respondent shall submit all executed or otherwise finalized instruments or other documents required.

69. If Respondent provides a performance guarantee for completion of the Work by means of a demonstration or guarantee pursuant to Paragraph 67.e or 67.f, Respondent shall also comply with the other relevant requirements of 40 C.F.R. § 264.143(f) relating to these mechanisms unless otherwise provided in this Order, and with the requirements of this Section, including but not limited to: (a) the initial submission of required financial reports and statements from the relevant entity’s chief financial officer and independent certified public accountant to EPA no later than 90 days after the Effective Date; (b) the annual re-submission of such reports and statements within 90 days after the close of each such entity’s fiscal year; and (c) the notification of EPA by certified mail no later than 30 days after any such entity determines that it no longer satisfies the financial test requirements set forth at 40 C.F.R. § 264.143(f)(1) and in any event within 90 days after the close of any fiscal year for which the year-end data show that such entity no longer satisfies such financial test requirements. Respondent agrees that EPA may

also, based on this Section, require reports of financial condition at any time from the relevant entity in addition to those specified in this Section. For purposes of the performance guarantee mechanisms specified in this Section, references in 40 C.F.R. Part 264, Subpart H and 265 to: (1) the terms “current closure cost estimate,” “current post-closure cost estimate,” and “current plugging and abandonment cost estimate” shall also include the Estimated Cost of the Work; (2) “the sum of current closure and post-closure costs and the current plugging and abandonment cost estimates” shall mean “the sum of all environmental obligations” (including obligations under CERCLA, RCRA, EPA’s Underground Injection Control program, 40 C.F.R. Part 144, enacted as part of the Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992k, the Toxic Substances Control Act, 15 U.S.C. §§ 2601-2695d, and any other federal, state, or tribal environmental obligation) guaranteed by such company or for which such company is otherwise financially obligated in addition to the Estimated Cost of the Work to be performed in accordance with this Order]; (3) the terms “owner” and “operator” shall be deemed to refer to Respondent obtaining a guarantee or making a demonstration under Paragraph 67.e or 67.f; and (4) the terms “facility” and “hazardous waste management facility” shall be deemed to include the FMC OU.

70. Respondent shall diligently monitor the adequacy of the performance guarantee. In the event that EPA determines, or Respondent becomes aware of information indicating, that the performance guarantee provided pursuant to this Section is inadequate or otherwise no longer satisfies the requirements set forth in this Section, whether due to an increase in the estimated cost of completing the Work or for any other reason, Respondent shall notify EPA of the inadequacy within 30 days and, within 30 days after providing to or receiving from EPA such notice, shall obtain and submit a proposal to EPA for approval for a revised or alternate form of performance guarantee that satisfies the requirements set forth in this Section. If EPA approves the proposal, Respondent shall provide a revised or alternate performance guarantee mechanism in compliance with and to the extent permitted by such written approval and shall submit all documents evidencing such change to EPA within 30 days of receipt of EPA’s written approval. In seeking approval for a revised or alternate form of performance guarantee, Respondent shall follow the procedures set forth in Paragraph 72. If EPA does not approve the proposal, Respondent shall follow the procedures set forth in Paragraph 72 to obtain and submit another proposal to EPA for approval for a revised or alternate form of performance guarantee within 30 days of receipt of EPA’s written disapproval.

71. EPA’s decision to take over the performance of all or any portion(s) of the Work pursuant to Paragraph 83 (Enforcement/Work Takeover) shall trigger EPA’s right to receive the benefit of any performance guarantee(s) provided pursuant to Paragraph 67. At such time, EPA shall have the right to enforce performance by the issuer of the relevant performance guarantee mechanism and/or have immediate access to resources guaranteed under any such performance guarantee(s), whether in cash or in kind, as needed to continue and complete all or any portion(s) of the Work assumed by EPA. EPA reserves the right to bring an action against Respondent under Section 107 of CERCLA for recovery of any costs incurred as a result of takeover of all or any portion(s) of the Work that are not paid for or reimbursed by the performance guarantee. In addition, if at any time EPA is notified by the issuer of a performance guarantee mechanism that such issuer intends to cancel the performance guarantee mechanism it has issued, then, unless Respondent has provided an alternate performance guarantee mechanism in accordance with this Section no later than 30 days prior to the noticed cancellation date, EPA shall be entitled (as of

and after the date that is 30 days prior to the impending cancellation) to draw fully on the funds guaranteed under the then-existing performance guarantee.

