STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI HAZARDOUS WASTE MANAGEMENT FACILITY
PART I PERMIT

PERMIT NUMBER: MOD046740148

PERMITTEE

Owner and Operator: EaglePicher Technologies, LLC
120 South Central Ave., Suite 200
St. Louis, MO 63105

FACILITY LOCATION

EaglePicher Technologies, LLC
1215 West C Street
Joplin, MO 64802
Jasper County
North Latitude – 37°45’56”
West Longitude – 94°31’38”

FACILITY DESCRIPTION

EaglePicher Technologies, LLC (EaglePicher) is a manufacturing facility of various types of batteries and power supplies for defense and aerospace applications. EaglePicher previously operated two hazardous waste surface impoundments: a lead settling pond and a mercury waste impoundment. The mercury impoundment was closed in 1989 and the lead impoundment was closed in 1991 according to Department-approved closure plans.

The former lead settling pond was used to retain process wastewater from the lead chemicals facility to allow secondary gravity sedimentation of suspended solids after the water underwent
primary clarification. The former lead impoundment is subject to the groundwater corrective action program requirements of 40 C.F.R. § 264.100 because it was historically operated as an illegal land disposal (regulated) unit and thereby became subject to the associated regulated unit closure requirements and ultimately closed with waste in place as the groundwater protection standard maximum concentrations are being exceeded.

The former mercury waste impoundment was used to manage wastewater generated by the mercury production process in the manufacture of batteries. The original permit was modified in 2003, to remove the requirements for the groundwater monitoring and post-closure care activities at the former mercury waste impoundment. Post-closure care for the former mercury impoundment was terminated on July 12, 2004, after an assessment of the long-term groundwater monitoring analytical results for the former mercury waste impoundment found no detections above the groundwater protection standards.

The general facility location is shown in Figure 1. The facility property boundaries are shown in Figure 2.

**PERMITTED ACTIVITIES**

This Permit requires EaglePicher to continue post-closure care of the former lead impoundment and groundwater corrective action activities at the facility. This Permit also contains contingent corrective action conditions to address any newly identified release(s) to the environment from previously or newly identified Solid Waste Management Units and Areas of Concern, as necessary and appropriate.

**EFFECTIVE DATES OF PERMIT:** ______________________ to ______________________

________________________     ______________________
Date                      Chris Nagel, Director
WASTE MANAGEMENT PROGRAM
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INTRODUCTION

After public notice, according to Code of State Regulations 10 CSR 25-8.124, and review of EaglePicher’s RCRA Hazardous Waste Permit Application (hereafter referred to as the permit application), the Missouri Department of Natural Resources (hereafter referred to as the Department) determined the permit application conforms to the provisions of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA), the Missouri Hazardous Waste Management Law Sections 260.350 through 260.433, Revised Statutes of Missouri (RSMo), et seq., and all standards, rules, and regulations adopted under these acts. The federal regulations, promulgated by the U.S. Environmental Protection Agency (hereafter referred to as EPA), are codified and to be codified in Title 40 of the Code of Federal Regulations (40 C.F.R.). The state rules and regulations, promulgated under the Missouri Hazardous Waste Management Law, are published in Title 10, Division 25, of the Code of State Regulations (10 CSR 25).

Pursuant to Section 260.375.13, RSMo., and the Solid Waste Disposal Act, the Department hereby approves the permit application and issues this Missouri Hazardous Waste Management Facility Part I Permit (hereafter referred to as the Permit), Permit Number MOD046740148, to EaglePicher, as the facility owner and operator (hereafter referred to as the Permittee), for post-closure care of the former lead impoundment and “active” corrective action activities, including selecting a final remedy, as described in the permit application and this Permit. This Permit also includes “contingent” corrective action requirements that may be triggered, if necessary, for Solid Waste Management Units and Areas of Concern, pursuant to the state-equivalent requirements of the federal Hazardous and Solid Waste Amendments of 1984 (HSWA) to RCRA, as administered and enforced by the Department. The Department is issuing this Permit under state authority.

On July 6, 1999, Missouri received final authorization for revisions to its hazardous waste management program, including the corrective action portion of the HSWA Codification Rule (July 15, 1985, 50 FR 28702), which the state previously adopted. Thus, the corrective action requirements Missouri implements, in lieu of EPA, are incorporated into this Permit and are under state authority.

All citations to federal regulations throughout this Permit are for the sake of convenience. The federal regulations are incorporated by reference in 10 CSR 25. Applicable regulations are found in 10 CSR 25-3, 25-4, 25-5, 25-6, 25-7, 25-8, and 25-12; and 40 C.F.R. Parts 260 through 264, 266, 268, and 270, as specified in this Permit. The appropriate state reference is given and shall apply in instances where state regulations are more stringent.

Any appeals of this Permit, or specific permit conditions based on state authority, shall be filed according to 10 CSR 25-8.124(2). Any parties adversely affected or aggrieved by this decision may be entitled to pursue an appeal before the Administrative Hearing Commission (AHC). To
appeal, the party shall file a petition with the AHC within 30 calendar days after the date this Permit was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, then it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC. Contact information for the AHC can be found online at ahc.mo.gov, or by calling 573-751-2422. The Department also requests the party provide a copy of the appeal request to the Missouri Department of Natural Resources, Waste Management Program Director, P.O. Box 176, Jefferson City, MO 65102-0176.

The provisions of this Permit are severable. If any provision of this Permit, or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby.

This Permit is for post-closure and “contingent” corrective action activities and issued only to the Permittee named above. This Permit is issued for a period of 10 years and expires at midnight on _______________________. This Permit is subject to review and modification by the Department, according to Section 260.395.12, RSMo. and 40 C.F.R. § 270.41. According to 40 C.F.R. § 270.51, if the Permittee submits a timely and complete application for a new permit and the Department, through no fault of the Permittee, is unable to issue a new permit on or before the expiration of this Permit, the conditions of this Permit will continue in force until the effective date or denial of a new permit.

All permit application information shall be made available to the public, unless the Permittee requests nondisclosure, in writing, as described in Section 260.430, RSMo and 10 CSR 25-7.270(2)(B)2. This Permit and accompanying materials shall be available for public review at the Department’s office in Jefferson City, Missouri.

The following shall collectively be referred to as the “approved permit application”:

- RCRA Hazardous Waste Permit Application, dated March 29, 2019; and,
- Response to permit renewal application review and additional technical information, dated May 1, 2020.

The “consolidated permit application” is defined as the approved permit application, any changes resulting from the public comment period, and all additional documents required to be submitted under the Schedule of Compliance contained in this Permit. The Permittee shall maintain a copy of all documents outlined above with the consolidated permit application at the facility.

Section 260.395.12, RSMo., and 40 C.F.R. § 270.32(b)(2), require each permit issued under that section to contain terms and conditions as the Department determines necessary to protect human
health and the environment. Current post-closure care of this hazardous waste management facility, and any future required post-closure and corrective action activities shall be according to the provisions of this Permit; the Missouri Hazardous Waste Management Law and the rules and regulations promulgated thereunder as effective on the date of this Permit; all final engineering plans, petitions, specifications, and operating procedures submitted to the Department during the permit application review process, which are included in the approved permit application; and any other conditions, changes, or additions to the engineering plans, specifications, and operating procedures as specified in this Permit. The consolidated permit application, which includes the approved permit application, is therefore incorporated by this reference into the conditions of this Permit. All conditions specified in this Permit supersede any conflicting information in the consolidated permit application. Where conflicts arise between documents, the latest revision shall be effective.

According to 40 C.F.R. Part 270 Subpart D, any inaccuracies found in information submitted by the Permittee may be grounds for terminating, revoking and reissuing, or modifying this Permit, and for potential enforcement action. The Permittee shall inform the Department of any deviation from, or changes in, the information in the application that would affect the Permittee’s ability to comply with the applicable regulations or permit conditions. When the Department receives any information, such as inspection results, information from the Permittee, or requests from the Permittee, it may decide whether cause exists to modify, revoke and reissue, or terminate this Permit. All such changes to this Permit shall be handled according to the requirements of 10 CSR 25-8.124 and 40 C.F.R. Part 270 Subpart D.

40 C.F.R. § 264.101(a), requires all owners or operators of facilities seeking a permit for treating, storing, or disposing hazardous waste, to institute corrective action as necessary to protect human health and the environment from all releases of hazardous wastes or hazardous constituents from any Solid Waste Management Unit, regardless of the time at which waste was placed in such unit. 40 C.F.R. § 264.101(b), requires that permits issued under the Missouri Hazardous Waste Management Law contain a schedule of compliance for corrective action (where corrective action cannot be completed before permit issuance) and assurances of financial responsibility for completing such corrective action. 40 C.F.R. § 264.101(c), requires corrective action to be taken by the facility owner or operator beyond the facility property boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates that, despite the owner or operator’s best efforts, the owner or operator was unable to obtain the necessary permission to undertake such actions. 40 C.F.R. § 264.101(c), further stipulates that the owner or operator is not relieved of any responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases shall be determined on a case-by-case basis. In addition, assurances of financial responsibility for completing such corrective action shall be provided.
The Permittee is required to comply with all applicable environmental laws and regulations enforced by the Department. These environmental laws and regulations are administered by the Air Pollution Control Program, Environmental Remediation Program, Land Reclamation Program, Missouri Geological Survey, Waste Management Program, and Water Protection Program. Failure to comply with these environmental laws and regulations may, in certain circumstances, result in suspending or revoking this Permit and may subject the permit holder to civil and criminal liability.

**DEFINITIONS**

For purposes of this Permit, terms used herein shall have the same meaning as those in RCRA and 40 C.F.R. Parts 260, 261, 264, 266, 268, and 270, and 10 CSR 25, unless this Permit specifically provides otherwise. Where terms are not defined in RCRA, the regulations, this Permit, or EPA guidance or publications, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

“Alternate Concentration Limit (ACL)” means a Department-approved maximum concentration limit or risk-based threshold for a hazardous constituent, facility-related contaminant, or combination thereof, in the groundwater that will not pose a substantial present or potential hazard to human health or the environment, as long as that concentration limit or risk-based threshold is not exceeded at defined compliance points.

“Approved Permit Application” means the original permit application and all subsequent revisions or addenda to the permit application, and any completeness and technical information submitted as referenced in the Introduction of this Permit.

“Area of Concern (AOC)” means any area where an actual or potential release of hazardous wastes or hazardous constituents that is not from a Solid Waste Management Unit, has occurred or is occurring and is determined by the Department to pose a current or potential threat to human health or the environment. Investigating and/or remediating AOCs may be required pursuant to Section 260.395, RSMo. and 40 C.F.R. § 270.32(b)(2).

“Consolidated Permit Application” means the approved permit application, any changes resulting from the public comment period, and all additional documents required to be submitted under the Schedule of Compliance contained in this Permit.

“Corrective Action” means the investigation and remediation of hazardous wastes and hazardous constituents from any past and present release(s), including contamination that may have migrated beyond the boundaries of the permitted property.
“Director” means the Director of the Missouri Department of Natural Resources or authorized delegate.

“Facility” means:

(1) All contiguous land and structures, other appurtenances, and improvements on the land used for treating, storing, or disposing hazardous waste; and

(2) All contiguous property under the control of the owner or operator, for the purpose of implementing corrective action under 40 C.F.R. § 264.101, and as specified in this Permit.

“Hazardous Constituent” means any chemical compound listed in 40 C.F.R. Part 261, Appendix VIII.

“Hazardous Waste” means any waste, or combination of wastes, as defined by or listed in 40 C.F.R. Part 261, that may cause or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness or that may pose a threat to the health of humans or other living organisms because of its quantity, concentration, physical, chemical, or infectious characteristics.

“Interim/Stabilization Measures (ISMs)” means actions to control or abate threats to human health or the environment from releases at hazardous waste treatment, storage, or disposal facilities, or to prevent or minimize the further spread of contamination while long-term remedies are pursued.

“Land Disposal Restriction” means the treatment standards established in the regulations found in 40 C.F.R. Part 268.

“Point of Compliance” means the location(s) at which the ground-water concentrations are measured to demonstrate the concentrations will not exceed the Groundwater Protection Standard (GPS) contained in Table 1.

“Release” means any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing hazardous wastes or hazardous constituents into the environment, outside of permitted primary or secondary containment. This includes abandoning or discarding barrels, containers, and other closed receptacles containing hazardous wastes or hazardous constituents.

“Solid Waste Management Unit (SWMU)” means any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for managing solid or
hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

**SCHEDULE OF COMPLIANCE**

I. Within 60 calendar days after the effective date of this Permit, the Permittee shall:

   A. Submit to the Department one paper copy and one searchable electronic copy of the consolidated permit application, incorporating any changes resulting from comments on the draft Permit, as required by 10 CSR 25-7.270(2)(B)7., and defined in the Introduction of this Permit.

   B. Submit to the Department for review and approval, a complete Part A permit application, including the Permittee’s signature.

   C. Submit to the Department a certification signed by the Permittee that the Permittee has read this Permit in its entirety and understands all permit conditions contained in this Permit.

   D. Submit to the Department, to the attention of the Waste Management Program, a check or money order payable to “State of Missouri” for any outstanding engineering review costs.

   E. Submit to the Department, to the attention of the Waste Management Program, a check or money order payable to “State of Missouri” for $1,000 for each year this Permit is to be in effect beyond the first year. This Permit is effective for 10 years. Since the Permittee submitted a $1,000 deposit with the permit application, the remaining balance is $9,000. An invoice is included with this Permit.

   F. Submit to the Department for review and approval, a revised Sampling and Analysis Plan to incorporate all groundwater monitoring conditions outlined in this Permit and any new conditions at the facility, as required in Special Permit Condition III.C.1.

   G. Submit to the Department for evaluation, a detailed written cost estimate, in current dollars, of the cost of hiring a third party to perform the post-closure, and corrective action activities required by this Permit, as specified in Financial Assurance Condition I.A.1.
II. Within 30 calendar days after receiving the Department’s final written response regarding review of the post-closure and corrective action cost estimate, the Permittee shall submit to the Department for evaluation, all documentation necessary to demonstrate the Permittee satisfies the financial assurance criteria in 40 C.F.R. § 264.145.

III. Within 10 calendar days after receiving the Department’s final written response regarding the draft financial assurance instrument(s), the Permittee shall execute or otherwise finalize all instruments or other documents required in order to make the selected financial assurance legally binding, as specified in Financial Assurance Condition II.B.2.

IV. Within 30 calendar days after receiving the Department’s final written response regarding the draft financial assurance instrument(s), the Permittee shall ensure the issuing institution submits all original executed and/or otherwise finalized instruments or other documents required in order to make the selected financial assurance legally binding, as specified in Financial Assurance Condition II.B.3.

V. Within 120 calendar days after the effective date of this Permit, the Permittee shall submit to the Department for review and approval, an Operation, Maintenance and Monitoring Plan (OM&M Plan). The OM&M Plan shall comply with the requirements of this Permit, as specified in Corrective Action Condition X.

VI. Within 30 calendar days after the effective date of this Permit, the Permittee shall execute the Environmental Covenant and submit the Environmental Covenant for signature by all other relevant parties needed to file the covenant in the property chain-of-title. Such covenant is needed to mitigate potentially unacceptable future exposures to residual contamination at the facility.

VII. Within 15 calendar days after all relevant parties have executed the Environmental Covenant, record the executed Environmental Covenant with the Jasper County Office of the Recorder of Deeds. The executed Environmental Covenant shall be recorded in the chain-of-title for the facility property or on some other instrument that is normally examined during a title search that will, in perpetuity, notify any potential purchaser of the environmental conditions of the property(ies).

VIII. Within 30 calendar days after recording the executed Environmental Covenant in the chain-of-title for the facility property or other instrument normally examined during a title search, submit to the Department a notarized statement certifying the Environmental Covenant has been recorded. Copies of the recorded pages that show
the Environmental Covenant has been recorded and become part of the property record shall be included with the notarized statement.

