

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII

901 N. 5TH STREET

KANSAS CITY, KANSAS 66101

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ENVIRONMENTAL PROTECTION
AGENCY-REGION VII
REGIONAL HEARING CLERK

IN THE MATTER OF:)

LEADWOOD MINE TAILINGS SITE)

County, State of the Missouri)

The Doe Run Resources Corporation)

Respondent,)

Proceeding under Section 106(a) of the)
Comprehensive Environmental Response,)
Compensation, and Liability Act of 1980,)
42 U.S.C. § 9606 (a).)

**UNILATERAL
ADMINISTRATIVE ORDER**

Docket No. CERCLA-07-2006-0272

UNILATERAL ADMINISTRATIVE ORDER
FOR NON-TIME CRITICAL REMOVAL ACTION

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I. JURISDICTION AND GENERAL PROVISIONS

1. This Unilateral Administrative Order (Order) is issued pursuant to the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental

Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9606(a), as amended (CERCLA), and delegated to the Administrators by Environmental Protection Agency (EPA) Delegation Nos. 14-14-A and 14-14-B. This authority has been delegated to the EPA, Region VII Superfund Division Director by R07-14-014-A and R07-14-014B.

2. This Order pertains to the Leadwood Mine Tailings Site, formerly used for mining, milling, roasting and smelting activities, located South of Highway 8 between the towns of Leadwood, Frank Clay, and Wortham in St. Francois County, Missouri (the Site). This Order requires the Doe Run Resources Corporation (Respondent) to conduct removal actions described herein to abate an imminent and substantial endangerment to the public health, welfare, or the environment that is presented by the actual or threatened release of hazardous substances at or from the Site.

3. The EPA notified the State of Missouri 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 Respondent's heirs, directors, officers, employees, agents, receivers, trustees, successors and assigns. Any change in ownership or corporate status of Respondent including but not limited to any transfer of assets or real or personal property shall in no way alter Respondent's responsibilities under this Order.

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

III. DEFINITIONS

6. Unless otherwise expressly provided herein, terms used in this Order that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in the statute or in its implementing regulations. Whenever terms listed below are used in this Order or in the documents attached to this Order or incorporated by reference into this Order, the following definitions shall apply:

a. "Action Memorandum" shall mean the EPA Action Memorandum for the Leadwood Mine Tailings Site, signed on June 22, 2006, by the Superfund Division Director, EPA, Region VII, and all appendices thereto. The Action Memorandum is enclosed as Appendix B.

b. "CERCLA" shall mean the Comprehensive Environmental Response, Compensations, and Liability Act of 1980, as amended 42 U.S.C. §9601, *et seq.*

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

d. "Effective Date" shall be the effective date of this Order as provided in Section XVIII.

e. "EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

f. "MDNR" shall mean the Missouri Department of Natural Resources and any successor departments or agencies of the State.

g. "National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

h. "Order" shall mean this Unilateral Administrative Order and all appendices attached hereto. In the event of conflict between this Order and any provision of any other agreement, order, appendix, or writing, the terms and conditions of this Order shall control.

i. "Paragraph" shall mean a portion of this Order identified by an Arabic numeral.

j. "Parties" shall mean the EPA and the Respondent.

k. "Respondent" shall mean the Doe Run Resources Corporation.

l. "Section" shall mean a portion of this Order identified by a Roman numeral.

m. "Site" shall mean the Leadwood Mine Tailings Site, consisting of a large chat pile, mill facility remnants, mine shaft remnants, two tailings dams and area including but not limited to adjacent areas, covered by chat or tailings, and depicted generally on the map attached as Figure One to Appendix A (SOW). The definition of "Site" shall have the same meaning as "facility" in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9), and for purposes of this Order, shall reference the locations where hazardous substances have come to be located as a result of

mining and milling activities at the Site or as a result of any migration of hazardous substances off the Site.

n. "State" shall mean the State of Missouri.

o. "Statement of Work (SOW) or "Scope of Work (SOW)" shall mean the statement of work for implementation of the Removal Action at the Leadwood Mine Tailings Site, as set forth in Appendix A to this Order, and any modifications made thereto in accordance with this Order. The SOW is incorporated into this Order and is an enforceable part of this Order.

p. "United States" shall mean the United States of America.

q. "Waste Material" shall mean any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); and any "hazardous waste" under State and Federal Law.

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

IV. FINDINGS OF FACT

7. Respondent is a New York Corporation registered to do business in the State of Missouri.

8. The majority of the Site is currently owned by The Doe Run Resources Corporation (Doe Run), as the corporate successor to St. Joe Minerals Corporation.

9. The Leadwood Mine Tailings Site is located in St. Francois County, in the southeastern region of the State of Missouri. It is part of what is commonly known as the Old Lead Belt, which was the largest lead-producing region in the United States from 1907 to 1953.