72. Respondent shall not reduce the amount of, or change the form or terms of, the performance guarantee until Respondent receives written approval from EPA to do so. Respondent may petition EPA in writing to request such reductions or changes on any anniversary of the Effective Date, or at any other time agreed to by the Parties. Any such petition shall include the estimated cost of the remaining Work and the basis upon which such cost was calculated, and, for proposed changes to the form or terms of the performance guarantee, the proposed revision(s) to the form or terms of the performance guarantee. If EPA notifies Respondent that it has approved the requested reduction or change, Respondent may reduce or otherwise change the performance guarantee in compliance with and to the extent permitted by such written approval and shall submit all documents evidencing such reduction or change to EPA within 30 days of receipt of EPA's written decision. Similarly, Respondent shall not release, cancel, or discontinue any performance guarantee provided pursuant to this Section until: (a) Respondent receives written notice from EPA in accordance with Section XX that the Work has been fully and finally completed in accordance with this Order; or (b) EPA otherwise notifies Respondent in writing that it may release, cancel, or discontinue the performance guarantee(s) provided pursuant to this Section.

XX. NOTICE OF COMPLETION OF WORK

73. Completion of the Construction of the Interim Remedial Action.

a. Within 30 days after Respondent concludes that the Interim Remedial Action has been constructed, Respondent shall schedule and conduct an inspection to be attended by Respondents and EPA. EPA will invite Tribal and State representatives to attend. If EPA determines that construction of the Interim Remedial Action is not complete, EPA shall so notify Respondent. EPA's notice will include a description of the activities that Respondent must perform for Construction Completion of the Interim Remedial Action and a schedule for such activities, or will require Respondent to submit a schedule for EPA approval. A re-inspection must be conducted if requested by EPA. Respondent shall submit a pre-final inspection report which describes the activities required by EPA and documents their completion. If, after the initial pre-notice inspection or subsequent re-inspection, if necessary, Respondent believes that the construction of the Interim Remedial Action has been completed, it shall submit a written report requesting issuance of Notice of Construction Completion of the Remedial Action to EPA for approval, pursuant to Section XVII (EPA Approval of Plans, Reports, and Other Deliverables), within 60 days after the inspection. In the report, a registered professional engineer and Respondent's Project Coordinator shall state that the Interim Remedial Action has been constructed in full satisfaction of the requirements of Interim Record of Decision Amendment and this Order. The report shall be prepared in accordance with EPA's Close Out Procedures for NPL Sites (May 2011). The written report shall include as-built drawings signed and stamped by a professional engineer. The report shall contain the following statement, signed by a responsible corporate official of Respondent or Respondent's Project Coordinator:

I certify under penalty of law that this document and all attachments were prepared

under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If, after completion of the any required inspection(s) and receipt and review of the written report, EPA determines that the Interim Remedial Action or any portion thereof has not been fully constructed, EPA will notify Respondent in writing of the activities that must be undertaken by Respondent pursuant to this Order to complete the construction of the Interim Remedial Action. EPA will set forth in the notice a schedule for performance of such activities consistent with the Order or require Respondent to submit a schedule to EPA for approval pursuant to Section XVII (EPA Approval of Plans, Reports, and Other Deliverables). Respondent shall perform all activities described in the notice in accordance with the specifications and schedules established pursuant to this Paragraph.

b. If EPA concludes, based on the initial or any subsequent report requesting Notice of Construction Completion of the Interim Remedial Action, that the Interim Remedial Action has been constructed in accordance with this Order, EPA will issue the Notice of Construction Completion of the Remedial Action. Issuance of Notice of Construction Completion of the Remedial Action shall not affect Respondent's remaining obligations under this Order. EPA's conclusion and subsequent notification shall be based on present knowledge and the written report, and shall not limit EPA's right to perform periodic reviews pursuant to Section 121(c) of CERCLA, 42 U.S.C §9621(c), or to take or require an action that in the judgment of EPA is appropriate at the FMC OU, in accordance with Sections 104, 106, or 107 of CERCLA, 42 U.S.C §§ 9604, 9606, or 9607.