IX. Within 30 calendar days after recording the executed Environmental Covenant in the chain-of-title for the facility property or other instrument normally examined during a title search, submit to the Department a written certification stating the final remedy has been put in place according to this Permit.

X. The Permittee shall comply, as necessary, with all planned and contingent corrective action requirements of this Permit, as specified in the Corrective Action Conditions of this Permit and as summarized in Tables 3 and 4.

SUBMITTAL OF REQUIRED INFORMATION

I. Unless otherwise requested by the Department, the Permittee shall submit one paper copy and one searchable electronic copy of all reports, documents, plans/specifications, and the consolidated permit application required under the terms of this Permit to:

Chief, Engineering Section
Missouri Department of Natural Resources
Waste Management Program
P.O. Box 176
Jefferson City, MO 65102-0176

II. If the Permittee requires additional time to submit a scheduled document or perform other activities required by this Permit, the Permittee shall submit a written extension request to the Department according to General Permit Condition V.

STANDARD PERMIT CONDITIONS


I. Application for Permit Reissuance [40 C.F.R. § 270.32(b)(2)]

According to 40 C.F.R. § 270.10(h)(1), the Permittee may submit a permit renewal application to the Department at least 180 calendar days before the expiration date of this Permit, unless the Department allows a later date. However, in order not to
jeopardize timely reissuance, according to 40 C.F.R. § 270.32(b)(2), the Permittee shall submit a permit renewal application to the Department at least 24 months before the expiration date of this Permit, unless the Department allows a later date pursuant to General Permit Condition V.

GENERAL PERMIT CONDITIONS

The Permittee shall comply with the applicable requirements described in 40 C.F.R. Part 264 Subparts B, C, D, E, F, G, and H; 40 C.F.R. Part 268; and 40 C.F.R. Part 270.

I. Notification of an Emergency Situation [Section 260.505.4, RSMo]

The Permittee shall, at the earliest practical moment upon discovery of an emergency involving the hazardous waste or hazardous constituents under the Permittee’s control, implement the facility contingency plan, including notifying the Department’s emergency response hotline at 573-634-2436 and the National Response Center at 800-424-8802.

Within 15 calendar days after the incident occurrence, the Permittee shall submit a written report to the Department providing details. The content of the written report shall conform to 40 C.F.R. § 264.56(i) and be provided to the addressee listed in the “Submittal of Required Information” provision of this Permit.

II. Reporting Requirements [40 C.F.R. § 270.30(l)(9)]

A biennial report shall be submitted to the Department by March 1 during even numbered calendar years, covering facility activities as required by 40 C.F.R. § 264.75.

III. This Permit does not authorize managing any non-hazardous solid waste. Handling non-hazardous solid waste or universal waste outside the requirements of this Permit is subject to regulation under Missouri’s Solid Waste Management Law and regulations.

IV. Review and Approval Procedures

A. Financial assurance cost estimates and draft financial assurance mechanisms submitted for post-closure care and corrective action activities shall be reviewed and responded to by the Department, according to the procedures described in the Financial Assurance Conditions of this Permit.
B. Following submission of any plan or report pertaining to sampling and analysis of hazardous waste or hazardous constituents, residues, emissions, or corrective action activities (excluding the Annual Progress Reports, Annual Groundwater Corrective Action Report, unless proposed actions to address corrective action program inadequacies are contained therein; and Corrective Measures Implementation Report), and any Certification of Completion of Construction of Final Remedy, the Department shall review and either approve or provide written comments on the plan or report. If the Department does not approve the plan or report, the Department shall notify the Permittee, in writing, of the plan’s or report’s deficiencies and specify a due date for submitting a revised plan, report, or associated activity schedule.

C. If the Department does not approve the revised plan, report, or associated activity schedule, the Department may modify the plan, report, or schedule and notify the Permittee, in writing, of the modifications. The plan, report, or schedule, as modified by the Department, shall be the approved plan, report, or schedule.

D. If the Permittee disagrees with any Department-initiated plan, report, or schedule modifications, and a mutually acceptable resolution of such modifications cannot be reached informally, the Permittee may file an appeal of the Department-initiated modifications according to Sections 260.395.11 and 621.250, RSMo.

V. Document and Activity Extension Requests

A. If the Permittee requires additional time to submit a scheduled document or perform other activities required by this Permit, the Permittee shall submit a written extension request to the Department. Hard copy letter or e-mail are acceptable. The Department shall receive the extension request at least 15 calendar days before the scheduled document due date or activity completion date. The Permittee’s extension request shall specify the amount of additional time needed and include the Permittee’s justification for the requested extension.

B. The Department shall review and approve the extension request according to the procedures described in General Permit Condition IV.

C. If the Department does not approve the extension request, the Department may modify the request and notify the Permittee, in writing, of the
modification. The extension request, as modified by the Department, shall be the approved schedule.

SPECIAL PERMIT CONDITIONS

The Department established the following permit conditions for the Permittee and the hazardous waste facility at the location specified in this Permit.

I. 100-Year Floodplain Requirements [40 C.F.R. § 264.18(b)]

   A. The Permittee submitted information, as required in 40 C.F.R. §§ 270.14(b)(11)(iii) and 270.28, that identifies a portion of the facility as being located in the 100-year floodplain. As such, the Permittee shall design, construct, operate, and maintain the facility in such a manner so as to prevent washout of any hazardous waste by a 100-year flood, as required by 40 C.F.R. § 264.18(b).

   B. According to 40 C.F.R. § 270.14(b)(11)(iv), facilities located in the 100-year floodplain shall provide one of the following:

      1. Demonstration that the engineering design of the facility is adequate to withstand the forces of a 100-year flood event; or

      2. Demonstration that hazardous waste can be removed in a safe and timely manner to a facility eligible to receive such waste according to hazardous waste laws and regulations.

   The Permittee has chosen to comply with Special Permit Condition I.B.1. for the hazardous waste management unit, the former lead impoundment, located within the 100-year floodplain. To fully satisfy this requirement, the Permittee shall maintain the facility design, as required in 40 C.F.R. § 270.14(b)(11)(iv)(A) and (B), and described in the approved permit application at Section 1.3, Site Flooding Considerations.

II. Post-Closure [40 C.F.R. Part 264 Subpart G]

   The Permittee shall comply with all applicable requirements in 40 C.F.R. Part 264 Subpart G, and all provisions of this Permit.

   A. Post-Closure Care and Use of Property [40 C.F.R. § 264.117]
1. According to 40 C.F.R. § 264.117(a)(1), post-closure care begins after closure certification for the hazardous waste management unit has been accepted and continues for 30 years after that date, unless modified according to 40 C.F.R. § 264.117(a)(2), or otherwise specified by the Department.

On August 10, 1988, EaglePicher Industries, Inc. submitted a closure plan to the Department for the former lead impoundment. The Department approved the plan in 1990. On August 7, 1991, EaglePicher Industries, Inc. certified that the former lead impoundment was closed. The Department accepted the lead impoundment closure and verified closure with waste in place on August 21, 1991, starting the post-closure care period. Post-closure care for the former lead impoundment shall continue until August 21, 2021.

2. At a minimum, post-closure care shall be extended until such time as the groundwater protection standard maximum concentration limits contained in Table 1 or approved alternate concentration limits, as applicable, are met for a period of three consecutive years under the groundwater monitoring and corrective action conditions described in the Special Permit Conditions of this Permit.

3. During the post-closure care period, the Permittee shall comply with the applicable maintenance, monitoring, and reporting requirements in 40 C.F.R. Part 264 Subparts F, G, and K.

4. During the post-closure care period, the Permittee shall comply with the post-closure requirements in 40 C.F.R. §§ 264.117 through 264.120, and the requirements in 40 C.F.R. § 264.228(b), including but not limited to:
   a. Maintaining the integrity and effectiveness of the final cover;
   b. Maintaining and monitoring the groundwater monitoring system and complying with all applicable requirements in 40 C.F.R. Part 264 Subpart F; and
   c. Preventing run-on and runoff from eroding or otherwise damaging the final cover.
5. In the event a significant ground subsidence or collapse occurs within 1,000 feet of any SWMU, AOC, or area under post-closure care, the Permittee shall notify the Department, verbally or in writing, within five calendar days of becoming aware of a subsidence or collapse feature. The Permittee shall also notify the Department of any subsidence or collapse within the facility property boundary that alters surface or groundwater flows to or from any land-based units closed with waste in place. The Permittee shall allow the Department to inspect the feature in order to evaluate the subsidence or collapse before conducting any repairs.

Within 30 calendar days after receiving the Department’s written request, the Permittee shall prepare and submit a plan for repairing the feature to the Department for review and approval. Any repair plan shall contain post-repair reporting provisions that include providing detailed documentation of the location, repair work conducted, before and after photographs, etc., in a final report to the Department. The Department shall review and approve the repair plan according to the procedures described in General Permit Condition IV.

6. The Permittee shall continue providing proper operation and maintenance of any engineering controls implemented as part of the approved permit application and upcoming final remedy. These actions are necessary to prevent human exposure to soils and/or groundwater contaminated with hazardous wastes or hazardous constituents in concentrations exceeding applicable regulatory risk-based criteria. The engineering controls shall not be disturbed and shall remain in place and be effective unless or until the Department provides written approval to alter, modify, eliminate, or otherwise cease operating and maintaining such controls.

7. Post-closure use of the property shall be restricted by the Permittee to prevent disturbing the integrity of the final cover on the former lead impoundment and to prevent damage to the monitoring system. The Department may approve a use of the property that disturbs the integrity of the final cover if it is necessary for the proposed property use and will not increase the potential hazards to human health or the environment, or if it is necessary to reduce a threat to human health or the environment. The Permittee shall submit a request to the Department before any activities that disturb the integrity of the final cover.
8. The Permittee may submit a request to the Department to shorten the post-closure care period. Justification for shortening the post-closure care period shall accompany any such request. The Department may approve the request if it determines a shortened post-closure care period is sufficient to protect human health and the environment. Approval to shorten the post-closure care period shall be according to the applicable permit modification procedures in 40 C.F.R. Part 270, 10 CSR 25-7, and 10 CSR 25-8.124.

B. Post-Closure Plan and Amendments [40 C.F.R. § 264.118]

1. Post-closure care shall be conducted according to the post-closure care plan included as Section 5 in the approved permit application, and all conditions of this Permit.

2. The post-closure care plan may be amended at any time during the active life of the facility or the post-closure care period. Amendments are subject to the applicable permit modification requirements in 40 C.F.R. Part 270 Subpart D and 10 CSR 25-8.124. Written requests for amendments shall be submitted at least 60 calendar days before the proposed change in post-closure operations, or no later than 60 calendar days after an unexpected event occurs that affects the post-closure care plan.

The Department may request modifications to the post-closure care plan if changes in site operations affect the approved post-closure care plan. No later than 60 calendar days after receiving the Department’s request, the Permittee shall submit the modified post-closure care plan. Any modifications requested by the Department are subject to the applicable permit modification requirements in 40 C.F.R. Part 270 Subpart D and 10 CSR 25-8.124.

3. The facility contact shall keep the approved post-closure care plan during the post-closure care period, as required by 40 C.F.R. § 264.118(c).

C. Future Removal of Hazardous Wastes [40 C.F.R. § 264.119(c)]

If the Permittee wishes to remove hazardous wastes, hazardous waste residues, contaminated soils, or contaminated sludges from within the boundaries of the former lead impoundment, the Permittee shall request a
modification of this Permit, according to the applicable requirements in 40 C.F.R. Part 270 Subpart D and 10 CSR 25-8.124. The modification request shall include a demonstration that the proposed action(s) will not increase potential hazards to human health or the environment, or the proposed action(s) is necessary to reduce threats to human health or the environment, according to 40 C.F.R. § 264.117(c). By removing contaminants, the Permittee may become a hazardous waste generator. The Permittee shall manage any removed material according to all applicable laws, regulations, and ordinances.

D. Certification of Completion of Post-Closure Care [40 C.F.R. § 264.120]

No later than 60 calendar days after completing the post-closure care period (including any necessary extensions), the Permittee shall submit to the Department, by certified mail, a certification that the post-closure care period was performed according to the approved post-closure plan. The certification shall be signed by the Permittee and a professional engineer registered in Missouri, and shall include documentation supporting the certification.

III. Groundwater Monitoring [40 C.F.R. Part 264 Subpart F]

A. GPS, Hazardous Constituents, and Concentration Limits [40 C.F.R. §§ 264.92, 264.93, and 264.94]

The GPS establishes the maximum concentration limits for hazardous constituents (40 C.F.R. Part 261, Appendix VIII) in groundwater at and beyond the Point of Compliance during the compliance period. The hazardous constituents and related contaminants, currently published health- and/or environmental-based concentration limits, and maximum analytical detection limits specified in Table 1 constitute the GPS for the Permittee’s former lead impoundment. The listed GPS hazardous constituents have been detected in the groundwater beneath and beyond the former lead impoundment or are reasonably expected to be in or derived from hazardous waste or hazardous constituents managed at the former lead impoundment.

1. The GPS for the hazardous constituents and related contaminants listed in Table 1 are based on protecting human health and the environment. These limits were derived from several different sources, as explained by the footnotes to Table 1.
2. The allowable maximum detection limit shall never be greater than the GPS. If the GPS for specific hazardous constituents cannot be achieved due to matrix interferences or other reasonable analytical limitations, as long as appropriate supporting documentation is provided, the affected sample(s) and associated chemical analysis shall be exempted from this requirement. However, such an exemption does not in any way relieve the Permittee from complying with the GPS.

3. The Permittee may make a demonstration to the Department, at any time during the term of this Permit, for establishing ACLs in lieu of the GPS contained in this Permit. Any such demonstration shall ensure any and all ACLs proposed in lieu of the GPS are protective of human health and the environment, according to the requirements of 40 C.F.R. §§ 264.94(b)(1) and (b)(2). In proposing an ACL(s), the Permittee shall consider and formally address the factors listed in 40 C.F.R. §§ 264.94(b)(1) and (b)(2), and the EPA document entitled, Interim Final Alternate Concentration Limit Guidance, Part I, OSWER Directive 9481.00-6C, EPA 530/SW-87-017, July 1987. Any ACL(s) proposed by the Permittee shall be processed as a Class 3 Permit Modification, following the requirements in 40 C.F.R. § 270.42(c), and the public notice and opportunity for comment requirements in 10 CSR 25-8.124.

4. The Permittee shall propose modifications to the GPS to include any additional hazardous constituent(s) (40 C.F.R. Part 261, Appendix VIII) identified in the groundwater and its presence confirmed during future sampling and analysis, if such constituents may be attributed to past operation of the former lead impoundment and/or the degradation of hazardous constituents known to be present in the groundwater. The Permittee can demonstrate that a source other than facility related releases caused the presence of such hazardous constituent(s) or the apparent presence was a result of an error in sampling, analysis, or evaluation. For the demonstration under this paragraph to be considered, the Permittee shall:

a. Within seven calendar days of determining an additional hazardous constituent has been discovered, notify the Department, in writing, that the Permittee intends to make a demonstration under this paragraph.
b. Within 90 calendar days, submit a report to the Department that demonstrates a source other than the facility related releases caused the hazardous constituent presence or the presence resulted from an error in sampling, analysis, or evaluation.

Any addition of hazardous constituents to the GPS as a result of the above determination shall require a Class 1 Permit Modification with Prior Director’s Approval. Any other changes to the GPS list of hazardous constituents shall require a permit modification, according to 40 C.F.R. § 270.42.