10. Mining operations began at and near the Site in approximately 1894 and continued until the mill at the Site was permanently closed around 1965. The by-product of the mining process resulted in the production of mine waste materials called chat and tailings. Much of the mining waste remains at the site today.

11. Substances of concern at the Site are residual heavy metals, primary lead, cadmium, and zinc, disposed of on-site. Ore metals were separated from the host rock as completely as possible during milling operations, however, relatively small quantities were disposed with the

chat and tailings. Over the century of waste generation, many tons of heavy metals have accumulated in the tailings and chat piles.

12. The Site consists of a large chat pile, mill facility remnants, mine shaft remnants, two tailings dams and areas including but not limited to adjacent areas, covered by chat or tailings. The Site is highly accessible and is frequently used by the public for recreation.

13. The chat pile at the Site covers approximately thirty-five (35) acres. Barren tailings cover approximately two-hundred twenty-eight (228) acres at the Site and an additional three hundred (300) acres at the Site are covered with sparsely or partially vegetated tailings. The depth of the mine tailings at the Site varies and their volume is estimated to be 5,100,000 cubic yards.

14. "Chat" is a waste product of the density separation lead extraction process. This method consisted of grinding the ore and allowing the lead to be separated by gravity. The waste from this process was dry and conveyed to a pile. Chat consists of larger gram-sized particles.

15. "Tailings" are medium to fine sand-sized particles that were generated as a result of the froth flotation lead extraction process. The tailings are generally of much finer consistency than the chat and are spread across the land surface in fields rather than in piles.

16. The fine-grained sediments comprising the tailings are particularly susceptible to erosion by wind and surface water runoff. During summer months, airborne transport of sediments from the tailings field is often visible.

17. Residential areas are located within close proximity to the Site. During periods of high wind, off-Site releases of heavy metals occur via wind-blown tailings. Nearby residential soil sampling indicates elevated lead, cadmium, and zinc levels. Approximately 1,165 people live in the towns adjacent to the Site. Accessibility to the Site is high, and the Site is frequented by off-road vehicles.

18. Samples of tailings collected during the EPA Site Screening Inspection (SSI) in May of 1994 measured lead at concentrations ranging from 637 to 3,990 ppm; cadmium ranging from 12.5 to 97.5 ppm; and zinc ranging from 655 to 8,260 ppm.

19. Surface runoff from the Site discharges into Eaton Creek which eventually flows into the Big River.

20. Samples of the Leadwood Tailings Pile taken in 1983 as part of The University of Missouri-Rolla study identified elevated metal values in Big River and at the confluence of Eaton

Creek and Big River. From this information the Study concluded that the Leadwood pile contributes materials to the Big River via Eaton Creek.

21. Surface water samples taken from Eaton Creek in 2003 as part of the development of the EE/CA revealed elevated levels of lead, zinc, and cadmium. These elevated levels exceeded surface water criteria for protection of aquatic life for total lead, zinc, and cadmium.

22. Sediment samples were taken by EPA in 2005 from the Big River at upstream and downstream locations of the Leadwood Tailings Pile. Samples taken upstream of the Leadwood Tailings Pile revealed maximum upstream sediment concentrations of lead, zinc, and cadmium were measured at 19.1 ppm, 83 ppm, and 0.3 ppm respectively. In comparison, samples taken downstream of the Leadwood Tailings Pile revealed maximum downstream sediment concentrations of lead, zinc, and cadmium which measured 26,600 ppm; 9,300 ppm; and 227 ppm respectively. The current McDonald's Sediment Quality Guideline for lead, zinc, and cadmium are 35.8 ppm, 121 ppm, and 0.99 ppm respectively.

23. The Doe Run Resources Corporation has been sampling and replacing lead-contaminated residential surface soils near the mine tailings sites in St. Francois County since 2001. There are approximately one hundred five (105) residential yards located within 1.4 miles of the Site which have been confirmed to have lead in surface soil at concentrations exceeding 400 ppm.

24. Residents of the area around the Site, including children, may face actual and/or potential exposure to lead, cadmium, and zinc from the mine waste via ingestion, skin contact, and inhalation.

25. Exposure to cadmium can increase the risks of future adverse health effects such as cancer in animals and humans, tetragenicity, reproductive toxicity, and kidney disorders in humans. Breathing air with very high levels of cadmium severely damages lungs and can cause death. Breathing lower concentrations of cadmium over a period of years can cause kidney disease, lung damage, and fragile bones. Ingestion of high concentrations of cadmium causes vomiting and diarrhea.

26. Exposure to zinc can increase the risk of acute toxicity in freshwater organisms. Oral ingestion of zinc may cause anemia in humans.