74. Completion of the Interim Remedial Action.

a. Within 30 days after Respondent concludes that the Interim Remedial Action has been fully performed and the Performance Standards have been achieved, Respondent shall schedule and conduct an inspection to be attended by Respondent and EPA. EPA will invite Tribal and State representatives to attend. If EPA determines that the Interim Remedial Action is not complete, EPA shall so notify Respondent. EPA's notice will include a description of the activities that Respondent must perform in order to complete the RA, and a schedule for such activities, or will require Respondent to submit a schedule for EPA approval. Respondent shall submit a pre-final inspection report which describes the activities required by EPA and documents their completion. A re-inspection must be conducted if requested by EPA. If, after the initial pre-notice inspection or subsequent re-inspection, Respondent believes that the Interim Remedial Action has been fully performed and the Performance Standards have been achieved, it shall submit a written report requesting issuance of Notice of Completion of the Remedial Action to EPA for approval, pursuant to Section XVII (EPA Approval of Plans, Reports, and Other Deliverables), within 60 days after the inspection. In the report, a registered professional engineer and Respondent's Project Coordinator shall state that the Interim Remedial Action has been completed and Performance Standards have been met in full satisfaction of the

requirements of this Order. The written report shall include as-built drawings signed and stamped by a professional engineer. The report shall contain the following statement, signed by a responsible corporate official of Respondent or Respondent's Project Coordinator:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If, after completion of the any required inspection(s) and receipt and review of the written report, EPA determines that the Interim Remedial Action or any portion thereof has not been completed in accordance with this Order or that the Performance Standards have not been achieved, EPA will notify Respondent in writing of the activities that must be undertaken by Respondent pursuant to this Order to complete the Interim Remedial Action and achieve the Performance Standards. EPA will set forth in the notice a schedule for performance of such activities consistent with the Order or require Respondent to submit a schedule to EPA for approval pursuant to Section XVII (EPA Approval of Plans, Reports, and Other Deliverables). Respondent shall perform all activities described in the notice in accordance with the specifications and schedules established pursuant to this Paragraph.

b. If EPA concludes, based on the initial or any subsequent report requesting Notice of Completion of the Interim Remedial Action, that the Interim Remedial Action has been performed in accordance with this Order and that the Performance Standards have been achieved, EPA will issue the Notice of Completion of the Remedial Action. Issuance of Notice of Completion of the Remedial Action shall not affect Respondent's remaining obligations under this Order. EPA's conclusion and subsequent notification shall be based on present knowledge and the written report, and shall not limit EPA's right to perform periodic reviews pursuant to Section 121(c) of CERCLA, 42 U.S.C §9621(c), or to take or require an action that in the judgment of EPA is appropriate at the Site, in accordance with Sections 104, 106, or 107 of CERCLA, 42 U.S.C §§ 9604, 9606, or 9607.

75. Completion of the Work.

a. Within 30 days after Respondent concludes that all phases of the Work, other than any remaining activities required under Section X (Remedy Review), have been fully performed, Respondent shall schedule and conduct a pre-notice inspection to be attended by Respondent and EPA. EPA will invite Tribal and State representatives to attend. If EPA determines that the Work is not complete, EPA shall so notify Respondent. EPA's notice will include a description of the activities that Respondent must perform for completion of the Work, and a schedule for such activities, or will require Respondent to submit a schedule for EPA approval. Respondent shall submit a pre-final inspection report which describes the activities required by EPA and documents their completion. A re-inspection must be conducted if

requested by EPA. If, after the pre-notice inspection or subsequent re-inspection, Respondent still believes that the Work has been fully performed, Respondent shall submit a written report by a registered professional engineer stating that the Work has been completed in full satisfaction of the requirements of this Order. The report shall contain the statement set forth in the preceding subparagraph, signed by a responsible corporate official of Respondent or Respondent's Project Coordinator. If, after review of the written report, EPA determines that any portion of the Work has not been completed in accordance with this Order, EPA will notify Respondent in writing of the activities that must be undertaken by Respondent pursuant to this Order to complete the Work. EPA will set forth in the notice a schedule for performance of such activities consistent with the Order or require Respondent to submit a schedule to EPA for approval pursuant to Section XVII (EPA Approval of Plans, Reports, and Other Deliverables). Respondent shall perform all activities described in the notice in accordance with the specifications and schedules established therein.

b. If EPA concludes, based on the initial or any subsequent request for Notice of Completion of the Work by Respondent that the Work has been performed in accordance with this Order, EPA will so notify Respondents in writing, based upon present knowledge and the written report referred to in the preceding subparagraph, issue written notification to Respondents that the Work has been completed. EPA's conclusion and subsequent notification shall not limit EPA's right to perform periodic reviews pursuant to Section 121(c) of CERCLA, 42 U.S.C §9621(c), or to take or require an action that in the judgment of EPA is appropriate at the Site, in accordance with Sections 104, 106, or 107 of CERCLA, 42 U.S.C §§ 9604, 9606, or 9607.