**Table 1 - Groundwater Protection Standards**

<table>
<thead>
<tr>
<th>Hazardous Constituent</th>
<th>Maximum Concentration Limit (µg/l)</th>
<th>Maximum Detection Limit (µg/l)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>10.0 (a)</td>
<td>10.0</td>
</tr>
<tr>
<td>Barium</td>
<td>2000.0 (a)</td>
<td>5.0</td>
</tr>
<tr>
<td>Cadmium</td>
<td>5.0 (a)</td>
<td>5.0</td>
</tr>
<tr>
<td>Chromium (total)</td>
<td>100.0 (a)</td>
<td>5.0</td>
</tr>
<tr>
<td>Lead</td>
<td>15.0 (b)</td>
<td>5.0</td>
</tr>
<tr>
<td>Mercury</td>
<td>2.0 (a)</td>
<td>0.2</td>
</tr>
<tr>
<td>Nickel</td>
<td>100.0 (b)</td>
<td>5.0</td>
</tr>
</tbody>
</table>

* Detection limit based on the lowest achievable practical quantitation limit available from the Permittee’s contract laboratory.  
(a) Denotes limits derived from Missouri Public Drinking Water Standards (10 CSR 60-4, dated August 31, 2018) and National Primary Drinking Water Regulations (EPA 816-f-09-0004, May 2009).  

B. Point of Compliance (40 C.F.R. § 264.95)

The point of compliance is defined as “a vertical surface located at the hydraulically downgradient limit of the waste management area that extends down into the uppermost aquifer underlying the regulated units.” For the purposes of this Permit, the waste management area is described by an imaginary line circumscribing the former lead impoundment. Groundwater contamination at and beyond the point of compliance that exceeds the GPS shall be subject to corrective action pursuant to 40 C.F.R. § 264.100. The point of compliance is defined by the following wells:

Should the Permittee’s ongoing groundwater monitoring program indicate the above sampling points do not adequately monitor groundwater at and beyond the point of compliance, the Permittee shall propose a permit modification according to 40 C.F.R. § 270.42, to install or establish new compliance monitoring points and/or exclude existing compliance monitoring points.

C. Compliance Period (40 C.F.R. § 264.96)

The compliance period shall last for 60 years based on the requirements in 40 C.F.R. § 264.96. The compliance period began August 1, 1993, and shall last until August 1, 2053. If the GPS limits are being exceeded at the end of the compliance period at or beyond the point of compliance, the Permittee’s groundwater monitoring program and compliance period shall continue until the Permittee demonstrates these limits have not been exceeded at and beyond the point of compliance for a period of three consecutive years.

D. General Groundwater Monitoring Requirements [40 C.F.R. § 264.97]

The Permittee shall comply with applicable sections of 40 C.F.R. § 264.97, for monitoring programs, as specified in 40 C.F.R. § 264.100, and this Permit.

1. Within 60 calendar days of the effective date of this Permit, the Permittee shall revise and resubmit to the Department for review and approval, a revised Sampling and Analysis Plan (SAP), to reflect any additional requirements contained in this Permit. All SAP procedures and techniques used in groundwater sampling, frequency, analysis, and measurement of groundwater-related parameters shall be designed to meet the requirements of 40 C.F.R. Part 264 Subpart F and this Permit. The Permittee’s sampling, analysis, and measurement protocols shall ensure the representative nature of all analysis and measurement results. The Department shall review and approve the revised SAP according to the procedures described in General Permit Condition IV.

2. The Permittee shall retain a copy of the approved groundwater SAP with the local facility representative and/or at the facility and comply with the approved sampling and analysis procedures in order to provide a reliable indication of the groundwater quality below the former lead impoundment. The groundwater SAP shall describe sample collection, preservation, and shipment methodology;
chain-of-custody procedures; and analytical methodology for field samples, trip blanks, and other quality control samples.

3. The Permittee’s groundwater monitoring systems shall be designed, installed, operated, and maintained during the compliance period in a manner that ensures:

a. Detection and/or delineation of the horizontal and vertical extent of groundwater contamination at and beyond the Point of Compliance, including beyond the facility property boundary;

b. Determination of representative concentrations of hazardous constituents and contaminant plume indicator parameters in the groundwater, and

c. Determination of the effectiveness of any groundwater corrective action activities in terms of contaminant removal, destruction, and/or containment (plume stability).

4. The number, location, and depth of the Permittee’s monitoring wells shall be sufficient to define the horizontal and vertical extent of groundwater contamination beneath the Permittee’s property and beyond the facility property boundaries. If, at any time during the compliance period, including any necessary extensions, the Permittee or the Department determines the existing monitoring system fails to define the horizontal and vertical extent of groundwater contamination, the Permittee shall submit, within 30 calendar days after such determination by the Permittee or written notification by the Department, a proposed plan for installing additional monitoring wells to define such extent.

When the Department determines the Permittee has adequately redefined the horizontal and/or vertical extent of groundwater contamination, the wells defining such extent shall be incorporated into, and be designated for continued monitoring in, the Permittee’s SAP. The Department shall notify the Permittee, in writing, when it makes this determination. Within 60 calendar days of receiving this notification, the Permittee shall consult the Department regarding the need for SAP modification to incorporate the new wells. If SAP modification is required, the timeframe for such modification will be
established via discussion with the Department. If agreeable to the Department, the Permittee may elect to submit an annual SAP modification to incorporate any needed changes in lieu of a modification for each individual change.

5. Any new groundwater monitoring well(s) installed by the Permittee to meet the requirements of this Permit shall be designed and constructed according to the requirements of 40 C.F.R. § 264.97, applicable portions of the Monitoring Well Construction Code of the Missouri Well Construction Rules (10 CSR 23-1 through 10 CSR 23-4), and/or Department-approved well-specific plans and specifications.

The Permittee shall submit to the Department’s Missouri Geological Survey (MGS) and Waste Management Program (WMP), a copy of the well certification report form and resulting certification acceptance required by 256.614.1.(1), RSMo., for any new monitoring well(s) installed pursuant to this Permit. This information shall be reported as part of the Annual Groundwater Monitoring Reports, required by Special Permit Condition IV.

6. Plugging and abandoning any groundwater monitoring well(s) operated by the Permittee pursuant to the requirements of this Permit shall meet the requirements of Section 256.614, RSMo. and 10 CSR 23-4.080.

a. The Permittee shall submit to MGS and WMP, a copy of the well registration report form and resulting registration acceptance required by 10 CSR 23-4.080, for any monitoring wells plugged pursuant to this Permit. This information shall be reported as part of the Annual Groundwater Monitoring Report required by Special Permit Condition IV.

b. Within 60 calendar days of MGS’s registration acceptance, the Permittee shall consult the Department regarding the need for SAP modification to remove the plugged wells. If SAP modification is required, the timeframe for such modification will be established via discussion with the Department. If agreeable to the Department, the Permittee may elect to submit an annual SAP modification to incorporate any needed changes in lieu of a modification for each individual change.
7. According to 40 C.F.R. § 270.42, a Class 2 Permit Modification is required for any change in the number, location, depth, or design of the point of compliance wells monitoring the lead impoundment. Replacing any point of compliance wells without changing the location, depth, or design of that well shall require a Class 1 Permit Modification without Prior Director’s Approval, according to 40 C.F.R. § 270.42. The Permittee may elect to submit an annual permit modification to address these changes collectively in lieu of a modification for each individual change.

Installing additional investigation wells does not require a Class 2 Permit Modification. These wells may be installed upon the Department’s approval of associated work plans. The Department shall review and approve the work plans, according to the procedures described in General Permit Condition IV.

8. The Permittee shall contact the Department at least five working days before conducting any field work associated with constructing or modifying the groundwater monitoring system required by this Permit. The Department shall then have the option to observe any part of the system’s construction or modification. This notification requirement applies to major work such as new wells, retrofitting existing wells, or abandoning wells. It does not apply to minor repairs, minor maintenance, or other minor changes.

9. A monitoring well inspection and maintenance program shall be implemented for the duration of the compliance period, including any necessary extensions. This program shall be designed to ensure the ongoing structural integrity of all monitoring well installations. The Permittee’s revised groundwater SAP shall specify the details of this program relative to the following requirements.

a. Surface well integrity inspections shall be performed at the time of each sampling event and shall be documented on a well inspection log sheet. Surface integrity evaluations for each monitoring well shall include a visual inspection of the outer protective casing, inner casing riser, surface well seal, well cap, and locking mechanism, to document any damage or deterioration. The ground surface in the immediate vicinity of each monitoring well and the annular space between the outer protective casing and casing riser shall be inspected for visible
anomalies (e.g., water collection or ponding, ground subsidence, etc.).

b. Subsurface well integrity inspections shall be performed during each monitoring event on all wells, according to the provisions contained in the Permittee’s approved SAP, and shall be documented on a well inspection log sheet. Subsurface well integrity inspections may consist of a combination of one or more elements, including total well depth measurements, groundwater turbidity measurements, in-situ hydraulic conductivity tests, casing caliper logs, down-hole television camera surveys, and/or other methods capable of verifying the subsurface integrity of the well casing and screen.

c. Wellbore siltation evaluations shall be conducted annually on all monitoring wells. The Permittee’s approved SAP shall specify performance standards for this evaluation to assess down-well siltation and well screen occlusion in all monitoring wells. This evaluation shall be designed to ensure the representative nature of the Permittee’s groundwater sample analysis and field measurement results through minimizing sampling and measurement interferences (e.g., turbidity, excessive well screen occlusion, etc.).

The Permittee’s approved SAP shall specify a well redevelopment trigger criterion based on a percentage of well screen occlusion and the potential of such occlusion to compromise the representative nature of the Permittee’s groundwater sample analysis and field measurement results. Wells demonstrating well screen occlusion equal to or in excess of the selected criterion (e.g., 10 percent occlusion) shall be redeveloped before the next regularly scheduled sampling event.

d. The Permittee shall perform well-specific surface and subsurface integrity inspections within 14 calendar days following any naturally-occurring event (contact of wells by flood waters, tornado, etc.) or man-made event (vehicular contact, vandalism, etc.) that has the potential to compromise the structural integrity of the well.
e. Monitoring well repairs shall be started within 30 calendar days of identifying any surface or subsurface well integrity problem(s). If adverse weather or site conditions prevent the Permittee from gaining access to and/or repairing impacted monitoring wells within 30 calendar days, the Permittee shall take appropriate action as soon as possible. A written justification for any delay, completed well inspection checklists, a narrative description of any well repairs, and before and after repair photographic documentation (in the case of visible surface well repairs) shall be provided to the Department as part of the Annual Groundwater Monitoring Report required by Special Permit Condition IV.

E. Corrective Action Program [40 C.F.R. §§ 264.100 and 264.101]

The former lead impoundment is subject to the corrective action program requirements of 40 C.F.R. §§ 264.100 and 264.101, and this Permit, until such time as these regulatory and permit requirements have been satisfied.

1. The Permittee’s corrective action program for the former lead impoundment shall consist of groundwater and surface water monitoring, according to Special Permit Conditions III. and V. Any additional investigation, evaluation, or implementation of remedial alternatives necessary to address facility-wide groundwater contamination shall be according to Corrective Action Conditions V. through IX. The corrective action program shall also address any groundwater contamination that has migrated beyond the facility property boundaries. The corrective action program is based on:

a. The need for additional site characterization to adequately support decisions regarding evaluating or implementing groundwater remedial alternatives.

b. The exceedance, or potential exceedance, of the GPS contained in Table 1 at the property boundary or evidence of groundwater plume expansion may act as a “trigger” for additional investigation, evaluation, or implementation of additional groundwater remedial alternatives or ISMs.

2. The Permittee shall perform groundwater sampling and analysis and field measurement of groundwater-related parameters to monitor
releases from the former lead impoundment, according to the schedule presented in Table 2.

a. Sampling and analysis according to this schedule shall begin during the next regularly scheduled sampling event, following approval of the revised SAP required by Special Permit Condition III.C.1. Given the potential lag time between the effective date of this Permit and approval of the revised SAP, the Permittee shall continue sampling and analysis according to the latest version of the approved SAP, until such time as the revised SAP is approved.

b. Sampling and analysis of groundwater from any newly installed wells required by 40 C.F.R. Part 264 Subpart F or this Permit shall be performed no later than the next regularly scheduled sampling event following their installation and according to the latest version of the approved SAP.

c. Wells monitored to ensure adequate delineation of the horizontal and vertical extent of groundwater contamination (hereafter referred to as perimeter wells) shall be analyzed according to Table 2.

d. Specific perimeter wells to be monitored shall be specified in the Permittee’s approved SAP required by Special Permit Condition III.C.1.

e. Installing additional perimeter wells during the compliance period, including any extensions, may be necessary to meet the requirements of 40 C.F.R. Part 264 Subpart F and this Permit. If any such wells are installed, they may be subject to the monitoring requirements contained in Table 2.

f. The Department shall approve, in writing, any future changes to the list of perimeter wells established in the Permittee’s SAP. Installing new wells to maintain continued knowledge of the extent of groundwater contamination during the compliance period may be necessary to meet the requirements of 40 C.F.R. Part 264 Subpart F and this Permit. New wells may be subject to the monitoring requirements contained in Table 2 and a
permit modification as outlined in Special Permit Condition III.C.4.

3. Wells monitored to assess the effectiveness of the Permittee’s corrective action program (hereafter referred to as effectiveness wells) shall be sampled and the samples analyzed annually, according to Table 2.

   a. Specific effectiveness wells to be monitored shall be specified in the Permittee’s SAP required by Special Permit Condition III.C.1.

   b. Installing additional effectiveness wells during the term of this Permit period, including any permit continuations, may be necessary to meet the requirements of 40 C.F.R. Part 264 Subpart F and this Permit. If any such wells are installed, they may be subject to the monitoring requirements contained in Table 2. Installing effectiveness wells does not require a permit modification, but does require prior Department approval.

   c. The Department shall approve, in writing, any future changes to the list of effectiveness wells established in the Permittee’s SAP. The Permittee may be required to submit SAP changes and shall do so according to Special Permit Condition III.C.4., and 5.

4. Only single sample analyses (as opposed to replicates) are required for the parameters listed in Table 2, with the exception of duplicate samples taken for Quality Assurance/Quality Control (QA/QC) purposes.

5. Field parameter values measured and reported by the Permittee shall be representative of stabilized well conditions.

   a. Down well measurement of static water level, and total well depth shall be taken before well purging.

   b. Specific conductance, pH, and temperature measurements reported to the Department shall be those taken upon stabilizing these parameters during well purging. Any additional field parameter measurements, such as those taken
to verify the adequacy of well purging, shall be recorded in the field logbook.

Table 2 - Groundwater Monitoring, Sampling, Analysis, and Parameter Measurement Schedule

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Type**</th>
<th>Maximum Detection Limit (ug/l)</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic*</td>
<td>HC</td>
<td>10.0 (a)</td>
<td>(1)</td>
</tr>
<tr>
<td>Barium*</td>
<td>HC</td>
<td>5.0 (a)</td>
<td>(1)</td>
</tr>
<tr>
<td>Cadmium*</td>
<td>HC</td>
<td>5.0 (a)</td>
<td>(1)</td>
</tr>
<tr>
<td>Chromium*</td>
<td>HC</td>
<td>5.0 (a)</td>
<td>(1)</td>
</tr>
<tr>
<td>Lead*</td>
<td>HC</td>
<td>5.0 (a)</td>
<td>(1)</td>
</tr>
<tr>
<td>Mercury*</td>
<td>HC</td>
<td>0.2 (a)</td>
<td>(1)</td>
</tr>
<tr>
<td>Nickel*</td>
<td>HC</td>
<td>5.0 (a)</td>
<td>(1)</td>
</tr>
<tr>
<td>pH</td>
<td>FM/IN</td>
<td>Not Applicable</td>
<td>(1)</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>FM/IN</td>
<td>Not Applicable</td>
<td>(1)</td>
</tr>
<tr>
<td>Static Groundwater Elevation</td>
<td>FM</td>
<td>Not Applicable</td>
<td>(2)</td>
</tr>
<tr>
<td>Temperature</td>
<td>FM</td>
<td>Not Applicable</td>
<td>(1)</td>
</tr>
<tr>
<td>Total Well Depth</td>
<td>FM</td>
<td>Not Applicable</td>
<td>Annually</td>
</tr>
</tbody>
</table>

*  Total Recoverable Metals
** FM = Field Measurement, HC = Hazardous Constituent, IN = Indicator

(1) Wells monitoring the point-of-compliance specified in Special Permit Condition III.B. (Pb-1, Pb-1A, Pb-2, Pb-2A, Pb-3, Pb-3A, Pb-4, Pb-4A) shall be sampled every three years.