27. Human exposure to lead can increase the risk of future adverse health effects. Lead is a metal and a constituent of D008 hazardous waste (40 C.F.R. §261.24). Lead is classified by EPA as a probable human carcinogen and is a cumulative toxicant. The early effects of lead poisoning are nonspecific and difficult to distinguish from the symptoms of minor seasonal illnesses. Lead poisoning causes decreased physical fitness, fatigue, sleep disturbance, headache,

aching bones and muscles, digestive symptom (particularly constipation), abdominal cramping, nausea, vomiting, and decreased appetite. With increased exposure, symptoms include anemia, pallor, a "lead line" on the gums, and decreased handgrip strength. Alcohol and physical exertion may precipitate these symptoms. The radial nerve is affected most severely causing convulsions, coma, delirium, and possibly death. The kidneys can also be damaged after long periods of exposure to lead, with loss of kidney function and progressive azotemia. Lead exposure is associated with increases in blood pressure and left ventricular hypertrophy. A significant amount of lead that enters the body is stored in the bones for many years and can be considered an irreversible health effect.

28. Young children are particularly susceptible to adverse health effects due to exposure to lead. Low levels of lead exposure may harm a child's brain and central nervous system. Exposure to lead could cause irreversible damage to children such as impaired growth development, lower IQ levels, behavioral problems, and hearing loss. Very high levels of lead exposure may cause coma, convulsions or even death in children. Some symptoms of high lead levels in children include poor appetite, stomachaches, vomiting, constipation, crankiness, loss of energy, headaches, and trouble sleeping. These symptoms are often mistaken for other illnesses and many children have no symptoms even though a screening test indicates a lead problem.

29. In May 1997, the Missouri Department of Health (MDOH) released a draft Lead Exposure Study of children in the Old Lead Belt. The MDOH Study included sampling children's blood, sampling environmental media such as soil and dust, and questioning residents about their lifestyles as it related to lead exposure. The MDOH Study compared the information in the Old Lead Belt of St. Francois County to information collected during a study on a control area, Salem, Missouri, located outside the area of concern. This Study showed that about 17% of the children tested in the Old Lead Belt showed a blood lead level of more than 10 micrograms/deciliter whereas only about 3% of the children in Salem were elevated.

30. According to the U.S. Centers for Disease Control and Prevention (CDC), a blood lead concentration of 10 μ g/dl presents a health concern. In the MDOH Study, approximately 17% of the children tested in the Old Lead Belt showed blood levels over 10 μ g/dl whereas only approximately 3% of the children in Salem had elevated blood levels. The Missouri Department of Health and Senior Services reported that the July 2003 through June 2004 blood level testing data showed that 5% of the children tested in St. Francois County showed blood levels over 10 μ g/dl.

31. Beginning in November 2005, EPA conducted a bioavailability analysis of lead from a composite sample taken from five tailings piles located in St. Francois County, Missouri. One of the five piles where a sample was collected was the Leadwood Mine Tailings Pile. The bioavailability analysis concluded that the point estimate, relative bioavailability (RBA) of the composite tailings sample was 40 percent.

32. On June 9, 2000, The Doe Run Resources Corporation entered into an Administrative Order on Consent (AOC) with EPA for an Engineering Evaluation/Cost Analysis (EE/CA) to identify and evaluate alternatives for a removal action to prevent, mitigate, or otherwise respond to or remedy the release or threatened release of hazardous substances, pollutants or contaminants from the Site.

33. The September 9, 2005 EE/CA, was approved by EPA and issued for public comment on February 28, 2006. A public meeting was held on February 28, 2006, in Leadwood, Missouri.

34. On June 22, 2006, following the close of the public comment period and consideration of all comments, EPA issued an Action Memorandum (attached as Appendix B) which selected the removal action to be implemented for the Site.

35. The EPA maintains an administrative record for the Site and it is available at the locations listed in Section XIII.

36. This Site is not currently on the National Priorities List and has not been proposed for listing.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

37. Based on the Findings of Fact set forth above, and the Administrative Record supporting this removal action, EPA has determined that:

a. The Leadwood Mine Tailings Site is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

b. The contamination found at the Site, 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).

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

d. The Respondent is a responsible party under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), as a person who is a current owner or operator of the chat pile portion of the Site, or as a person who at the time of disposal of any hazardous substances owned or operated any facility at which such hazardous substances were disposed. The Respondent is liable for the performance of response actions and for response costs incurred and to be incurred at the Site.

e. The presence of hazardous substances at the Site or the past, present, or potential migration of hazardous substances currently located at or emanating from the Site constitutes an actual or threatened "release" of hazardous substances from the facility as defined by Section 101(22), 42 U.S.C. § 9601(22).

f. The lead contamination identified in soils and mining waste at the Site and in adjacent residential properties, as further described in the Findings of Fact above, constitutes an imminent and substantial endangerment to public health, welfare, or the environment within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a). The EPA considered the factors set forth in Section 300.415(b)(2) of the NCP when determining the appropriateness of a removal action at the Site. The NCP factors include but are not limited to the actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants; the presence of high levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate; as well as weather conditions that may cause the hazardous substances to migrate or be released from the Site.

g. At least six (6) months planning existed at this Site and the removal action required by this Order is necessary to protect the public health, welfare, or the environment and, if carried out in compliance with the terms of this Order, will not be inconsistent with the NCP or CERCLA.