XXI. EMERGENCY RESPONSE

76. In the event of any action or occurrence during performance of the Work that causes or threatens a release of any Waste Material from the FMC OU or the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action. Respondent shall take these actions in accordance with all applicable provisions of this Order, including, but not limited to, the Health and Safety Plan, in order to prevent, abate, or minimize any such release or threat of release or endangerment caused or threatened by the release.

77. Respondent shall also immediately notify the EPA Project Coordinator and the Regional Duty Officer, Emergency Management Program, EPA Region X, 206-553-1263 and the National Response Center at (800) 424-8802 for releases of oil or hazardous substances above the reportable quantity, as well as the Tribes and State of the incident or conditions to ensure safety to the maximum extent. In the event that Respondent fails to take appropriate response action as required by this Section, and EPA takes such action instead, EPA reserves the right to pursue cost recovery.

78. Respondent shall submit a written report to EPA within 7 days after each release or threat of release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or threat of release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release or threat of release. This reporting requirement is in

addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004, et seq.

XXII. PAYMENT OF RESPONSE COSTS

79. Upon EPA's written demand, Respondent shall pay EPA all Response Costs incurred or to be incurred in connection with this Order beginning on the Effective Date. On a periodic basis, EPA will send Respondent a bill requiring payment of all Response Costs incurred by the United States with respect to this Order that includes a SCORPIOS or other regionally prepared cost summary, which includes direct and indirect costs incurred by EPA, its contractors, and the Department of Justice.

80. Respondent shall make all payments within 30 days after receipt of each written demand requiring payment. Payment shall be made to EPA by Fedwire Electronic Funds Transfer ("EFT") to:

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT address = FRNYUS33
33 Liberty Street
New York NY 10045
Field Tag 4200 of the Fedwire message should read "D 68010727 Environmental Protection Agency"

and shall reference Site/Spill ID Number 105X and the EPA docket number for this action.

81. At the time of payment, Respondent shall send notice that payment has been made to the EPA Cincinnati Finance Office, MS-NWD, 26 Martin Luther King Drive, Cincinnati, OH 45268 or acctreceivable.cinwd@epa.gov, and to the EPA Project Coordinator. Such notice shall reference Site/Spill ID Number 105X and EPA docket number for this action.

82. Interest. In the event that the payments for Response Costs are not made within 30 days after Respondent's receipt of a written demand requiring payment, Respondent shall pay Interest on the unpaid balance. The Interest on Response Costs shall begin to accrue on the date of the written demand and shall continue to accrue until the date of 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 shall make all payments required by this Paragraph in the manner described in this Section.

XXIII. ENFORCEMENT/WORK TAKEOVER

83. Any willful violation, or failure or refusal to comply with any provision of this Order may subject Respondent to civil penalties of up to \$37,500 per violation per day, as

provided in Section 106(b)(1) of CERCLA, 42 U.S.C. § 9606(b)(1), and the Civil Monetary Penalty Inflation Adjustment Rule, 69 Fed. Reg. 7121, 40 C.F.R Part 19.4. In the event of such willful violation, or failure or refusal to comply, 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. If EPA elects to take over the performance of all or any portion(s) of the Work pursuant to this provision, EPA shall have the right to enforce performance by the issuer of the relevant performance guarantee mechanism and/or immediately access any performance guarantee mechanisms provided pursuant to Section XIX (Performance Guarantee) of this Order. 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 failure to comply, as provided in Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3).

XXIV. RESERVATIONS OF RIGHTS BY EPA

84. Nothing in this Order 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 FMC OU or the Site. Further, nothing in this Order 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 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 costs incurred by the United States related to this Order or the FMC OU and not paid by Respondent.