Background groundwater quality (wells AW-9, Pb-5, Pb-5A) shall be sampled either annually (Pb-5, Pb-5A) or every three years (AW-9).

Wells monitoring groundwater quality downgradient of the former lead impoundment (AW-1, AW-3, AW-4, AW-5, AW-7, AW-10, MW-4, MW-5, MW-5D) shall be sampled either annually (AW-1, AW-4, AW-10, MW-4, MW-5, MW-5D) or every three years (AW-3, AW-5, AW-7).

(2) Potentiometric measurements shall be obtained at the time of each regularly scheduled sampling event from all monitoring wells/piezometers at the facility including those which are not being sampled regularly. Elevation shall be to the nearest 0.01 foot.

(a) Detection Limit based on the lowest achievable PQL available from the Permittee’s contract laboratory.
IV. **Annual Groundwater Corrective Action Report**

The Permittee shall prepare and submit to the Department Annual Groundwater Monitoring Reports, giving a comprehensive evaluation of the facility wide groundwater monitoring program for the previous calendar year (i.e., January through December). Annual Groundwater Monitoring Reports are due by March 1 of each calendar year for the previous calendar year. The Annual Groundwater Monitoring Reports shall include the following information for the time period being reported:

A. Narratively discuss the nature and evolution of the Permittee’s facility wide groundwater monitoring program, as well as conclusions concerning the overall adequacy of the program as related to its intended purpose, including any interim measures/stabilization measures. Any conclusions concerning inadequacies in the Permittee’s groundwater monitoring program shall be accompanied by a discussion of proposed remedies. The Permittee shall further develop specific details concerning any proposed remedies outside of the scope of these reports or as otherwise specified in this Permit;

B. Comprehensively address all technical requirements of 40 C.F.R. Part 264 Subpart F and this Permit. The Permittee shall summarize relevant groundwater monitoring information and shall present this information in the form of narrative discussions, groundwater flow calculations, and/or diagrammatic illustrations (e.g., tabular groundwater and statistical data summaries, hydrogeologic and potentiometric contour maps/cross-sections, chemical parameter trend graphs, calculated rate(s) of contaminant migration, contaminant isoconcentration maps/cross-sections, fence/isometric diagrams, groundwater flow nets, etc.), as appropriate; and

C. Contain detailed boring logs for new exploratory borings and/or detailed “as-built” monitoring well diagrams for any new monitoring wells installed during the corresponding reporting period.

V. **Surface Water Monitoring [40 C.F.R. § 270.32(b)]**

A. Surface water monitoring shall continue throughout the post-closure care period, including any extensions, or until such time as the Permittee makes a successful demonstration for exemption from these requirements. Compliance with this monitoring program is for the purposes of this Permit only and does not relieve the Permittee of the obligation to comply with any other federal, state or local water monitoring requirements. The Permittee’s surface water
monitoring program shall be performed as described in the approved permit application, this Permit, and the approved SAP.

1. The Permittee’s surface water monitoring program shall be incorporated directly into, and be submitted as part of, the groundwater SAP required by Special Permit Condition III.C.1.

2. The Permittee’s surface water sampling locations shall be sufficient to yield representative data on background and downgradient surface water quality and shall be depicted in the SAP. Sampling and analysis methods for hazardous constituents shall be consistent with the Permittee’s Missouri State Operating Permit #MO-0002348 issued by the Department’s Missouri Clean Water Commission and Water Protection Program.

3. The Permittee shall perform surface water sampling on a schedule consistent with the Permittee’s Operating Permit and the approved SAP.

4. Reporting and analysis of data and information collected as part of the surface water monitoring program shall be sufficient to meet the requirements of the Permittee’s Operating Permit, and shall be included as part of the Annual Groundwater Corrective Action Report, as defined in Special Permit Condition IV. In addition to other reporting requirements for the surface water monitoring program, the Permittee shall include with the Annual Groundwater Corrective Action Report a discussion of any exceedances of the effluent limits in the Missouri State Operating Permit.

5. The Permittee shall perform statistical comparisons of mercury, lead, and zinc analytical data obtained from the upgradient and downgradient surface water sampling locations in Lone Elm Creek. The Permittee shall use a statistical method appropriate for the distribution of data undergoing analysis and shall ensure, to the greatest degree possible, protection of human health and the environment. These statistical comparisons shall be included in the Annual Groundwater Corrective Action Report required by Special Permit Condition IV.

6. The Permittee shall notify the Department within seven days of determining that a statistically significant increase of hazardous
constituents has been detected via statistical comparison of downstream and upstream surface water analytical data.

B. The Permittee may, at any time during the post-closure care period of the former lead impoundment, including any extensions, make a demonstration to the Department for a surface water monitoring exemption. A successful demonstration for such an exemption shall, at a minimum, address the elements of 40 C.F.R. § 264.94(b), as applied to potentially affected surface water bodies. This demonstration shall be certified by a geologist or professional engineer registered in Missouri. Department approval of the Permittee’s surface water monitoring exemption shall necessitate a permit modification, according to 40 C.F.R. § 270.42. In addition, any exemption shall not affect any obligation on the part of the Permittee to apply for and obtain a Missouri State Operating Permit from the Department’s Clean Water Commission and Water Protection Program for discharges to waters of the State.

CORRECTIVE ACTION CONDITIONS

The Permittee shall comply with all applicable post-closure care, groundwater monitoring, surface water monitoring, and corrective action requirements contained in 40 C.F.R. Part 264 Subparts F and G, and all provisions of this Permit, for all previously and any newly identified SWMUs, AOCs, and releases identified pursuant to the provisions of this Permit.

I. Identification of SWMUs and AOCs

A. Jacobs Engineering, on behalf of EPA, completed a RCRA Facility Assessment to identify and gather information on releases or potential releases from SWMU(s) and AOC(s) at the facility, including those that appeared to require further investigation. The 1989 report identified 43 SWMUs and 4 AOCs at the EaglePicher facility, and the 1993 RCRA Part B permit application described an additional 81 SWMUs, bringing the total to 124 SWMUs. A further 4 SWMUs were added to the list in the 1995 RCRA Facility Investigation (RFI) Work Plan, which is discussed in Corrective Action Condition V.A. of this permit. In a 1994 meeting between the Department, EPA, and the Permittee, 46 SWMUs were determined to need no further investigation, denoted in Tables 5 and 6, as No Further Action (NFA). Figure 3 shows the approximate locations of the SWMUs and AOCs at the facility. A summary of the SWMUs and AOCs with brief descriptions is found in Tables 5 and 6 at the end of this Permit.
B. The status of the known SWMUs and AOCs is based on available information at the time of issuance of this Permit. In the event new information becomes available indicating human health or the environment may be adversely impacted, the Permittee may be required to conduct additional investigations and evaluations, as necessary, to determine the need for additional corrective action for the previously identified SWMUs and AOCs, or any newly identified SWMUs and AOCs, including off-site release(s), as specified in Corrective Action Conditions II. and III.

C. As deemed appropriate by the Department, the Permittee shall conduct additional investigation(s) and/or take corrective action for any previously or newly identified SWMUs and AOCs, including off-property release(s), demonstrating the releases of hazardous waste or hazardous constituents to soil, surface water, sediment, groundwater, and/or air have been thoroughly delineated and reported, as specified in Corrective Action Conditions II. through IX. Any off-property impacts to surface water, sediment, soil, or groundwater shall be addressed if the impacts to these media originated from SWMUs, AOCs, or other releases on the facility property.

II. Notification Requirements for, and Assessment of, Newly Identified SWMU(s) and AOC(s)

A. The Permittee shall notify the Department, in writing, no later than 15 calendar days after discovery, or after discovery should have been made (e.g., visual observations, laboratory test results, or information not available previously), of any new SWMU(s) or AOC(s) identified after the issuance of this Permit. The Department may examine the facility’s inspection records to determine if the Permittee should have known that a release occurred.

B. The Department may require the Permittee to conduct an investigation of any newly identified SWMU(s) or AOC(s). The Department shall notify the Permittee, in writing, of this decision. Within 30 calendar days after receiving the Department’s request to conduct an investigation, the Permittee shall prepare and submit a SWMU/AOC Assessment Work Plan to the Department for review and approval. The SWMU/AOC Assessment Work Plan shall include, but not be limited to, the following:

1. A discussion of past hazardous wastes management practices related to the unit(s);
2. A detailed investigation approach for surface and subsurface soils, surface water, groundwater, and air as necessary to:

a. Determine if a release of hazardous wastes or hazardous constituents has occurred or is occurring at the unit(s);

b. Yield reliable, representative samples and results;

c. Determine impacts or potential impacts to human health and the environment; and

d. Sufficiently assess all hazardous wastes and hazardous constituents related to the unit(s).

3. A proposed schedule for implementing the SWMU/AOC Assessment Work Plan, which is predicated on the date the Department approves the plan; and

4. Identification of all data to be collected that is necessary to provide for a complete SWMU/AOC Assessment Report, as specified below.

C. The Department shall review and approve the SWMU/AOC Assessment Work Plan according to the procedures described in General Permit Condition IV. The Permittee shall complete all activities described in the SWMU/AOC Assessment Work Plan, according to the schedule contained in the approved plan.

D. The Permittee shall submit a SWMU/AOC Assessment Report to the Department according to the schedule specified in the approved SWMU/AOC Assessment Work Plan. The SWMU/AOC Assessment Report shall present and discuss the information obtained under the approved SWMU/AOC Assessment Work Plan. At a minimum, the SWMU/AOC Assessment Report shall provide the following information for each newly identified SWMU or AOC:

1. The location of the newly identified SWMU or AOC in relation to other SWMU(s) and AOC(s);

2. The type and function of the SWMU or AOC;
3. The general dimensions, capacities, and structural description of the SWMU or AOC;

4. The period during which the SWMU or AOC was operated;

5. The physical and chemical properties of all wastes that have been or are being managed at the SWMU or AOC, to the extent possible;

6. The results of any sampling and analysis conducted;

7. Past and present operating practices;

8. Previous uses of the area occupied by the SWMU or AOC;

9. Amounts of waste handled;

10. Drainage areas and/or drainage patterns near the SWMU or AOC; and

11. A recommendation as to whether further action is necessary for the newly identified SWMU or AOC and justification for the recommendation. If further action is recommended, such as updating the site conceptual model and/or assessing SWMU/AOC-specific risk, the SWMU/AOC Assessment Report shall include a proposal for additional investigation or corrective action, as appropriate.

E. The Department shall review and approve the SWMU/AOC Assessment Report according to the procedures described in General Permit Condition IV. Based on the findings of this report and any other available information, the Department shall determine the need for additional investigation, including interim/stabilization measures or a RFI, at specific unit(s) identified in the SWMU/AOC Assessment Report.

F. If the Department determines additional investigations are needed, the Department may require the Permittee to prepare and submit to the Department for review and approval, a work plan for such investigations according to the applicable Corrective Action Conditions of this Permit. The Department shall review and approve any such work plan according to the procedures described in General Permit Condition IV. The Permittee shall complete all activities described in the work plan, according to the schedule contained in the approved plan.
III. Notification Requirements for, and Assessment of, Newly Identified Releases from Previously Identified SWMUs and AOCs

A. The Permittee shall notify the Department, in writing, no later than 15 calendar days after discovery, or after discovery should have been made (e.g., visual observations, laboratory test results, or information not available previously), of any newly identified release(s) of hazardous wastes or hazardous constituents from any previously identified SWMU(s) or AOC(s) at the facility. This includes SWMUs or AOCs being investigated and reported as part of the corrective action process, where newly identified release(s) are discovered during the course of groundwater monitoring, field investigation, environmental auditing, or other activities undertaken after issuance of this Permit. The Department may examine the facility’s inspection records to determine if the Permittee should have known that a release occurred.

B. The Department may require the Permittee to conduct an investigation of the newly identified release(s). The Department shall notify the Permittee, in writing, of this decision. Within 30 calendar days after receiving the Department’s request to conduct an investigation, the Permittee shall prepare and submit a Newly Identified Release Work Plan to the Department for review and approval. The Newly Identified Release Work Plan shall include, but not be limited to, the following:

1. A discussion of the hazardous waste/chemical management practices related to the release(s);

2. A detailed investigation approach for groundwater, land surface and subsurface soils, surface water, and air as necessary to:
   a. Define the extent of the release area(s);
   b. Yield reliable, representative samples and results;
   c. Determine impacts or potential impacts to human health and the environment; and
   d. Sufficiently assess all hazardous wastes and hazardous constituents related to the release(s).
3. A proposed schedule for implementing the Newly Identified Release Work Plan, which is predicated on the date the Department approves the plan; and

4. Identification of all data to be collected that is necessary to provide for a complete Newly Identified Release Report, as specified below.

C. The Department shall review and approve the Newly Identified Release Work Plan according to the procedures described in General Permit Condition IV. The Permittee shall complete all activities described in the Newly Identified Release Work Plan, according to the schedule contained in the approved plan.

D. The Permittee shall submit a Newly Identified Release Report to the Department according to the schedule specified in the approved Newly Identified Release Work Plan. The Newly Identified Release Report shall present and discuss the information obtained under the approved Newly Identified Release Work Plan. At a minimum, the report shall provide the following information for each newly identified release:

1. The location of the newly identified release in relation to the SWMU(s) or AOC(s) under investigation and to any other SWMU(s) and AOC(s);

2. The general dimensions of the release;

3. The period during which the release is suspected to have occurred;

4. The physical and chemical properties of all wastes that have been determined to compose the release;

5. The results of any sampling and analysis conducted;

6. Past and present operating practices near and at the location of the release;

7. Previous uses of the area(s) occupied near and at the location of the release;

8. Amounts of waste handled near and at the location of the release;
9. Drainage areas and/or drainage patterns near and at the location of the release; and

10. A recommendation as to whether further action is necessary for the newly identified release from a previously identified SWMU(s) or AOC(s) and justification for the recommendation. If further action is recommended, such as updating the site conceptual model and/or assessing SWMU/AOC-specific risk, the Newly Identified Release Report shall include a proposal for additional investigation or corrective action, as appropriate.

E. The Department shall review and approve the Newly Identified Release Report according to the procedures described in General Permit Condition IV. Based on the findings of the report and any other available information, the Department shall determine the need for additional investigation, including interim/stabilization measures or an RFI, at specific releases(s) identified in the Newly Identified Release Report.

F. If the Department determines additional investigation is needed, the Department may require the Permittee prepare and submit to the Department for review and approval, a work plan for such investigations according to the applicable Corrective Action Conditions of this Permit. The Department shall review and approve any such work plan according to the procedures described in General Permit Condition IV. The Permittee shall complete all activities described in the work plan, according to the schedule contained in the approved plan.

IV. Interim/Stabilization Measures (ISMs)

Should the Permittee become aware of a situation that may require ISMs that may be necessary to protect human health or the environment, the following conditions shall apply:

1. The Permittee shall notify the Department by e-mail or telephone within 24 hours and by letter within seven days after becoming aware, or should have become aware, of the situation. The Department may examine the facility’s inspection records to determine if the Permittee should have known ISMs might be required and notification should have occurred.