VI. ORDER

38. Based upon the foregoing Findings of Fact, Conclusions of Law, Determinations, and the Administrative Record for this Site, EPA hereby orders that Respondents comply with all provisions of this Order including but not limited to all attachments to this Order; all documents incorporated by reference into this Order; and all schedules and deadlines in this Order, attached to this Order or incorporated by reference into this Order, and perform the following actions:

A. Notice of Intent to Comply

39. Respondent shall notify EPA in writing within fourteen (14) days of the Effective Date of this Order of Respondents' irrevocable intent to comply with this Order. Failure of Respondent to provide such notification within this time period shall be a violation of this Order by Respondents.

B. Designation of Contractor, Project Coordinators

40. Respondent shall perform the removal action themselves or retain one or more contractors to perform the removal action. Should Respondent elect to conduct the removal action themselves, they shall notify EPA of their qualifications to perform the work within twenty-one (21) days of the Effective Date of this Order. Should Respondent retain a contractor to conduct the removal action, Respondent shall notify EPA of the name and qualifications of each contractor within twenty-one (21) days of the Effective Date. Respondent shall also notify EPA of the name and qualifications of any other contractor or subcontractor retained to conduct the removal action under this Order at least two (2) days prior to commencement of such removal action. The EPA retains the right to disapprove of any party Respondent selects to conduct the removal action. If EPA disapproves of Respondents selection, Respondent shall propose a different party to perform the work and shall notify EPA of the name and qualifications of that party within two (2) working days of EPA's disapproval.

41. Within twenty-one (21) days after the Effective Date, Respondent shall designate a Project Coordinator who shall be responsible for administration of all actions by Respondent which are required by this Order. Respondent shall submit to EPA the designated Project Coordinator's name, address, telephone number, and qualifications. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during Site work. The EPA retains the right to disapprove of any Project Coordinator named by Respondent. If EPA disapproves of a selected Project Coordinator, Respondents shall retain a different Project Coordinator and shall notify EPA of that persons name, address, telephone number, and qualifications within two (2) working days following EPA's disapproval. Receipt by Respondent's Project Coordinator of any notice or communication from EPA relating to this Order shall constitute receipt by Respondent.

42. The EPA has designated Bruce Morrison as its Project Coordinator. Respondent shall direct all submissions required by this Order by certified or registered mail to Mr. Morrison at the United States Environmental Protection Agency, Region VII, 901 North Fifth Street, Kansas City, Kansas 66101, or at (913) 551-7755.

C. Work to be Performed

43. Respondent shall perform, at a minimum, all actions necessary to implement the Statement of Work (Appendix A), Action Memorandum (Appendix B), and Recommended Alternative's 3, 4.1, 4.2, 4.3A and 4.4 from the September 2005 Engineering Evaluation/Cost Analysis Report (EE/CA Alternative's 3, 4.1, 4.2, 4.3A and 4.4) (Appendix C). Respondent shall also perform all actions necessary to implement institutional controls to restrict future uses and activities on the Site.

44. Removal Action Work Plan. Within sixty (60) days of the Effective Date of this Order, Respondent shall prepare and submit to EPA for review and approval a Removal Action Work Plan that presents the plans and specifications for the removal action to be conducted at the Site and describes the proposed tasks and schedules associated with implementation of the removal action. The schedule shall provide for completion of grading, basin construction, rock cover, soil cover, and initial vegetative seeding within two (2) years of EPA's approval of the Work Plan. The Work Plan shall conform to the requirements of the attached SOW, Action Memorandum, and EE/CA Alternative's 3, 4.1, 4.2, 4.3A and 4.4. In the event that there is any conflict between the language of this Order, the SOW, the Action Memorandum, and EE/CA Alternative's 3, 4.1, 4.2, 4.3A and 4.4, this Order shall ultimately control. The SOW shall control over both the Action Memorandum and the EE/CA Alternative's 3, 4.1, 4.2, 4.3A and 4.4, and the Action Memorandum shall control over the EE/CA Alternative 3, 4.1, 4.2, 4.3A and 4.4.

EPA may approve, disapprove, require revisions to, or modify the Work Plan in whole or in part. If EPA requires revisions, Respondent shall submit a revised Work Plan within thirty (30) days of receipt of EPA's notification of the required revisions. Respondent shall implement the Work Plan as approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Work Plan, the schedule, and any subsequent modifications shall be incorporated into and become fully enforceable under this Order.