XXV. OTHER CLAIMS

85. 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. The United States or EPA shall not be deemed a party to any contract entered into by Respondent or its directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Order.

86. Nothing in this Order constitutes a satisfaction of or release from any claim or cause of action against Respondent or any person not a party to this Order, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

87. Nothing in this Order shall be deemed to constitute preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or C.F.R. § 300.700(d).

88. 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).

XXVI. MODIFICATION

89. The EPA Project Coordinator may make modifications to any plan or schedule in writing. Any other requirements of this Order may be modified in writing by the EPA signatory of this Order or their designee.

90. If Respondent seeks permission to deviate from any approved Work Plan or schedule, Respondent's Project Coordinator shall timely submit a written request to EPA for approval outlining the proposed modification and its basis. Respondent may not proceed with the requested deviation until receiving approval from the EPA Project Coordinator pursuant to the preceding Paragraph.

91. No informal advice, guidance, suggestion, or comment by the EPA Project Coordinator or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondent shall relieve Respondent of its obligation to obtain any formal approval required by this Order, or to comply with all requirements of this Order, unless it is formally modified.

XXVII. DELAY IN PERFORMANCE

92. Any delay in performance of this Order that, in EPA's judgment, is not properly justified by Respondent under the terms of the following Paragraph shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondent's obligations to fully perform all obligations under the terms and conditions of this Order.

93. Respondent shall notify EPA of any delay or anticipated delay in performing any requirement of this Order. Such notification shall be made by telephone and email to the EPA Project Coordinator within forty-eight hours after Respondent first knew or should have known that a delay might occur. Respondent shall adopt all reasonable measures to avoid or minimize any such delay. Within five business days after notifying EPA by telephone and email, Respondent shall provide written notification to EPA fully describing the nature of the delay, the anticipated duration of the delay, any justification for the delay, all actions taken or to be taken to prevent or mitigate the delay or the effect of the delay, a schedule for implementation of any measures to be taken to mitigate the effect of the delay, and any reason why Respondent should not be held strictly accountable for failing to comply with any relevant requirements of this Order. Increased costs or expenses associated with implementation of the activities called for in this Order are not a justification for any delay in performance.

XXVIII. COMPLIANCE WITH OTHER LAWS

94. Respondent shall perform all actions required pursuant to this Order in accordance with all applicable local, state, tribal and federal laws and regulations except as provided in Section 121(e) of CERCLA, 42 U.S.C. § 9621(e). Respondents must also comply

with all applicable or relevant and appropriate requirements as set forth in the Interim ROD Amendment.

XXIX. ADMINISTRATIVE RECORD

95. EPA has established an Administrative Record that contains the documents that form the basis for the issuance of the Interim ROD Amendment. It is available for review at the 4 locations specified on page 12 of Appendix “A” to the Order (Interim ROD Amendment).

XXX. APPENDICES

96. The following appendices are attached to and incorporated into this Order:

“Appendix A” is the Interim ROD Amendment.

“Appendix B” is the description and/or map of the Site, including the FMC OU.

“Appendix “C” is the Remedial Design and Remedial Action Schedules.

Appendix “D” is a partial list of References including EPA Guidance and Policy publications.

XXXI. COMMUNITY INVOLVEMENT

97. If requested by EPA, Respondent shall participate in community involvement activities pursuant to the Community Involvement Plan that has been developed by EPA. EPA will determine the appropriate role for Respondent under the Plan. Respondent shall also cooperate with EPA in providing information regarding the Work to the public. As requested by EPA, Respondent shall participate in the preparation of such information for dissemination to the public and in public meetings that may be held or sponsored by EPA to explain activities at or relating to the FMC OU.

XXXII. OPPORTUNITY TO CONFER

98. Within 10 days after issuance of this Order, Respondent may request a conference with the signatory of this Order or subordinate EPA staff to discuss this Order or any matter pertinent to this Order. Any such conference shall be held within 15 days after such request.

99. Respondent may appear in person or by an attorney or other representative at the conference. Respondent may also submit written comments or statements of position on any matter pertinent to this Order no later than 10 days following the issuance of this order. This conference is not an evidentiary hearing, does not constitute a proceeding to challenge this Order, and does not give Respondent a right to seek review of this Order. Any request for a conference or written comments or statements should be directed to the EPA Project Coordinator (RPM).