2. If, during the course of any activities initiated under this Permit, the Permittee or Department determines a release or potential release of hazardous wastes or
hazardous constituents poses a threat to human health or the environment, the Department may require ISMs in coordination with the Permittee, to slow or stop the further spread of contamination until final corrective action measures are implemented. The Department shall determine the specific action(s) that shall be taken to implement the ISMs, including potential permit modifications, and the schedule for implementing the ISMs. The Department shall notify the Permittee, in writing, of decisions regarding the action(s). This requirement shall not preclude the Permittee from responding to an emergency situation without direction from the Department.

3. The Permittee shall notify the Department, in writing or by e-mail, no later than 10 calendar days after determining, or after a determination should have been made, that the ISMs are not effectively limiting or stopping the further spread of contamination. The Department may require the ISMs be revised to make them effective in limiting or stopping the spread of contamination, or that additional corrective action measures are required to address the contaminated media.

4. In cases where releases or potential releases present minimal exposure concerns, or the remedial solution is relatively uncomplicated, the Permittee may propose ISMs to the Department for review and approval. These ISMs shall be consistent with, and may supplement or satisfy the requirements for, a final remedy(s) in specific areas. Proposed ISMs the Department determines to be significant (e.g., those which are anticipated to make up a substantial part of the final remedy) may be subject to public review and comment before final Department approval. Proposed ISMs the Department determines not to be significant will be reviewed and approved according to the procedures described in General Permit Condition IV.

V. RCRA Facility Investigation (RFI) Work Plan

Dames & Moore, on behalf of the Permittee, submitted a two-part Phase I RFI Work Plan to the Department and EPA on February 15 and March 25, 1994. The Department and EPA provided comments on the Phase I RFI Work Plan to the Permittee, including that the two work plans should be combined. The Permittee submitted revised Phase I RFI Work Plans to the Department and EPA on November 1, 1994, and April 28, 1995. The Department approved the final revised Work Plan on May 5, 1995.

Dames & Moore, on behalf of the Permittee, submitted a Phase II RFI Work Plan to the Department and EPA on August 4, 1998, following a March 11, 1998 comment
letter on further actions to take following the Phase I RFI Report. The Department and EPA provided comments on the Phase II RFI Work Plan to the Permittee, and the Permittee submitted a revised Work Plan on September 24, 1998. The Department and EPA approved the revised Work Plan on October 9, 1998, with comments and further revisions.

ENVIRON International Corporation, on behalf of the Permittee, submitted a Phase I Work Plan for Sediment Sampling in Lone Elm Creek on April 20, 2007. The Department provided comments on the Work Plan. These comments led to the Revised Work Plan for Solids and Surface Water Sampling in Lone Elm Creek being submitted on June 6, 2007. The Department approved the Revised Work Plan.

ENVIRON International Corporation, on behalf of the Permittee, submitted a Phase I Work Plan for Sediment Sampling in Lone Elm Creek on April 20, 2007. The Department provided comments on the Work Plan. These comments led to the Phase II Work Plan for Ecological Sediment and Sediment and Surface Water Investigation for Lone Elm Creek being submitted on June 5, 2007. The Department approved the Phase II Work Plan.

Ramboll, on behalf of the Permittee, submitted the Northeast Parcel Investigation Work Plan to the Department on July 20, 2016. The Department provided comments to the Permittee on the Work Plan on December 12, 2016. Ramboll, on behalf of the Permittee, responded to those comments and provided a revised Work Plan on January 11, 2017. USEPA provided comments to the Department on the revised Work Plan on April 4, 2017. Ramboll, on behalf of the Permittee, responded to those comments on June 9, 2017, including additional Work Plan revisions. The Department approved the Northeast Parcel Investigation Work Plan with Conditions on March 16, 2018.

A. If the Department determines additional investigations are needed, the Department may require the Permittee to conduct a supplemental RFI. The Department shall notify the Permittee, in writing, of this decision. Within 60 calendar days after receiving the Department’s request to conduct a supplemental RFI, and after meeting with the Department to discuss the content of the Work Plan, the Permittee shall prepare and submit a supplemental RFI Work Plan to the Department for review and approval.

B. The supplemental RFI Work Plan shall be designed to investigate releases of hazardous wastes and hazardous constituents to all appropriate media of concern, including surface and subsurface soils, surface water, sediment, groundwater, and air, as necessary. In order to substantiate future corrective
action decisions, the supplemental RFI Work Plan shall contain provisions sufficient to meet the following objectives and a proposed schedule for implementing the supplemental RFI Work Plan, which is predicated on the date the Department approves the plan:

1. Full characterization of the nature, vertical and horizontal extent, and rate of migration of releases of hazardous wastes and hazardous constituents from SWMUs and AOCs, or groups of SWMUs and AOCs, or newly identified release(s) at the facility and the actual or potential receptors of such releases; and

2. Collection of any other pertinent data that may be used to substantiate future corrective action decisions.

C. The supplemental RFI Work Plan shall be appropriate for facility-specific conditions and shall be consistent with and address all applicable investigation elements described in the EPA document entitled, RCRA Facility Investigation (RFI) Guidance, EPA 530/SW-89-031, May 1989, or the most recent version. Any required RFI activities shall also be conducted using the approaches contained in the EPA document entitled, Resource Conservation and Recovery Act Facilities Investigation Remedy Selection Track (RCRA FIRST): A Toolbox for Corrective Action, May 20, 2016. At a minimum, the RFI Work Plan shall detail all proposed activities and procedures to be conducted at the facility, including, but not limited to, the following:

1. A description of current conditions;

2. The schedule for implementing and completing such investigations and for submitting reports (including the supplemental RFI Report);

3. The qualifications of personnel performing or directing the investigations, including contractor personnel; and

4. The overall management of the RFI activities.

D. The supplemental RFI Work Plan shall include a Quality Assurance Project Plan, which shall present the policies, organization, objectives, functional activities, and specific QA/QC activities designed to achieve the data quality goals of the supplemental RFI. It shall include, at a minimum, the supplemental RFI objectives; sampling procedures; analytical methods; field and laboratory quality control samples; chain-of-custody procedures; and data
review, validation, and reporting procedures. The Permittee shall follow the EPA document entitled, *EPA Requirements for Quality Assurance Project Plans, EPA QA/R-5, March 2001*, (reissued May 2006) or the most recent version.

E. The Permittee shall prepare and maintain a Health and Safety Plan during the project that ensures the supplemental RFI activities are conducted in a manner that is protective of human health and the environment.

F. Due to the complexity of defining the extent of contamination, the Permittee may be required to use a phased approach that requires submitting supplemental RFI Work Plans.

G. The Department shall review and approve the supplemental RFI Work Plan(s) according to the procedures described in General Permit Condition IV. The Permittee shall complete all activities described in the supplemental RFI Work Plan(s), according to the schedules contained in the approved plan(s).

VI. **RCRA Facility Investigation (RFI) Report**

Dames & Moore, on behalf of the Permittee, submitted a Phase I RFI Report to the Department and EPA on November 14, 1995, and a Phase II RFI Report on March 5, 1999. The Department and EPA approved the documents on October 29, 1999. Data gaps were identified, and in 2009 a Final RFI Report including the investigations performed under the Phase II Work Plan Addendum were submitted by ENVIRON. ENVIRON also performed investigations on Lone Elm Creek, detailed in the Phase I Lone Elm Creek Solids and Surface Waste Site Investigation Report, submitted October 2007, which is also considered an RFI activity. The Phase II Work Plan for Ecological Sediment and Surface Water Investigation for Lone Elm Creek investigations were submitted as the 2012 RFI Report, which also consolidated data from all of the former investigations. In a July 5, 2012, letter to the Department, EPA recommended that the 2012 RFI Report be approved with conditions; however, the Department’s approval was delayed pending the Permittee’s submission of additional information and revised documents. The Department approved the RFI on July 14, 2020, following the satisfactory review of the Permittee’s submissions.

A. Should additional investigations become necessary, the Permittee shall submit a supplemental RFI Report to the Department according to the schedule specified in the approved supplemental RFI Work Plan described in Corrective Action Condition V. The supplemental RFI Report shall present all information gathered under the approved supplemental RFI Work Plan, along
with a brief facility description and map showing the property boundary and all SWMUs and AOCs. The supplemental RFI Report shall contain adequate information to support additional corrective action decisions at the facility. Information contained in the supplemental RFI Report shall be presented in a format consistent with Section 5 of the EPA document entitled, RCRA Facility Investigation (RFI) Guidance, EPA 530/SW-89-031, May 1989, or the most recent version.

B. The supplemental RFI Report shall provide an interpretation of the RFI information gathered, supported with adequate documentation, to enable the Department to determine whether ISMs or a Corrective Measures Study (CMS) may be necessary. The supplemental RFI Report shall describe the procedures, methods, and results of all investigations of SWMUs and AOCs and associated releases, including, but not limited to, the following, as appropriate:

1. Characterization of the nature, concentration(s), horizontal and vertical extent, and direction/rate of migration of releases from SWMUs and AOCs at the facility;

2. Characterization of the environmental setting of the facility, including:
   a. Hydrogeological conditions;
   b. Climatological conditions;
   c. Soil and bedrock characteristics;
   d. Surface water and sediment quality; and
   e. Air quality and meteorological conditions.

3. Characterization of SWMUs and AOCs from which releases have been or may be occurring, including unit and waste characteristics;

4. Descriptions of human and environmental receptors and associated risks to the receptors which are, may have been, or, based on site-specific circumstances, could be exposed to release(s) from SWMUs and AOCs;
5. Assessment of potential risks to the human and environmental receptors exposed to release(s) from SWMUs and AOCs;

6. Extrapolations of future contaminant migration, including description of contaminant fate and transport mechanisms, and pathways for human and environmental exposure;

7. Laboratory, bench-scale, pilot-scale, and/or appropriate tests or studies to determine the feasibility or effectiveness of treatment technologies or other technologies that may be appropriate in implementing remedies at the facility;

8. Statistical analyses to aid in interpreting data;

9. Results of any ISMs previously implemented; and

10. Evaluation of data quality that may affect the nature and scope of a CMS, as well as the evaluation of corrective measures alternatives thereunder (e.g., identifying any potential bias in the supplemental RFI data and documenting its precision, accuracy, representativeness, completeness, comparability, validation, etc.).

C. The Department shall review and approve the supplemental RFI Report according to the procedures described in General Permit Condition IV. If the Department determines the objectives of the supplemental RFI have not been met, the Department may require additional investigation. Upon approval of the supplemental RFI Report, the Department shall notify the Permittee, in writing, of the next step in the corrective action process, which may include submitting a CMS Work Plan or equivalent, as described in Corrective Action Condition VII.

VII. Corrective Measures Study (CMS) Work Plan

A formal CMS has not been conducted at this facility. To date, investigations of the entire site have been performed, though a formal CMS will not be performed at this time, as the Department has determined pursuant to the RCRA First initiative that a formal CMS is not needed. This determination is based on the investigations/monitoring and closure/interim measures conducted to date at the facility. The groundwater at a single SWMU, the former lead impoundment, is being monitored yearly. This SWMU is also classified as a regulated (hazardous waste) land disposal unit, therefore the final remedy for soil, which included removal of contaminated
soils and placement of clean fill as well as a clay cap, was implemented during the closure process. Closure with waste in place was completed in 1989.

A. If the Department determines there has been a release of hazardous waste or hazardous constituents from newly or previously identified SWMUs or AOCs that may pose a threat to human health or the environment, the Department may require the Permittee to conduct a CMS or remedy evaluation. The Department shall notify the Permittee, in writing, of this decision. The notice shall identify the hazardous constituent(s) of concern and may specify remedial alternatives for the Permittee to evaluate.

B. As part of the CMS or remedy evaluation, the Department may require the Permittee to evaluate one or more specific remedial alternatives for removing, containing, or treating hazardous wastes and hazardous constituents in contaminated media, based on the objectives established for the corrective action. These remedial alternatives may include a specific technology or combination of technologies that, in the Department’s judgment, may be capable of achieving standards for protecting human health and the environment.

C. Within 45 calendar days after receiving the Department’s request to conduct a CMS or remedy evaluation, and after meeting with the Department to discuss the nature and scope of the CMS or remedy evaluation, the Permittee shall prepare and submit a CMS Work Plan or Remedy Evaluation Plan to the Department for review and approval. The CMS Work Plan or Remedy Evaluation Plan shall be generally consistent with the EPA document entitled, RCRA Corrective Action Plan (Final), OSWER Directive 9902.3-2A, May 1994, or the most recent version. Any required CMS activities shall be conducted using the approaches contained in the EPA document entitled, Resource Conservation and Recovery Act Facilities Investigation Remedy Selection Track (RCRA FIRST): A Toolbox for Corrective Action, May 20, 2016. At a minimum, the CMS Work Plan or Remedy Evaluation Plan shall provide the following information, as appropriate, and a proposed schedule for implementing the elements of the CMS Work Plan or Remedy Evaluation Plan:

1. A description of the general approach to investigating and evaluating potential remedial alternatives or combinations of alternatives;

2. A definition of the specific objectives of the study/evaluation;
3. A description of the remedial alternative or combination of alternatives that will be studied;

4. A description of those potentially viable remedial alternatives initially considered, but were dropped from further consideration, including the rationale for elimination;

5. The specific plans for evaluating remedial alternatives or combination of alternatives to ensure compliance with applicable remedy selection threshold/balancing criteria and cleanup standards;

6. A schedule for conducting the study/evaluation and submitting a CMS Report or equivalent and/or preferred remedy proposal, which is predicated on the date the Department approves the CMS Work Plan or Remedy Evaluation Plan;

7. The proposed format for ranking remedial alternatives or a combination of alternatives in support of a preferred remedial alternative or combination of alternatives; and

8. Identification of laboratory, bench-scale, pilot-scale, and/or other appropriate tests or studies that will be used to determine the feasibility or effectiveness of treatment technologies, or other technologies that may be appropriate in implementing remedial alternatives at the facility.

D. The Department shall review and approve the CMS Work Plan or Remedy Evaluation Plan according to the procedures described in General Permit Condition IV. The Permittee shall complete all activities described in the CMS Work Plan or Remedy Evaluation Plan, according to the schedule contained in the approved plan.

VIII. Corrective Measures Study (CMS) Report

A. Should submitting a CMS Work Plan or Remedy Evaluation Plan become necessary, the Permittee shall submit a CMS or Remedy Evaluation Report to the Department according to the schedule specified in the approved CMS Work Plan or Remedy Evaluation Plan described in Corrective Action Condition VII. The CMS or Remedy Evaluation Report shall present all information gathered under the approved CMS Work Plan or Remedy Evaluation Plan and shall be generally consistent with the EPA document
entitled, RCRA Corrective Action Plan (Final), OSWER Directive 9902.3-2A, May 1994, or the most recent version.

B. The CMS or Remedy Evaluation Report shall describe and discuss each remedial alternative or combination of alternatives evaluated, including any bench-scale or pilot tests conducted. The CMS or Remedy Evaluation Report shall include, but not be limited to, the following information:

1. Evaluation of the performance, reliability, ease of implementation, and potential impacts of each remedial alternative or combination of alternatives, including safety impacts, cross media impacts, overall carbon footprint, and control of exposure to any residual contamination;

2. Assessment of the effectiveness of each remedial alternative or combination of alternatives in terms of achieving adequate control of contaminant sources and cleanup of hazardous waste or hazardous constituents released from the SWMU(s) and AOC(s);

3. Estimation of the time required to begin and complete implementation of each remedial alternative or combination of alternatives, and an estimate of the time required to meet the proposed remediation objectives contained in the CMS or Remedy Evaluation Report;

4. Estimation of the costs to implement, operate, monitor, and maintain each remedial alternative or combination of alternatives;

5. Recommendation of a preferred remedial alternative or combination of alternatives, and rationale for the proposed selection; and

6. Assessment of institutional requirements that may be needed (e.g., state or local permits), discussion of other environmental or public health requirements or institutional controls that may substantially affect implementing the preferred remedial alternative or combination of alternatives (e.g., local ordinances), and a draft of any facility-specific institutional controls proposed as part of the preferred remedial alternative or combination of alternatives (e.g., a draft environmental covenant containing specific activity and use limitations prepared pursuant to the Missouri Environmental Covenants Act, Sections 260.1000 through 260.1039, RSMo).
C. The Department shall review and approve the CMS or Remedy Evaluation Report according to the procedures described in General Permit Condition IV. Upon approval of the CMS or Remedy Evaluation Report, the Department will approve a final remedy, as specified in Corrective Action Condition IX.