45. Quality Assurance Project Plan and Sampling

a. Respondent shall submit for EPA review and approval a Quality Assurance Project Plan and Sampling Plan within sixty (60) days of the Effective Date of this Order. All sampling and analyses performed pursuant to this Order shall conform to EPA direction, approval, and guidance regarding sampling, quality assurance/quality control (QA/QC), data validation, and chain of custody procedures. Respondent shall ensure that the laboratory used to perform the analyses participates in a QA/QC program that complies with the appropriate EPA guidance. Respondent shall use the following documents as guidance for QA/QC and sampling: "Quality Assurance/Quality Control Guidance for Removal Activities: Sampling QA/QC Plan and Data Validation Procedures" (OSWER Directive No. 9360.4-01, April 1, 1990); "Environmental Response Team Standard Operating Procedures" (OSWER Directive Nos. 9360.4-02 through 9360.4-08); and any other pertinent EPA directives and guidance.

b. Upon request by EPA, Respondent shall have such laboratory analyze samples submitted by EPA for quality assurance monitoring. Respondent shall provide to EPA the QA/QC procedures followed by all sampling teams and laboratories performing data collection and/or analysis.

c. Upon request by EPA, Respondent shall allow EPA or its authorized representatives to take split and/or duplicate samples. Respondent shall notify EPA not less than two (2) days in advance of any sample collection activity. EPA shall have the right to take any additional samples that EPA deems necessary.

46. Health and Safety Plan. Within sixty (60) days after the Effective Date of this Order, Respondent shall submit for EPA review and comment a Health and Safety Plan as described in the SOW. This plan shall be prepared in accordance with EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June 1992). In addition, the plan shall comply with all currently applicable Occupational Safety and Health Administration (OSHA) regulations found at 29 C.F.R. Part 1910. Respondent shall incorporate all changes to the Health and Safety Plan recommended by EPA and shall implement the plan during the performance of the removal action.

47. Execute Removal Action Work Plan. Respondent shall execute the removal action in accordance with the EPA-approved Work Plan. As specified in Section 104 (a) (1) of CERCLA, as amended, EPA will provide oversight of Respondents' activities throughout the removal action. Respondent shall support EPA's initiation and conduct of activities related to the implementation of oversight activities.

48. Removal Action Report. Within thirty (30) days for completion of on-site construction, including grading, rock cover, soil cover, and initial vegetative seeding, Respondent shall submit for EPA review and approval a Removal Action Report in accordance with the attached SOW summarizing the actions taken to comply with this Order. The Removal Action Report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP entitled "OSC Reports". The Removal Action Report shall include a good-faith estimate of total costs or a statement of actual costs incurred in complying with the Order, a listing of quantities and types of materials removed off-site or handled on-site, a destination of those materials, a presentation of the analytical results of all sampling and analyses performed, and accompanying appendices containing all relevant documentation generated during the removal action (e.g., manifests, invoices, bills, contracts, and permits). The Removal Action Report shall also include the following certification signed by a person who supervised or directed the preparation of that report:

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

49. Post-Removal Site Control. Respondent shall provide long-term operations and maintenance of the Site to ensure the long-term effectiveness and integrity of the removal action as constructed by Respondent and as described in the EPA-approved Removal Action Report. At the same time that Respondent submits to EPA the Removal Action Report, Respondent shall also submit for EPA's review and approval a Post-Removal Site Control Plan prepared in accordance with the attached SOW and consistent with Section 300.415(l) of the NCP and OSWER Directive No. 9360.2-02. Respondent shall implement the Post-Removal Site Control Plan as approved by EPA.

50. Reporting

a. Respondent shall submit monthly written progress reports to EPA concerning actions undertaken pursuant to this Order by the first day of every month beginning with the first full month after the date of receipt of EPA's approval of the Work Plan until termination of this Order unless otherwise directed in writing by EPA's Project Coordinator. These reports shall describe all significant developments during the preceding month including the actions performed and any problems encountered; analytical data received during the reporting period; and the developments anticipated during the next reporting period including a schedule of actions to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

b. Respondent shall submit to EPA a written post-removal site control inspection report of Site conditions within thirty (30) days of the end of each six-month Site inspection period, as described in the SOW.

c. Respondent shall submit (1) one paper copy of all plans, reports or other submissions required by this Order, the attached SOW, or any approved work plan to EPA's Project Coordinator, and (2) one paper copy to Greg Bach, MDNR Hazardous Waste Program, P.O. Box 176, Jefferson City, Missouri 65102-0176. Respondent shall also submit electronic versions of the Work Plan, Removal Action Report, and Post-Removal Site Control Plan to EPA's Project Coordinator at the same time as submission of the paper copy. Electronic format text shall be provided in Microsoft Word software.