XXXIII. SEVERABILITY

100. 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.

XXXIV. EFFECTIVE DATE

101. This Order shall be effective 10 days after the Order is signed by EPA unless a conference is requested as provided in Section XXXII (Opportunity to Confer). If a conference is requested, this Order shall be effective on the 5th day following the day of the conference unless modified in writing by EPA.

It is so ORDERED.

BY: 

Name

DATE: June 10, 2013

Richard Albright, Director

Office of Environmental Cleanup

Region 10

U.S. Environmental Protection Agency

EFFECTIVE DATE: _____

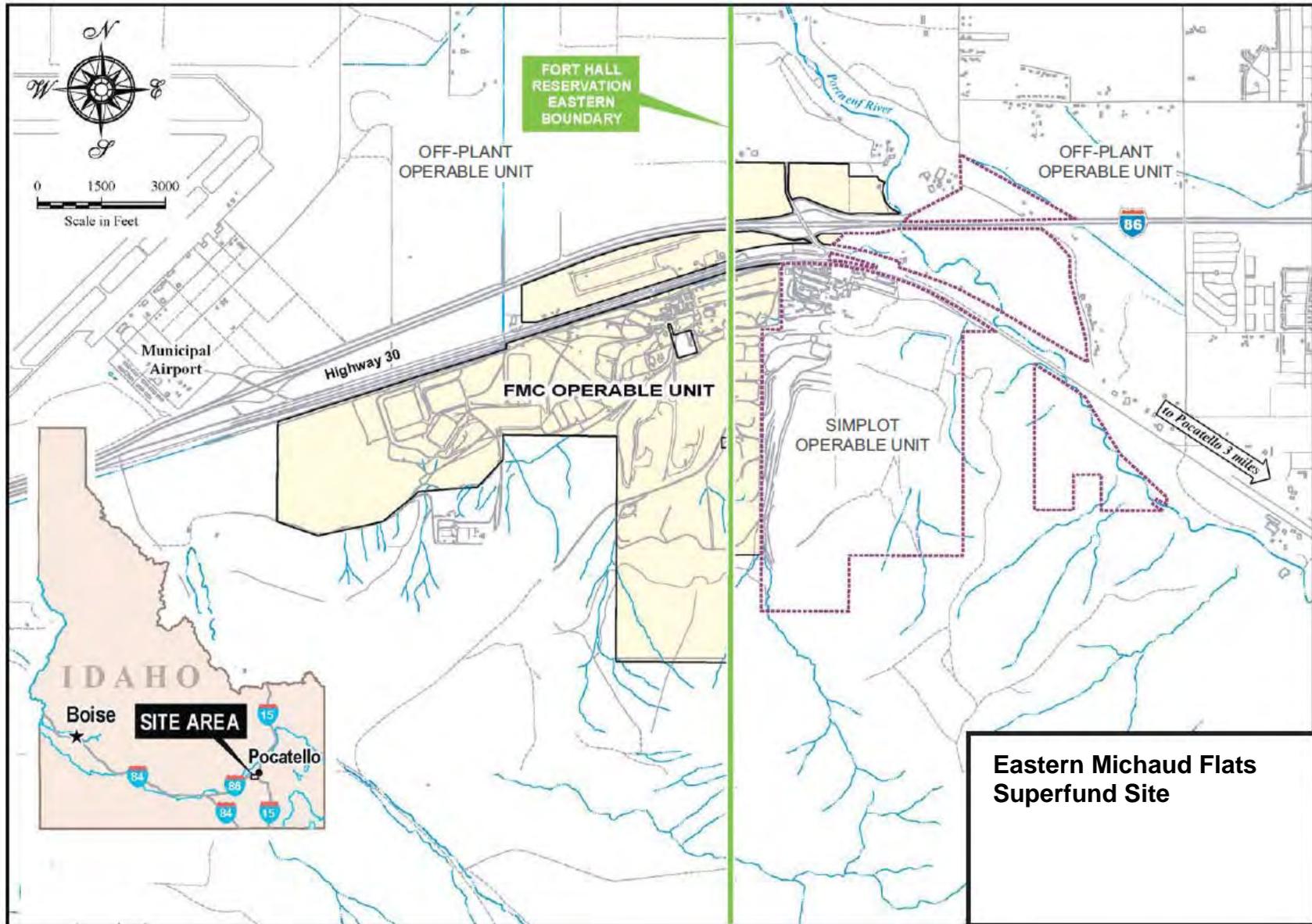
Appendix A: EPA Interim Record of Decision Amendment for the FMC Operable Unit of the Eastern Michaud Flats Superfund Site, September 27, 2012