IX. Final Remedy Selection and Approval

A. The specific details of each health and safety plans (HASP) will be determined on a project-by-project basis and will contain procedures and equipment to address potential exposures related to specific project activities. The facility-wide soil management plan includes requirements that will be used to develop project and area specific HASPs.

B. The Department has determined pursuant to the RCRA First initiative that a formal CMS/remedy evaluation is not needed. This determination is based on the investigations/monitoring and closure/interim measures conducted to date at the facility. The proposed final remedy is being issued concurrently with this Permit. The proposed final remedy is also discussed in more detail in the Statement of Basis accompanying this Permit, which includes the following:

1. Remedial Actions to Address Risk to Construction Workers
   a. Use of area- and activity-specific HASP to protect future construction workers from unacceptable exposures to residual contamination, particularly to metals such as lead. Each HASP should specify the appropriate personal protective equipment and monitoring based on the residual levels of contamination in soil and/or groundwater specific to each planned construction area/location.

2. Remedial Actions to Address Exceedance of Groundwater Protection Standards
   a. To prevent future use of contaminated groundwater for drinking water or any purpose other than investigation, monitoring and remediation on the permitted facility property, groundwater use restrictions will be established in an enforceable Environmental Covenant according to Corrective Action Condition XIV.E.
b. If a sustained increase in the level and/or extent of groundwater contamination is confirmed via continued groundwater monitoring, additional actions may be required consistent with this Permit to address the increases and/or migration, as appropriate. These actions may include one or more of the following:

(1) Investigation of suspected contaminant releases and/or source areas.

(2) Removal, treatment and/or control of previously unknown releases/sources that are identified.

(3) Implementation of other active or passive remedial technologies as warranted by a detailed evaluation of the data.

3. Remedial Actions to Address Future Risk and Groundwater Plume Stability

Groundwater monitoring will be conducted to monitor, verify, and document groundwater plume stability. The data will be evaluated to determine if the groundwater concentrations are stable, decreasing, or increasing.

C. This Corrective Action Condition may apply to additional activities undertaken in response to newly identified SWMUs and AOCs, additional activities undertaken in response to newly identified release(s) from previous identified SWMUs and AOCs, and additional activities undertaken in response to any increasing trends in levels of contamination identified through long-term monitoring under Corrective Action Condition(s) II. and/or III.

1. If a supplement to the final remedy is determined to be necessary, following the approval of a CMS or Remedy Evaluation Report, as described in Corrective Action Condition VIII., the Department shall prepare a Statement of Basis summarizing the remedial alternatives evaluated by the Permittee and the Department’s basis of support for the proposed supplemental final remedy.

2. Following the Department’s preparation of the Statement of Basis, a permit modification shall be initiated according to 40 C.F.R. §§ 270.41
or 270.42(c), as applicable, to facilitate public review and comment on the Statement of Basis, proposed supplemental final remedy, and supporting documents. When, and if, required, the Permittee shall provide assurances of financial responsibility for any approved corrective action final remedy pursuant to 40 C.F.R. § 264.101(b), and as specified in the Financial Assurance Conditions of this Permit.

3. Upon completion of the public participation activities associated with the permit modification to implement the proposed supplemental final remedy, the Department shall approve a final remedy that shall:
   a. Be protective of human health and the environment;
   b. Control and/or eliminate the source(s) of contaminants so as to reduce or eliminate, to the maximum extent practicable, further contaminant releases, exposures or migration that may pose a threat to human health and the environment; and
   c. Meet all applicable federal, state, and local laws and regulations.

X. Site Operation, Maintenance, and Monitoring (OM&M) Plan

A. The Permittee shall submit an OM&M Plan within 120 calendar days after the effective date of this Permit. The updated OM&M Plan shall specify operation, maintenance, and monitoring procedures for the approved final remedy including, at a minimum, the information described in Chapter V, Section II, of the EPA document entitled, RCRA Corrective Action Plan (Final), OSWER Directive 9902.3-2A, May 1994. The OM&M Plan shall include the following:

1. A short report summarizing the implementation of final remedy elements;

2. A Site Security Program specifying access controls, including fencing, controlled access to wells, posting warning signs, and designated operating areas for workers and visitors;

3. Area specific HASPs;

4. Institutional Controls; and
5. Other information, as necessary, pertaining to the operation, maintenance, and monitoring procedures for the approved final remedy.

B. The Permittee shall prepare project-specific HASPs as required under the SMP(s). The area specific HASPs shall be appended to the OM&M Plan as they are developed. The HASPs shall specify health and safety procedures at the facility and provisions for all activities performed at the facility during final remedy construction and long-term groundwater, surface water, and groundwater containment performance monitoring. The HASPs shall include, at a minimum, the applicable information described in Chapter V, Section VIII, of the EPA document entitled, RCRA Corrective Action Plan (Final), OSWER Directive 9902.3-2A, May 1994.

C. The Permittee shall include as part of the OM&M plan, a site security program as described in the approved permit application and this Permit. The site security program shall describe access controls for preventing unplanned and accidental exposures to soil and groundwater contamination using measures including fencing, controlled access to wells, posting warning signs, and designated operating areas for workers and visitors. The site security program shall also identify access controls that are intended to provide long-term protection against unplanned and accidental exposures and integrate these with access controls that are available at the facility as of the effective date of this Permit.

XI. Certification of Completion of Corrective Measures

A. When the Permittee decides to verify completion of corrective measures at a SWMU, group of SWMUs, or facility-wide, the Permittee shall submit to the Department, documentation to demonstrate groundwater contaminant levels are protective of human health and the environment. Factors to address in the demonstration include:

1. The continued presence (or lack thereof) of legally enforceable groundwater use restrictions,

2. The groundwater contaminant plume(s) has been stable or decreasing for at least three consecutive years,

3. The GPS limits included in Table 1 are not likely to be exceeded in the future beyond the permitted facility property boundaries, and
4. Future expansion of the groundwater contaminant plume(s) is unlikely beyond the three consecutive year period due to “contaminant rebound” related to back diffusion of contaminants from matrix or secondary porosity features.

The Permittee’s groundwater corrective action program shall continue until the Permittee demonstrates, individually or collectively, that these limits have not been exceeded for a period of three consecutive years at each SWMU, group of SWMUs, or facility wide. Groundwater corrective action may stop at any individual SWMU or group of SWMUs, once the Department reviews and approves the Permittee’s demonstration and this Permit is successfully modified according to 40 C.F.R. §§ 270.41 or 270.42(c), as appropriate, to recognize this demonstration has been completed. The permit modification shall address changes in the groundwater corrective action status of individual SWMUs, groups of SWMUs, or facility wide. Documentation related to the certification of completion of corrective measures can be included in the Annual Groundwater Corrective Action Report submitted according to Special Permit Condition IV., or submitted as a stand-alone document under separate cover.

B. The Department shall review and approve the documentation verifying completion of all corrective action at each SWMU, group of SWMUs, or facility wide, according to the procedures described in General Permit Condition IV.

C. Within 60 calendar days after receiving the Department’s approval of the documentation verifying completion of all corrective action under Corrective Action Condition X.A., the Permittee shall submit a written certification to the Department, by certified mail, stating the final remedy has been completed according to the approved final remedy decision. The certification shall be signed by the Permittee and a professional engineer or geologist registered in Missouri.

D. Facility wide cessation of the groundwater corrective action program will require submitting a Groundwater Remediation Completion Report that addresses all factors identified in Corrective Action Condition XI.A. above, in support of a Class 3 Permit Modification or permit termination, following the requirements in 40 C.F.R. § 270.42(c), and the public notice and opportunity for comment requirements in 10 CSR 25-8.124.

XII. Activity and Use Limitations (AULs)
AULs are legal or physical restrictions or obligations with respect to the permitted facility property. AULs place a legal responsibility and physical restrictions or limitations on the use of, or access to, the permitted facility property. The following AULs apply to the Permittee and the facility property subject to the jurisdiction of this Permit:

A. Soil or Other Environmental Media Disturbance at the Facility

1. The Permittee shall notify the Department at least 30 calendar days before any planned construction, excavation, or maintenance and repair activities that may disturb existing contamination at any SWMU, AOC, or other area subject to AULs. The Permittee shall, in coordination with the owner(s) of any off-property areas impacted by soil and/or groundwater contamination originating from SWMUs and AOCs at the facility, assess the potential hazards associated with activities that potentially disturb or expose any contaminated environmental media and ensure that necessary precautions are taken, including protective and/or remedial measures, before performing the activity. In situations where advance notice is not feasible (i.e., emergency utility service or repair), notice shall occur as soon as practical. Future construction, excavation activities, or land use changes may necessitate further evaluation of conditions at SWMUs or AOCs having residual levels of contamination that exceed applicable regulatory thresholds.

2. The Permittee shall continue to utilize the Excavated Soil Management Plan, dated March 24, 2011. The plan is designed to expedite future subsurface utility and construction activities in known and potentially contaminated areas at the facility. If the Permittee determines the Excavated Soil Management Plan no longer addresses facility conditions, the Permittee may submit changes to the plan. The Department shall review and approve any changes/amendments to the Excavated Soil Management Plan according to the procedures described in General Permit Condition IV.
B. Transfer of Interest in Permitted Property

1. The Permittee shall notify the Department at least 90 calendar days before transferring any interest in any portion of the permitted facility property. The Permittee shall comply with all requirements of 40 C.F.R. § 270.40, as related to any transfer of ownership or operational control of any portion of the permitted facility.

2. Any proposal by the Permittee to remove any parcel of the permitted facility property from the jurisdiction of this Permit shall require submitting a demonstration that all residual contamination on the portion of the property proposed for removal is protective of human health and the environment. Such demonstrations can be made by demonstrating the residual concentrations are below applicable regulatory standards consistent with any enforceable institutional and/or engineering controls contained in an environmental covenant for that portion of the property.

3. Any parcel of the permitted facility property proposed to be removed from the jurisdiction of this Permit shall require a legal survey for that portion of the property, execution of an environmental covenant, if needed and such a covenant is not already in place at the time of the proposal, and successful completion of a Class 3 Permit Modification to remove the proposed portion of the property from the jurisdiction of this Permit, following the requirements in 40 C.F.R. § 270.42(c), and the public notice and opportunity for comment requirements in 10 CSR 25-8.124.

C. Change in Use of Property

The Permittee shall notify the Department, according to 40 C.F.R. § 270.30(h), at least 30 calendar days before any proposed change in the use of the facility property, including any applications for building permits for work on the facility property or proposals for work that could potentially affect the contamination on the facility property, be affected by contamination from a SWMU or AOC, or affect compliance with the requirements of this Permit.
D. Deed Notice/Restrictions

The Permittee previously filed 1 deed notice in the chain-of-title for the facility associated with the management of hazardous waste or constituents as described below. Notice details, including specific areas of coverage at the facility, can be found with the Office of Recorder of Deeds of Jasper County, Missouri.

1. The deed notice for the closed hazardous waste management facility was filed on January 30, 1991, and amended June 1, 2004. The deed notice restricts the owner or operator of the property from disturbing the hazardous waste disposal units described in a survey plat attached to the notice. The deed notice can be found on Page 556 of Book 1865, in the Recorder of Deed’s Office in Jasper County, Missouri.

E. Missouri Environmental Covenants Act

The Permittee prepared a draft Environmental Covenant in conformance with the Missouri Environmental Covenants Act, Sections 260.1000 through 260.1039, RSMo. The draft Environmental Covenant is being provided for public review and comment as part of the proposed final remedy along with this Permit.

1. Within 30 calendar days after the effective date of this Permit, the Permittee shall execute the Environmental Covenant, incorporating any changes necessitated in response to public comments, and shall submit the Environmental Covenant to all other relevant parties for signature.

2. Within 15 calendar days after all relevant parties have executed the Environmental Covenant for the permitted facility property, or for any off-property areas impacted by soil and/or groundwater contamination originating from SWMUs and AOCs on the facility property, the Permittee shall record the executed Environmental Covenant with the county recorder of deeds, the local zoning authority, or the authority with jurisdiction over local land use, according to state law. The executed Environmental Covenant shall be recorded in the chain-of-title for all affected properties, or on some other instrument which is normally examined during a title search, that will, in perpetuity, notify any potential purchaser of the environmental conditions of the property(ies).
3. Within 30 calendar days after recording the executed Environmental Covenant, the Permittee shall submit to the Department, a notarized statement certifying the executed Environmental Covenant has been recorded, including a copy of the Environmental Covenant showing the book/page/instrument number of recordation.

4. The Environmental Covenant shall run with the land (permitted facility property) and shall be binding upon any future owners, operators, heirs, successors, lessees, or assigns and their authorized agents, employees, or persons acting under their direction or control. In the event of permit termination, the Permittee and/or facility owner shall cause any lease, grant, or other transfer of any interest in the facility property to include a provision expressly requiring the lessee or transferee to comply with the Environmental Covenant conditions filed in the chain-of-title for the facility property.

5. In the event that future additional remediation on the permitted facility property, before or after permit termination, reduces contaminants to levels below applicable risk-based threshold/standards based on use of the property, the AULs, or portions thereof, contained in the Environmental Covenant may be rescinded and/or modified according to the provisions specified in the Environmental Covenant. This may include placing an additional document in the property chain-of-title indicating the Environmental Covenant, or portions thereof, have been rescinded and/or modified.

F. Environmental Covenant Provision Requirements Before Permit Termination

1. If the Permittee desires to rescind or modify all or part of a previously executed Environmental Covenant, the Permittee shall submit a proposal to the Department at least 180 calendar days before the effective date of any proposed permit transfer or termination. This proposal shall contain a demonstration, signed by the Permittee, which evaluates the residual levels of contamination in comparison with then-current risk-based thresholds/standards. The Permittee shall demonstrate that residual contaminant levels have decreased to less than the applicable risk-based thresholds/standards in support of rescinding or modifying established AULs. The demonstration shall include, at a minimum, a summary of analytical data collected during any monitoring and/or confirmation sampling of contaminated media, a summary of all relevant historical data, accompanying narrative
discussion, and any other relevant information that will ensure residual contaminant levels will be protective of human health and the environment if specific AULs are rescinded or modified.