51. Institutional Controls and Property Use and Activity Restrictions

a. Respondent and any successors in title shall, at least thirty (30) days prior to the conveyance of any interest in their real property at the Site, give written notice of this Order to the transferee and written notice to EPA and the State of the proposed conveyance, including the name and address of the transferee. The party conveying such an interest shall require that the transferee comply with the Institutional Controls and Property Use and Activity Restrictions, and Access to Property and Information requirements of this Order.

b. Respondent shall not use its property at the Site which contains mine waste for any purpose that could reasonably be expected to attract children for significant periods of time, including but not limited to schools, child care facilities, playgrounds, parks, and picnic grounds. Respondent shall not use its property for residential purposes, except for existing residences, or future residences where children will not reside, such as senior citizen housing or nursing homes.

c. Respondent shall not conduct any excavation, drilling, or other similar intrusive activity which would disturb or otherwise interfere with the cover to be established and maintained on its property at the Site, except as provided in paragraph 51 d below.

d. If Respondent wishes to change the use of its property at the Site which contains mine waste, or wishes to conduct excavation, drilling, or other intrusive activity that would disturb or otherwise interfere with the cover at the Site, such Respondent shall submit a written request to EPA seeking approval of such activity. The written request shall describe in detail the activity Respondent wishes to conduct, the procedures it will follow to ensure that human health and the environment are adequately protected during and after the activity, and the actions it will take to ensure that all mine waste is properly covered and the cover maintained following completion of any activity which disturbs the cover. EPA will review the request and either approve it, disapprove it, or require that Respondent resubmit its request with revisions and/or additional details.

e. Within sixty (60) days of the Effective Date of this Order, Respondent shall submit to EPA for review and approval, legal descriptions for the portions of property owned at the Site for inclusion with the Restrictive Covenants included as Appendix D. Within sixty (60) days of EPA's approval of the legal description, Respondent shall record with the St. Francois County Recorder of Deeds the Restrictive Covenant with the EPA-approved legal description for its property at the Site. Within thirty (30) days of recording the Restrictive Covenants, Respondent shall submit to EPA a copy of the Restrictive Covenant as recorded.

52. Community Relations. Respondent shall send, via registered mail, copies of all submissions required by this Order to EPA and MNDR. Respondent shall participate in public meetings when requested to do so by EPA.

D. EPA Review and Approval of Submissions

53. EPA will review Respondents' Work Plans, QAPP's, draft and final reports, and any other documents submitted pursuant to this Order (submissions), and will notify Respondent in writing of EPA's approval or disapproval of each such submission. In the event of EPA's disapproval, EPA will specify in writing any deficiencies in the submission. Respondent shall modify the submission to incorporate EPA's comments, and shall submit the amended submission to EPA in accordance with the schedule provided by EPA. Upon resubmission, EPA,

at its sole discretion, may either approve the document, or if EPA determines that the document does not adequately address the comments provided by EPA, EPA may unilaterally modify the document, and will provide Respondent with a copy of the document, as modified by EPA, to be implemented in accordance with any modifications. If, upon resubmission, a document, or portion thereof, is unilaterally modified by EPA, Respondent will be deemed to have failed to submit such plan, report, or item timely and adequately and, as a result, may be in violation of this Order.

E. Access to Property and Information

54. Respondent shall provide and/or obtain access to all records and documentation related to the conditions at the Site and the action conducted pursuant to this Order, and provide access to all records and documentation related to the conditions at the Site and the action conducted pursuant to this Order. Such access shall be provided to EPA employees, contractors, agents, consultants, designees, representatives, and State representatives. These individuals shall be permitted to move freely at the Site and appropriate off-site areas in order to conduct actions which EPA determines to be necessary.

55. Respondent shall submit to EPA, upon receipt, the results of all sampling or tests and all other data generated by Respondent or its contractor(s), or on Respondent's behalf during implementation of this Order.

56. Where action under this Order is to be performed in areas owned by or in possession of someone other than Respondent, Respondent shall use their best efforts to obtain all necessary access agreements within twenty-one (21) days after the Effective Date of this Order or as otherwise specified in writing by EPA's Project Coordinator. Respondent shall immediately notify EPA if, after using its best efforts, it is unable to obtain such agreements. As used in this Section, "best efforts" shall include an initial visit, a follow-up telephone call and a certified letter from Respondent to the present owner of the property requesting an access agreement to permit Respondent and EPA, including its authorized representatives, access to the property to conduct the activities required under this Order. In Respondent's notification to EPA of failure to obtain access, Respondent shall describe and document, in writing, its efforts to obtain access. EPA may then assist Respondent in gaining access, to the extent necessary, to effectuate the removal actions described herein, using such means as EPA deems appropriate. EPA reserves the right to seek reimbursement from Respondent for all costs and attorney's fees incurred by the United States in obtaining access for Respondent.