This document can also be found at the following URL:

http://www.epa.gov/region10/pdf/sites/emichaud/IRODA_sept2012.pdf

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Appendix B - Site Map



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Appendix C - Remedial Design and Remedial Action Schedules

RD Schedule	
Description of Deliverable / Task / Supporting Deliverable	Deadline
Designate proposed Project Coordinator	10 days after the effective date
Designate proposed Supervising Contractor	10 days after the effective date
RDWP and HASP	45 days after EPA's approval of Supervising Contractor
Draft ICIAP	Submitted with the Preliminary RD
Performance Testing Work Plan	60 days after EPA's approval of Supervising Contractor
Preliminary (30%) RD	45 days after EPA approval of Final RDWP, or if no Intermediate Design, 45 days after receipt of EPA's approval on the Performance Testing Evaluation Report.
Intermediate (60%) RD If required.	90 days after EPA comments on Preliminary RD or 90 days after receipt of receipt of EPA's approval on the Performance Testing Evaluation Report whichever is later.
Pre-final (90/95%) RD	90 days after EPA comments on Intermediate RD, or 120 days after receipt of EPA comments on the Preliminary Remedial Design (if there is no intermediate design).
Final RD	21 days after EPA comments on Pre-final RD
Remedial Action Work Plan	Draft Concurrently with Pre-final RD

RA Schedule	
Description of Deliverable / Task / Supporting Deliverable	Deadline
Award RA contract	45 Days after approval of the RAWP
Pre-Construction Inspection and Meeting	30 days after Award of RA contract(s)
Start of Construction	15 days after Pre-Construction Meeting
<u>Construction Completion</u>	
Pre-final Inspection	30 days after completion of construction
Pre-final Inspection Report	30 days after completion of Pre-final Inspection
Final Inspection	30 days after completion of work identified in Pre-final Inspection Report

Construction Completion Report	60 days after Final Inspection
<u>RA Completion</u>	
Pre-final Inspection	30 days after completion of construction
Pre-final Inspection Report	30 days after completion of Pre-final Inspection
Final Inspection	30 days after completion of work identified in Pre-final Inspection Report
RA Completion Report	60 days after Final Inspection
<u>Completion of the Work</u>	
Pre-final Inspection	30 days after completion of construction
Pre-final Inspection Report	30 days after completion of Pre-final Inspection
Final Inspection	30 days after completion of work identified in Pre-final Inspection Report
Work Completion Report	60 days after Final Inspection

Misc	
Deliverable	Due Date
Monthly Progress Reports (comprehensive for all RD/RA work during design and construction)	15 th day of each month following the reporting period

Appendix D - Partial list of References including EPA Guidance and Policy Publications

The following regulations and guidance documents, among others, apply to the Work. For any regulation or guidance referenced in the UAO, the reference will be read to include any subsequent modification, amendment or replacement of such regulation or guidance. Such modifications, amendments or replacements apply to the Work only after FMC receive notification from EPA of the modification, amendment or replacement.

1. Interim Guidance on Compliance with Applicable of Relevant and Appropriate Requirements, OSWER 9234.0-05 (July 1987).
2. A Compendium of Superfund Field Operations Methods, OSWER 9355.0-14, EPA/540/P-87/001a (Aug. 1987).
3. CERCLA Compliance with Other Laws Plan, Draft, OSWER 9234.1-01 and 9234.1-02 (Aug. 1988).
4. Guidance for Conducting Remedial Investigations and Feasibility Studies, OSWER 9355.3-01, EPA/540/G-89/004 (Oct. 1988).
5. Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites, Draft, OSWER 9283.1-2, EPA/540/G-88/003 (Dec. 1988).
6. Guidance on EPA Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties, EPA/540/G-90/001 (Apr. 1990).
7. Guidance on Expediting Remedial Design and Remedial Actions, EPA/540/G-90/006 (Aug. 1990).
8. Guide to Management of Investigation-Derived Wastes, OSWER 9345.3-03FS (Jan. 1992).
9. Permits and Permit Equivalency Processes for CERCLA On-Site Response Actions, OSWER 9355.7-03 (Feb. 1992).
10. Guide for Conducting Treatability Studies under CERCLA, EPA/540/R-92/071A (Oct. 1992).
11. Construction Quality Management for Remedial Action and Remedial Design Waste Containment Systems, EPA/540/R-92/073 (October 1992).
12. Construction Quality Management for Remedial Action and Remedial Design Waste Containment Systems, EPA/540/R 92/073 (Oct. 1992).
13. National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule, 40 C.F.R. Part 300 (Oct. 17, 1994).