2. If the Department determines, based on the demonstration required in Corrective Action Condition XI.F.1., that the residual levels of contamination present may still pose a threat to human health or the environment based on use of the property, the Department shall notify the Permittee, in writing, that the terms of the existing Environmental Covenant are still appropriate or that the Permittee shall prepare and submit for review and approval, a revised draft Environmental Covenant to address the changed conditions at the facility. Within 60 calendar days after receiving the Department’s notification, the Permittee shall prepare and submit a revised draft Environmental Covenant to the Department for review and approval. The revised Environmental Covenant shall include the following:

   a. A record of the type, location, and concentrations of hazardous wastes and hazardous constituents expected to remain in the subsurface soils and/or groundwater that will exceed the currently applicable regulatory risk-based thresholds/standards at the time of proposed revision of the Environmental Covenant and/or termination of this Permit;

   b. Two figures illustrating the boundary of each SWMU and AOC for which the levels of contamination in the subsurface soils and/or groundwater exceed the applicable regulatory risk-based thresholds/standards at that time. One figure shall illustrate soil contamination in relation to individual SWMUs or groups of SWMUs at the time of proposed revision of the Environmental Covenant and/or termination of this Permit. The second figure shall illustrate groundwater contamination in relation to individual SWMUs or groups of SWMUs at the time of proposed revision of the Environmental Covenant and/or termination of this Permit. The figures shall be to scale and indicate the location and dimensions of each SWMU with respect to key landmarks, such as major buildings, the permitted facility property boundaries, etc. These figures shall also illustrate the location of any engineered controls implemented as part of the approved final remedy, which are to be restricted from disturbance;
c. Groundwater use restrictions applicable at the time of proposed revision of the Environmental Covenant and/or termination of this Permit; and

d. A provision to provide for continued proper operation and maintenance of any engineering controls implemented as part of the approved final remedy to prevent human and/or environmental exposures to disposed wastes or soils and/or groundwater contaminated with hazardous wastes or hazardous constituents in concentrations exceeding applicable regulatory risk-based thresholds/standards at the time of proposed revision of the Environmental Covenant and/or termination of this Permit. Any engineering controls shall not be disturbed and shall remain in place and be effective until the Department provides written approval to alter, modify, eliminate, or otherwise cease operation and maintenance of such controls.

3. If the Department determines the demonstration required in Corrective Action Condition XI.F.1. is sufficient to support eliminating and/or modifying established AULs, the Department shall direct the Permittee to prepare and submit to the Department for review and approval, a revised draft Environmental Covenant to address the changed conditions at the facility.

4. The Department shall review and approve the revised draft Environmental Covenant according to the procedures described in General Permit Condition IV.

5. The Permittee shall record the approved revised Environmental Covenant as outlined in Corrective Action Condition XI.E. and submit any related documentation to the Department according to the schedule outlined in Corrective Action Conditions XI.E. The Permittee shall also comply with any additional Environmental Covenant conditions as outlined in Corrective Action Conditions XI.E., as appropriate.

XIII. Planned and Contingent Activities

A. The Permittee shall comply with the schedule for planned corrective action activities, as specified in this Permit and summarized in Table 3.
B. The Permittee shall comply, as necessary, with the schedule(s) for contingent corrective action activities, as specified in this Permit and summarized in Table 4.

XIV. Data

All uninterpreted data, such as laboratory reports, drilling logs, bench-scale or pilot-scale data, and other supporting information gathered or generated during activities undertaken pursuant to this Permit shall be maintained by the Permittee during the term of this Permit, including the term of any continued or reissued permits.

FINANCIAL ASSURANCE CONDITIONS

The Permittee shall comply with all applicable financial assurance requirements contained in the Missouri Hazardous Waste Management Law (and all standards, rules, and regulations adopted under this act), Section 260.350 through 260.430, et seq., RSMo.; 40 C.F.R. Part 264 Subpart H; 40 C.F.R. §§ 264.101, 270.30, 270.40, 270.42, and 270.51; and all provisions of this Permit for post-closure care and corrective action activities identified pursuant to the provisions of this Permit.

I. Cost Estimates

A. Post-Closure Care and Corrective Action Cost Estimates

1. The Permittee submitted, as part of the approved permit application, an updated post-closure care cost estimate. When the final corrective action remedy is approved by the Department, the Permittee shall, within 60 calendar days after the effective date of this Permit, submit an updated, detailed written cost estimate, in current dollars, of the cost of hiring a third party, as identified at Financial Assurance Condition I.A.1.a., to perform the post-closure care and corrective action activities required by this Permit.

a. A third party is a party who:

(1) Is neither a parent nor a subsidiary of the Permittee; and

(2) Does not share a common parent or subsidiary with the Permittee.
b. The cost estimates shall be certified by a professional engineer or geologist registered in Missouri and developed using appropriate cost estimating software.

c. The post-closure care and corrective action cost estimates shall account for the total cost of all work activities and related costs expected to continue until such time as final cleanup objectives are met and confirmed. This includes, but is not limited to, any long-term costs, such as:

(1) Final remedy operation, maintenance, and monitoring;

(2) Utilities, including electricity, water, and sewer;

(3) Decommissioning remediation equipment and plugging/abandoning monitoring wells;

(4) Real estate taxes on the property; and

(5) Departmental oversight cost reimbursement.

d. The post-closure care and corrective action cost estimates shall be based on a “rolling” 30 years’ duration unless the Permittee makes a successful demonstration for a shorter time period. The Permittee may, at any time, submit to the Department for review and approval, a demonstration to adjust the post-closure care or corrective action cost estimates based on the estimated time remaining to achieve applicable remediation objectives/standards.

e. The post-closure care and corrective action cost estimates shall include a contingency cost allowance of 10 percent of the total cost of all post-closure and corrective action activities.

f. The cost estimates shall not include any salvage value that may be realized from the sale of wastes, facility structures or equipment, land, or other assets associated with the facility.

g. Discounting is not allowed for post-closure care cost estimates. The regulations are silent on discounting for corrective action cost estimates, if and when needed. Discounting would allow a
facility to provide less than the amount of financial assurance required, based on the future value of the investment. The assumption is made that by the end of any post-closure care period, the full amount of financial assurance will be available based on the future value of money.

2. The Permittee shall submit each post-closure care and corrective action cost estimate to the Department for review and evaluation. If the cost estimate requires modification, the Department shall notify the Permittee, in writing, of the estimate's deficiencies and specify a due date for submitting a revised cost estimate for further evaluation and final written response.

3. The Permittee shall maintain, in the operating record, the most recent post-closure care and corrective action cost estimate that has received a final written response from the Department.

B. Revisions to Post-Closure Care and Corrective Action Cost Estimates

1. Annual Adjustment for Inflation

The Permittee shall annually adjust the post-closure care and corrective action cost estimates, as applicable, for inflation until all activities required by this Permit are complete. The inflation adjustment shall be determined by using the procedures described in 40 C.F.R. § 264.142(b), except that the inflation factor should be derived from the most recent annual Implicit Price Deflator for the Gross Domestic Product, instead of the Gross National Product. The cost estimate is due within 60 calendar days before the anniversary date of the financial assurance instrument used to comply with this section. If the Permittee uses a financial test or corporate guarantee to demonstrate financial assurance, the cost estimate is due within 30 calendar days after the close of the guarantor’s fiscal year.

2. The Permittee shall also adjust the post-closure care and corrective action cost estimate if:

a. The Permittee or the Department determines any additional post-closure care or corrective action activities are required; or
b. Any other conditions increase or decrease the estimated cost of the post-closure care or corrective action activities to be performed under this Permit.

3. If the Department determines a new cost estimate is required, the Department shall notify the Permittee, in writing, of this requirement. The revised cost estimate is due within 60 calendar days of the Permittee’s determination that a revised cost estimate is necessary or the Department’s written notification that a new cost estimate is required.

4. The Permittee shall submit each revised post-closure care and corrective action cost estimate to the Department for review and evaluation. If the revised cost estimate requires further modification, the Department shall notify the Permittee, in writing, of the estimate’s deficiencies and specify a due date for submitting a new revised cost estimate for further evaluation and final written response.

II. Financial Assurance

In order to provide for the full and final completion of the post-closure care and corrective action activities required by this Permit, the Permittee shall establish and maintain financial assurance, for the benefit of the Department, in the amount at least equal to the most recent post-closure care and corrective action cost estimate that received a final written response from the Department. All financial assurance instruments provided pursuant to this Permit shall be satisfactory in form and substance as determined by the Department.

A. Certified Mail

The Permittee shall submit all required financial assurance instruments and related documents to the Department by certified mail.

B. Timeframes for Financial Assurance Instruments (other than Financial Test or Corporate Guarantee)

1. Within 30 calendar days after receiving the Department’s final written response regarding the Permittee’s cost estimate(s) pursuant to this Permit, the Permittee shall submit to the Department for review and evaluation, the draft financial assurance instrument(s) and related documents.
2. Within 10 calendar days after receiving the Department’s final written response regarding the draft financial assurance instrument(s), the Permittee shall execute or otherwise finalize all instruments or other documents required in order to make the selected financial assurance legally binding. The final financial assurance instrument(s) shall be in a form identical to the draft financial assurance documents reviewed and responded to by the Department, including any changes resulting from that review.

3. Within 30 calendar days after receiving the Department’s final written response regarding the draft financial assurance instrument(s), the Permittee shall ensure the issuing institution submits to the Department, all original executed and/or otherwise finalized instruments or other documents required in order to make the selected financial assurance legally binding. The instruments or other documents shall be in a form identical to the financial assurance documents reviewed and responded to by the Department. Facsimiles or photocopies are not acceptable.

C. Timeframes for Financial Tests and Corporate Guarantees

1. Within 30 calendar days after receiving the Department’s final written response regarding the Permittee’s cost estimate(s) pursuant to this Permit, the Permittee shall submit to the Department for review and evaluation, all documentation necessary to demonstrate the Permittee satisfies the financial test criteria. See Financial Assurance Condition II.E.5.

2. The Permittee’s financial assurance shall become effective immediately upon the Permittee receiving the Department’s final written response regarding either the Permittee’s cost estimate(s) or the Permittee’s demonstration that the Permittee satisfies the financial test criteria, whichever date is later.

D. Multiple Instruments

The Permittee may combine more than one mechanism generally described in Financial Assurance Condition II.E., to demonstrate financial assurance for the post-closure care and corrective action activities required by this Permit. The Department reserves the right to limit the Permittee’s choices to one or more of the instruments, on a case-by-case basis, in order to ensure the full
and final completion of the post-closure care and corrective action activities required by this Permit.

E. Financial Assurance Instruments

The Permittee must choose from the mechanisms specified in 40 C.F.R. §§ 264.143, 264.145, and 264.146. The wording of the financial assurance documents shall meet the requirements of 40 C.F.R. § 264.151, except that deviation in wording to incorporate coverage for corrective action activities is allowed. All financial assurance instruments provided pursuant to this Permit shall be satisfactory in form and substance as determined by the Department.

1. Trust Fund
   a. The trust fund shall be established for the benefit of the Department and administered by a trustee who has the authority to act as a trustee under federal or state law and whose trust operations are regulated and examined by a federal or state agency.
   b. The trust agreement shall state that the trustee shall make payments from the fund, as the Department directs in writing, to:
      (1) Reimburse the Permittee for expenditures made by the Permittee for post-closure care and corrective action activities performed according to this Permit; or
      (2) Pay any other person whom the Department determines has performed or will perform the post-closure care and corrective action activities required by this Permit.
   c. The trust agreement shall also state that the trustee shall not refund to the grantor any amounts from the fund until the Department notifies the trustee, in writing, that the post-closure care and corrective action activities performed according to this Permit have been completed to the Department’s satisfaction.

2. Surety Bond
   a. A surety bond shall unconditionally guarantee either:
(1) Payment, at the direction of the Department, into a standby trust fund that meets the requirements of Financial Assurance Condition II.E.1; or

(2) Performance of the post-closure care and corrective action activities required by this Permit. The Surety Company issuing the bond shall, at a minimum, be among those listed as acceptable sureties on Federal Bonds, as described in Circular 570 of the U.S. Department of the Treasury.

b. If the Permittee chooses to establish financial assurance by using a surety bond, the Permittee shall, at the same time, establish and maintain a standby trust fund. The standby trust fund shall meet the requirements of Financial Assurance Condition II.E.1. Funds from the surety bond shall be deposited into the standby trust fund if the Department directs the financial assurance provider to do so, pursuant to Financial Assurance Condition II.I.

3. Irrevocable Letter of Credit

a. The letter of credit shall be issued by a financial institution 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.

b. If the Permittee chooses to establish financial assurance by using a letter of credit, the Permittee shall, at the same time, establish and maintain a standby trust fund. The standby trust fund shall meet the requirements of Financial Assurance Condition II.E.1. Funds from the letter of credit shall be deposited into the standby trust fund if the Department directs the financial assurance provider to do so, pursuant to Financial Assurance Condition II.I.

4. Policy of Insurance

a. A policy of insurance shall provide the Department with rights, as a beneficiary, and be issued by an insurance carrier that has the authority to issue insurance policies in Missouri and whose
insurance operations are regulated and examined by a federal or state agency.

b. The insurance policy shall be issued for a face amount at least equal to the current post-closure care and corrective action cost estimate for which the facility has received a final written response from the Department, except that the face amount may exclude costs covered by another financial assurance instrument, as permitted in Financial Assurance Condition II.D.

c. The insurance policy shall state that the insurer shall make payments up to an amount equal to the face amount of the policy, as the Department directs in writing, to:

(1) Reimburse the Permittee for expenditures made by the Permittee for post-closure care and corrective action activities performed according to this Permit; or

(2) Pay any other person whom the Department determines has performed or will perform the post-closure care or corrective action activities required by this Permit.

d. The insurance policy shall also state that it may not be canceled, terminated, or non-renewed and the policy shall remain in full force and effect in the event that:

(1) The Permittee is named as a debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or

(2) The Department notifies the insurer of the Permittee’s failure to perform, under Financial Assurance Condition II.I.

5. Financial Test or Corporate Guarantee

a. A Permittee may provide financial assurance through a demonstration that the Permittee satisfies the financial test requirements described in 40 C.F.R. §§ 264.143(f) and 264.145(f).
b. A Permittee’s direct or indirect parent company may provide a corporate guarantee, executed in favor of the Department. Such guarantee shall state the company providing the guarantee shall perform the post-closure care and corrective action activities required by this Permit, or that the company shall establish a trust fund as allowed in Financial Assurance Condition II.E.1. Any company providing such a guarantee shall demonstrate, to the satisfaction of the Department, that it satisfies the financial test requirements described in 40 C.F.R. §§ 264.143(f) and 264.145(f).

c. The Permittee shall also comply with the applicable requirements of 40 C.F.R. §§ 264.151(f) and (h)(1), as related to these methods, unless otherwise provided in this Permit. This includes, but is not limited to:

(1) Initial submission of required financial reports and statements from the guarantors’ chief financial officer and independent certified public accountant;

(2) Annual re-submission of such reports and statements within 90 calendar days after the close of each of the guarantor’s fiscal year; and

(3) Notifying the Department, by certified mail, within 90 calendar days after the close of any of the guarantor’s fiscal years in which any such guarantor no longer satisfies the financial test requirements.

d. The Department may, at any time, request additional information from the Permittee or corporate guarantor, including financial statements and accountant’s reports. Any Department request for this information shall be in writing and shall specify a due date for submitting the information. The Permittee shall promptly provide the requested information to the Department.

e. References in 40 C.F.R. §§ 264.143(f) and 264.145(f), to “the sum of current post-closure costs” and “the current plugging and abandonment cost estimates” and reference in 40 C.F.R. § 264.101(c) to “Assurances of financial
responsibility for such corrective action shall be provided” shall mean “the sum of all environmental remediation obligations” guaranteed by such company or for which such company is otherwise financially obligated, in addition to the cost of the post-closure care, and corrective action activities required by this Permit. This includes obligations under the Comprehensive Environmental Response, Compensation, and Liability Act; RCRA; Toxic Substances Control Act; Underground Injection Control Program; and any other state or tribal environmental obligation.

F. Automatic Renewal

All financial assurance instruments shall automatically renew each calendar year, at the time of their expiration, unless the financial assurance provider notifies both the Permittee and Department, by certified mail, of a decision to cancel, terminate, or not renew a financial assurance instrument. The Permittee and Department shall receive such notification at least 120 calendar days before expiration, cancellation, or termination of the instrument. Under the terms of the financial assurance instrument, the 120 calendar days shall begin on the date both the Permittee and Department receive the notice.

1. Within 90 calendar days after receiving such notice by both the Permittee and Department, the Permittee shall provide alternate financial assurance and obtain a final written response from the Department regarding such alternate financial assurance.