57. Notwithstanding any provision of this Order, EPA retains all of its access authorities and rights, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

F. Record Retention, Documentation, Availability of Information

58. Respondent shall preserve all documents and information relating to work performed under this Order, or relating to the hazardous substances found on or released from the Site, for ten (10) years following completion of the removal actions required by this Order. At the end of this ten (10) year period and thirty (30) days before any document or information is destroyed, Respondent shall notify EPA that such documents and information are available to EPA for inspection, and upon request, shall provide the originals or copies of such documents and information to EPA. In addition, Respondent shall provide documents and information retained under this Section at any time before expiration of the ten (10) year period at the written request of EPA.

59. Respondent may assert a business confidentiality claim pursuant to 40 C.F.R. § 2.203(b) with respect to part or all of any information submitted to EPA pursuant to this Order provided such claim is allowed by section 104(e)(7) of CERCLA, 42 U.S.C. 9604 e)(7). Analytical and other data specified in Section 104(e)(7)(F) of CERCLA, 42 U.S.C. 9604(e)(7) (F), shall not be claimed as confidential by the Respondent. EPA shall only disclose information covered by a business confidentiality claim to the extent permitted by and by means of the procedures set forth at 40 C.F.R. Part 2, Subpart B. If no such claim of confidentiality accompanies the information when it is received by EPA or if EPA has notified the Respondent that the information is not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, EPA may make said information available to the public without further notice to Respondent.

60. Respondent shall maintain a running log of privileged documents on a document-by-document basis, containing the date, author(s), addresses(s), subject, the privilege or grounds claimed (*e.g.* attorney work product, attorney-client privilege), and the factual basis for assertion of the privilege. Respondent shall keep the "privilege log" on file and available for inspection. EPA may at any time challenge claims of privilege through negotiations or otherwise as provided by law or the Federal Rules of Civil Procedure.

G. Off-Site Shipments

61. All hazardous substances, pollutants or contaminants removed off-Site pursuant to this Order for treatment, storage, or disposal shall be treated, stored, or disposed of at a facility in compliance, as determined by EPA, with Section 121(d)(3) of CERCLA, 42 U.S.C. §9621(d)(3), and the Amendment to the NCP; and Procedures for Planning and Implementing Off-Site Response Actions: Final Rule, 58 Fed. Reg. 49200 (September 22, 1993), codified at 40 C.F.R. §300.440. Upon request, EPA's Project Coordinator will provide information to Respondent on the acceptability of a facility under Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), and

the above rule. Unless impracticable, prior notification of out-of-state waste shipments should be given consistent with EPA's OSWER Directive 9330.2-07.

H. Compliance with Other Laws

62. Respondent shall perform all actions required pursuant to this Order in accordance with all applicable local, state, and federal laws and regulations except as provided in Section 121 (e) of CERCLA, 42 U.S.C. § 9621(e), and 40 C.F.R. §300.440(e) and 300.41 (j). In accordance with 40 C.F.R. §300.415(j), all on-Site actions required pursuant to this Order shall, to the extent practicable as determined by EPA, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements (ARARs) under federal environmental or state environmental or facility siting laws (see "The Superfund Removal Procedures for Consideration of ARARs During Removal Actions," OSWER Directive No. 9360.3-02, August 1991).

I. Emergency Response and Notification of Releases

63. If any incident or change in Site conditions during the actions conducted pursuant to this Order causes or threatens a release of Waste Material from 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 such release or endangerment caused or threatened by the release. Respondent shall also immediately notify EPA's Project Coordinator or, in the event of his unavailability, the Regional Duty Officer, Emergency Planning and Response Branch, EPA, Region VII, at (913) 281-0991, of the incident or Site conditions. If Respondent fails to take appropriate response action, EPA may respond to the release or endangerment and reserves the right to pursue cost recovery.

64. In addition, in the event of any release of a hazardous substance from the Site, Respondent shall immediately notify EPA's Project Coordinator at (913) 551-7755, and the National Response Center at (800) 424-8802. Respondent shall submit a written report to EPA within seven (7) days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a 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.*

VII. AUTHORITY OF EPA'S PROJECT COORDINATOR

65. EPA's Project Coordinator shall be responsible for overseeing the proper and complete implementation of this Order. EPA's Project Coordinator shall have the authority vested in an On-Scene Coordinator (OSC) and a Remedial Project Manager (RPM) by the NCP, 40 C.F.R. § 300.120, including the authority to halt, conduct, or direct any action required by this Order, or to direct any other removal action undertaken by EPA or Respondent at the Site. Absence of EPA's Project Coordinator from the Site shall not be cause for stoppage of work unless specifically directed by EPA's Project Coordinator.

66. The EPA and Respondent shall have the right to change their designated Project Coordinators. The EPA shall notify Respondent and Respondent shall notify EPA fourteen (14) days before such a change is made. Notification may initially be made orally but shall be followed promptly by written notice.