14. Methods for Monitoring Pump and Treat Performance, EPA/600/R-94/123 (June 1994).
15. Scoping the Remedial Design, OSWER 9355.5-21/FS (Mar. 1995).
16. Remedial Design/Remedial Action Handbook, OSWER 9355.0-04B, EPA/540/R-95/059 (June 1995).
17. EPA Guidance for Data Quality Assessment, Practical Methods for Data Analysis, QA/G-9, EPA/600/R-96/084 (July 1996).
18. Construction Quality Assurance (CQA) Plan Requirements For Hazardous Waste Landfills, EM 1110-1-4011 (1999).
19. Operation and Maintenance in the Superfund Program, OSWER 9200.1-37FS, EPA/540/F-01/004 (May 2001).
20. USEPA Contract Laboratory Program National Functional Guidelines for Low Concentration Organic Data Review, OSWER 9240.1-34, EPA/540/R-00/006 (June 2001).
21. Guidance for Quality Assurance Project Plans, EPA/240/R-02/009 (Dec. 2002).
22. Revised Response Selection and Settlement Approach for Superfund Alternative Sites, OSWER 9208.0-18 (June 2004).
23. Quality Systems for Environmental Data and Technology Programs: Requirements with Guidance for Use, ANSI/ASQ E4-2004 (2004), available at: <http://webstore.ansi.org/RecordDetail.aspx?sku=ANSI/ASQ+E4-2004>.
24. Uniform Federal Policy for Quality Assurance Project Plans, Parts 1-3, EPA/505/B-04/900A through 900C (Mar. 2005).
25. Superfund Community Involvement Handbook, EPA/540/K-05/003 (Apr. 2005).
26. EPA Guidance on Systematic Planning Using the Data Quality Objectives Process, QA/G-4, EPA/240/B-06/001 (February 2006)
27. EPA Requirements for Quality Assurance Plans, QA/R-5, EPA/240/B-01/003 (reissued May 2006).
28. EPA Requirements for Quality Management Plans, QA/R-2, EPA/240/B-01/002 (reissued May 2006).
29. USEPA Contract Laboratory Program Statement of Work for Multi-Media Multi-Concentration Organic Analysis, SOM01.2 (June 2007).
30. USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, EPA/540/R-08/01 (June 2008).

31. A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems, EPA/600/R-08/003 (Jan. 2008).
32. Smart Energy Resources Guide, EPA/600/R-08/049 (Mar. 2008).
33. Principles for Greener Cleanups, EPA OSWER (Aug. 2009).
34. Providing Communities with Opportunities for Independent Technical Assistance in Superfund Settlements, Interim, EPA (Sept. 2009).
35. USEPA Contract Laboratory Program Statement of Work for Inorganic Superfund Methods (Multi-Media, Multi-Concentration), ISM01.2 (Jan. 2010).
36. Close Out Procedures for NPL Sites, OSWER 9320.2-22 (May 2011).
37. Construction Specifications Institute's Master Format 2012, available from the Construction Specifications Institute, www.csinet.org/masterformat.
38. Standard Methods for the Examination of Water and Wastewater, 22nd Ed. (Standard Methods) (2012).
39. Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites, OSWER 9355.0-89, EPA/540/R-09/001 (Sept. 2012).
40. Institutional Controls: A Guide to Preparing Institutional Controls Implementation and Assurance Plans at Contaminated Sites, OSWER 9200.0-77, EPA/540/R-09/02 (Sept. 2012).

UNDATED

Occupational Health and Safety Administration, Standards for General Industry and for Construction Industry, 29 C.F.R. Parts 1910 and 1926.

Air Toxics - Monitoring Methods, 40 C.F.R. Part 136.