VIII. ENFORCEMENT: PENALTIES FOR NONCOMPLIANCE

67. Violation of any provision of this Order may subject Respondent to civil penalties of up to \$32,500.00 per violation per day as provided in Section 106(b)(1) of CERCLA, 42 U.S.C. § 9606(b)(1). Respondent may also be subject to punitive damages in an amount up to three times the amount of any cost incurred by the United States as a result of such violation as provided in Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Should Respondent violate this Order or any portion hereof, EPA may carry out the required actions unilaterally pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Order pursuant to Section 106 of CERCLA, 42 U.S.C. §9606.

IX. RESERVATION OF RIGHTS

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

X. OTHER CLAIMS

69. 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, representative, assigns, contractors, or consultants in carrying out actions pursuant to this Order.

70. This Order does not constitute a pre-authorization of funds under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611 (a)(2).

71. Nothing in this Order constitutes a satisfaction of 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 for costs, damages and interest under Sections 106 and 107 of CERCLA, 42 U.S.C. § 9606 and § 9607.

XI. MODIFICATIONS

72. Modifications to any plan or schedule or the attached EPA Statement of Work may be made in writing by EPA's Project Coordinator or at EPA's Project Coordinators oral direction. If EPA's Project Coordinator makes an oral modification it will be memorialized in writing within fourteen (14) days, provided, however, that the effective date of the modification shall be the date of the EPA's Project Coordinator's oral direction. The rest of the Order, or any portion of the Order, may only be modified in writing by signature of the Superfund Division Director.

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

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

XII. NOTICE OF COMPLETION

75. When EPA determines, after EPA's review of the Removal Action Report, that all actions have been fully performed in accordance with this Order, with the exception of any continuing obligations required by this Order, including post-removal site control and record retention, EPA will provide written notice to Respondent. If EPA determines that any removal

actions have not been completed in accordance with this Order, EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent modify the Work Plan if appropriate in order to correct such deficiencies. Respondent shall implement the modified and approved Work Plan and shall submit a modified final report in accordance with the EPA notice. Failure by Respondent to implement the approved modified Work Plan shall be a violation of this Order.

XIII. ACCESS TO ADMINISTRATIVE RECORD

76. The Administrative Record supporting this removal action is available for review at EPA, Region VII, 901 North Fifth Street, Kansas City, Kansas 66101; at the St. Francois County Health Department, 1025 West Main Street, Park Hills, Missouri 63601; and at the Desloge Public Library, 300 North Lincoln Street, Desloge, Missouri 63601.

XIV. OPPORTUNITY TO CONFER

77. Within five (5) days after issuance of this Order, Respondent may request a conference with EPA. Any such conference shall be held within ten (10) days after the Effective Date of this Order unless extended by agreement of the parties. At any conference held pursuant to the request, Respondent may appear in person or be represented by an attorney or other representative.

78. If a conference is held, Respondent may present any information, arguments or comments regarding this Order. Regardless of whether a conference is held, Respondent may submit any information, arguments or comments in writing to EPA within five (5) days following the conference or within seven (7) days following the issuance of this Order if no conference is requested. 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. Requests for a conference or any written submittal under this paragraph shall be directed to Jennifer Trotter, Assistant Regional Counsel, at (913) 551-7180, 901 North Fifth Street, Kansas City, Kansas 66101.

XV. INSURANCE

79. Prior to commencing any on-Site work under this Order, Respondent shall secure and shall maintain for the duration of this Order, comprehensive general liability insurance and automobile insurance with limits of two million dollars, combined single limit. Within the same time period, Respondent shall provide EPA with certificates of such insurance and a copy of each insurance policy. If Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance

covering the same risks but in a lesser amount, then Respondent need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

XVI. ADDITIONAL REMOVAL ACTIONS

80. If EPA determines that additional removal actions not included in the Statement of Work are necessary to protect public health, welfare, or the environment, EPA will notify Respondent of that determination. Unless otherwise stated by EPA, within thirty (30) days of receipt of notice from EPA that additional removal actions are necessary to protect public health, welfare, or the environment, Respondent shall submit for approval by EPA, a Work Plan for the additional removal actions. The Work Plan shall conform to the applicable requirements of this Order. Upon EPA's approval of the Work Plan, Respondent shall implement the Work Plan for additional removal actions in accordance with the provisions and schedule contained therein. This section does not alter or diminish EPA's Project Coordinator's authority to make oral modifications to any plan or schedule pursuant to Section XI.

XVII. SEVERABILITY

81. 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.

XVIII. EFFECTIVE DATE

82. This Order shall be effective the date it is received by Respondent.

IT IS SO ORDERED



Cecilia Tapia

Director
Superfund Division
Region VII
U.S. Environmental Protection Agency

Date: 9-29-06

For the United States Environmental Protection Agency



Jennifer L. Trotter
Assistant Regional Counsel
Region 7
U.S. Environmental Protection Agency

Date: 9-29-06