2. If the Permittee fails to provide alternate financial assurance within 90 calendar days, the Department shall notify the financial assurance provider, in writing, before the instrument expires. The notice to the financial assurance provider shall instruct the financial assurance provider to immediately deposit any and all funds obligated under the financial assurance instrument into the standby trust fund, or a newly created trust fund acceptable to the Department.

G. Modifying Instruments

1. Inadequate Financial Assurance Instrument

   a. If, at any time, the Department determines a financial assurance instrument(s) provided pursuant to this Permit is
inadequate or no longer satisfies the requirements, the Department shall notify the Permittee, in writing. This applies whether there is an adjustment in the estimated cost of the post-closure care or corrective action activities required by this Permit, as independently determined by the Department, or for any other reason.

(1) Within 30 calendar days of receiving such notice, the Permittee shall submit to the Department for review and evaluation, draft revised financial assurance instrument(s) and related documents. The draft revised financial assurance instrument(s) and related documents shall address the inadequacies outlined in the Department’s notice.

(2) Within 10 calendar days after receiving the Department’s final written response regarding the draft revised financial assurance instrument(s), the Permittee shall execute and/or otherwise finalize all instruments or other documents required in order to make the selected financial assurance legally binding. The final financial assurance instrument(s) shall be in a form identical to the draft revised financial assurance documents reviewed and responded to by the Department, including any changes resulting from that review.

(3) Within 30 calendar days after receiving the Department’s final written response regarding the draft revised financial assurance instrument(s), the Permittee shall ensure the issuing institution submits to the Department, all original executed and/or otherwise finalized instruments or other documents required in order to make the selected financial assurance legally binding. The instruments or other documents shall be in a form identical to the revised financial assurance documents reviewed and responded to by the Department. Facsimiles or photocopies are not acceptable.
b. If, at any time, the Permittee determines a financial assurance instrument provided pursuant to this Permit is inadequate or no longer satisfies the requirements described or incorporated herein, the Permittee shall notify the Department, in writing, within 10 calendar days of this determination. This applies whether due to an adjustment in the estimated cost of the post-closure care or corrective action activities required by this Permit or for any other reason.

2. Reduction in Amount of Financial Assurance

a. If the Permittee believes the estimated cost to complete the post-closure care and corrective action activities required by this Permit has diminished below the amount covered by the existing financial assurance provided under this Permit, the Permittee may submit a written proposal to the Department to reduce the amount of the financial assurance provided under this Permit.

(1) The amount of financial assurance proposed shall be at least equal to the estimated cost of the remaining post-closure care and corrective action activities required by this Permit.

(2) The written proposal shall specify, at a minimum, the cost of the remaining post-closure care and corrective action activities to be performed and the basis upon which such cost was calculated (e.g., years remaining until established cleanup standards are expected to be met).

b. The Department shall notify the Permittee, in writing, regarding its evaluation of the revised financial assurance amount. The Permittee may reduce the financial assurance amount after receiving the Department’s written response to the proposed revisions, but only according to, and to the extent permitted by, the Department’s response. No change to the form or terms of any financial assurance provided under this Section is authorized, other than a reduction in amount.
3. Change of Form of Financial Assurance

a. If the Permittee wishes to change the form or terms of financial assurance, the Permittee may submit a written proposal to the Department for a revised or alternative form of financial assurance. The written proposal shall specify, at a minimum:

(1) The cost of the remaining post-closure care and corrective action activities to be performed and the basis upon which such cost was calculated; and

(2) The proposed revised form of financial assurance, including all proposed instruments or other documents required in order to make the proposed financial assurance legally binding. The proposed revised or alternative form of financial assurance shall satisfy all requirements described or incorporated by reference in this Permit.

b. The Department shall notify the Permittee, in writing, of its decision regarding the revised or alternative form of financial assurance. Acceptance of the written proposal shall be made at the Department’s sole discretion.

c. Within 30 calendar days after receiving the Department’s final written response regarding the proposed revised or alternative financial assurance, the Permittee shall ensure the issuing institution submits to the Department, all original executed and/or otherwise finalized instruments or other documents required in order to make the selected financial assurance legally binding. The instruments or other documents shall be in a form identical to the financial assurance documents reviewed and responded to by the Department. Facsimiles or photocopies are not acceptable.

d. The Department shall release, cancel, or terminate the prior existing financial assurance instruments only after the Permittee has submitted to the Department, all executed and/or otherwise finalized new financial assurance instruments or other required documents.
H. Obligation to Complete Post-Closure Care and Corrective Action Activities

The Permittee’s inability or failure to establish or maintain financial assurance for completing the post-closure care or corrective action activities required by this Permit in no way excuses performing any other requirements of this Permit, including, without limitation, the Permittee’s obligation to complete all necessary post-closure care and corrective action activities in strict accordance with the terms of this Permit.

I. Performance Failure

1. In the event the Department determines the Permittee:
   
   a. Has ceased implementing any of the post-closure care or corrective action activities required by this Permit; or
   
   b. Is significantly or repeatedly deficient or late in performing the post-closure care or corrective action activities required by this Permit; or
   
   c. Is implementing the post-closure care or corrective action activities required by this Permit in a manner that may cause an endangerment to human health or the environment;

   the Department may issue, to both the Permittee and financial assurance provider, a written notice ("Performance Failure Notice") of the Permittee’s failure to perform. The notice shall specify the grounds upon which the notice was issued and provide the Permittee 10 calendar days to remedy the circumstances.

2. If the Permittee fails to remedy the performance failure to the Department’s satisfaction before the 10 calendar days’ end, the Department shall have immediate access to, and benefit of, the financial assurance provided. The Department may, at any time thereafter, direct the financial assurance provider to immediately:

   a. Deposit any and all funds obligated under the financial assurance instrument into the standby trust fund, or a newly created trust fund acceptable to the Department; or
b. Arrange for performance of the post-closure care or corrective action activities required by this Permit.

3. The Department shall notify the Permittee, in writing, if the Department is unable, after reasonable efforts, to secure the payment of funds from the financial assurance provider for performing the post-closure care or corrective action activities. Within 10 calendar days after receiving such notice, the Permittee shall provide cash to fund the standby trust fund, or a newly created trust fund acceptable to the Department.

   a. The funds shall at least equal the cost of the remaining post-closure care and corrective action activities required by this Permit.

   b. The deposit shall be made in immediately available funds and without setoff, counterclaim, or condition of any kind.

J. Release of Financial Assurance

1. After the Department and Permittee have mutually agreed that all post-closure care and corrective action activities required by this Permit are complete, the Permittee may submit a written request to the Department to release the Permittee from the requirement to maintain financial assurance.

2. The Department shall notify both the Permittee and financial assurance provider(s), in writing, if and when the Permittee is released from all financial assurance obligations under this Permit.

3. The Permittee shall not release, cancel, or terminate any financial assurance provided pursuant to this Permit, except as provided in Financial Assurance Condition II.G.2.

III. Liability Requirements

If the Permittee has not already done so as of the effective date of this Permit, within 90 calendar days after the effective date of this Permit, the Permittee shall establish third party liability coverage according to 40 C.F.R. § 264.147. This requirement only applies until the closure certification for the five former permitted hazardous waste storage areas has been accepted in writing by the Department. If the Department
accepts this closure certification before 90 calendar days have elapsed then this requirement is no longer applicable.

**FACILITY SUBMISSION SUMMARY**

**Table 3 - Planned Submittal Requirements Pursuant to this Permit and Schedule of Compliance**

<table>
<thead>
<tr>
<th>Submittal Requirements</th>
<th>Due Date*</th>
<th>Permit Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>One paper copy and one searchable electronic copy of the consolidated permit application</td>
<td>Within 60 calendar days after effective date of this Permit.</td>
<td>Schedule of Compliance Item I.A.</td>
</tr>
<tr>
<td>Revised Part A permit application</td>
<td>Within 60 calendar days after effective date of this Permit.</td>
<td>Schedule of Compliance Item I.B.</td>
</tr>
<tr>
<td>Certification that Permittee has read and understands all permit conditions in this Permit</td>
<td>Within 60 calendar days after effective date of this Permit.</td>
<td>Schedule of Compliance Item I.C.</td>
</tr>
<tr>
<td>Check or money order for any outstanding engineering review costs</td>
<td>Within 60 calendar days after effective date of this Permit.</td>
<td>Schedule of Compliance Item I.D.</td>
</tr>
<tr>
<td>Check or money order for each year this Permit is to be in effect beyond the first year</td>
<td>Within 60 calendar days after effective date of this Permit.</td>
<td>Schedule of Compliance Item I.E.</td>
</tr>
<tr>
<td>Revised Sampling and Analysis Plan</td>
<td>Within 60 calendar days after effective date of this Permit.</td>
<td>Schedule of Compliance Item I.F.</td>
</tr>
<tr>
<td>Post-Closure Care and Corrective Action Cost Estimate</td>
<td>Within 60 calendar days after effective date of this Permit.</td>
<td>Schedule of Compliance Item I.G.</td>
</tr>
<tr>
<td>Draft financial assurance instrument(s)</td>
<td>Within 30 calendar days after receiving the Department’s final written response regarding updated post-closure care and corrective action cost estimate.</td>
<td>Schedule of Compliance Item II.</td>
</tr>
<tr>
<td>Execute updated financial assurance instrument reflecting updated cost estimate</td>
<td>Within 10 calendar days after receiving Department’s final written response regarding draft financial assurance instrument.</td>
<td>Schedule of Compliance Item III.</td>
</tr>
<tr>
<td>Submittal Requirements</td>
<td>Due Date*</td>
<td>Permit Condition</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td>Original executed financial assurance instruments and related documents</td>
<td>Within 30 calendar days after receiving Department’s final written response regarding draft financial assurance instrument.</td>
<td>Schedule of Compliance Item IV.</td>
</tr>
<tr>
<td>Draft Operation, Maintenance &amp; Monitoring Plan</td>
<td>Within 120 calendar days after effective date of this Permit.</td>
<td>Schedule of Compliance Item V.</td>
</tr>
<tr>
<td>Execute Environmental Covenant</td>
<td>Within 30 calendar days after effective date of this Permit.</td>
<td>Schedule of Compliance Item VI.</td>
</tr>
<tr>
<td>Recordation of Executed Environmental Covenant</td>
<td>Within 15 calendar days after execution of approved Environmental Covenant.</td>
<td>Schedule of Compliance Item VII.</td>
</tr>
<tr>
<td>Notarized statements certifying recordation of executed Environmental Covenants</td>
<td>Within 30 calendar days after recording executed Environmental Covenants.</td>
<td>Schedule of Compliance Item VIII.</td>
</tr>
<tr>
<td>Certification of final remedy construction</td>
<td>Within 30 calendar days after recording executed Environmental Covenants.</td>
<td>Schedule of Compliance Item IX.</td>
</tr>
<tr>
<td>Annual Groundwater Corrective Action Report</td>
<td>March 1 of each calendar year.</td>
<td>Special Permit Condition IV.</td>
</tr>
<tr>
<td>Biennial Report with information required by 40 C.F.R. § 264.75</td>
<td>March 1 of each even numbered calendar year, unless an extension is requested.</td>
<td>General Permit Condition II.</td>
</tr>
<tr>
<td>Certification of Completion of Post-Closure Care</td>
<td>Within 60 calendar days after completing post-closure care period.</td>
<td>Special Permit Condition II.D.</td>
</tr>
<tr>
<td>Permit Renewal Application</td>
<td>At least 24 months before expiration date of this Permit.</td>
<td>Standard Permit Condition I.</td>
</tr>
</tbody>
</table>

*Extensions may be requested and approved by the Department for cause without modifying this Permit.

| Table 4 - Contingent Corrective Action Submittal Requirements Pursuant to the Corrective Action Conditions of this Permit |
|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Contingent Submittal Requirements                                                                                       | Due Date                                                                                     | Corrective Action Condition                  |
| Written report of an Emergency Situation                                                                             | Within 15 calendar days after the incident occurrence.                                      | General Permit Condition II.                 |
### Contingent Submittal Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Due Date</th>
<th>Corrective Action Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written notification of newly identified SWMU(s) and AOC(s)</td>
<td>No later than 15 calendar days after discovery.</td>
<td>II.A.</td>
</tr>
<tr>
<td>SWMU/AOC Assessment Work Plan</td>
<td>Within 30 calendar days after notice by the Department that a work plan is required.</td>
<td>II.B.</td>
</tr>
<tr>
<td>SWMU/AOC Assessment Report</td>
<td>According to the schedule in the approved SWMU/AOC Assessment Work Plan.</td>
<td>II.D.</td>
</tr>
<tr>
<td>Written notification of newly identified releases from previously identified SWMU(s) and AOC(s)</td>
<td>No later than 15 calendar days after discovery.</td>
<td>III.A.</td>
</tr>
<tr>
<td>Newly Identified Release Work Plan</td>
<td>Within 30 calendar days after notice by the Department that a work plan is required.</td>
<td>III.B.</td>
</tr>
<tr>
<td>Newly Identified Release Report</td>
<td>According to the schedule in the approved Newly Identified Release Work Plan.</td>
<td>III.D.</td>
</tr>
<tr>
<td>Notification of interim/stabilization measures</td>
<td>Within 24 hours after discovery of need for stabilization.</td>
<td>IV.A.1.</td>
</tr>
<tr>
<td>Notification of interim/stabilization measures not effective</td>
<td>Within 10 calendar days after determination.</td>
<td>IV.A.3.</td>
</tr>
<tr>
<td>RCRA Facility Investigation (RFI) Work Plan</td>
<td>Within 60 calendar days after notice by the Department that a work plan is required.</td>
<td>V.E.</td>
</tr>
<tr>
<td>RCRA Facility Investigation (RFI) Report</td>
<td>According to the schedule in the approved RFI Work Plan.</td>
<td>VI.B.</td>
</tr>
<tr>
<td>Corrective Measures Study (CMS) or Remedy Evaluation Work Plan</td>
<td>Within 45 calendar days after notice by the Department that a work plan is required.</td>
<td>VII.C.</td>
</tr>
<tr>
<td>Contingent Submittal Requirements</td>
<td>Due Date</td>
<td>Corrective Action Condition</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>Corrective Measures Study (CMS) or Remedy Evaluation Report</td>
<td>According to the schedule in the approved CMS Work Plan.</td>
<td>VIII.A.</td>
</tr>
<tr>
<td>Certification of Completion of Corrective Measures</td>
<td>Within 60 calendar days after receiving Department approval of documentation verifying completion.</td>
<td>XIII.C</td>
</tr>
<tr>
<td>Soil or Other Media Disturbance Notification</td>
<td>At least 30 calendar days before any planned activities at any area subject to AULs.</td>
<td>XI.A.</td>
</tr>
<tr>
<td>Transfer of Interest in Permitted Property Notification</td>
<td>At least 90 calendar days before transferring any interest in any portion of permitted property.</td>
<td>XI.B.</td>
</tr>
<tr>
<td>Change in Use of Property Notification</td>
<td>At least 30 calendar days before any proposed change in use of property.</td>
<td>XI.C.</td>
</tr>
</tbody>
</table>
Figure 1 - Facility Location

Figure not available due to size.
Please see hard copy or separate electronic file online at
Figure 2 - Facility Property Boundaries

Figure not available due to size. Please see hard copy or separate electronic file online at https://dnr.mo.gov/env/hwp/permits/mod046740148/2009-01-16-figure-2-facility-property-boundaries-mod046740148.pdf
Figure 3 - Location of SWMUs and AOCs at the Facility by Geographic Group

Figure not available due to size.
Please see hard copy or separate electronic file online at
<table>
<thead>
<tr>
<th>Number</th>
<th>SWMU Name</th>
<th>Status</th>
<th>Geographic Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Former Mercury Waste Surface Impoundment</td>
<td>Closed, NFA, post-closure care terminated</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Former Lead Chemical Settling Pond</td>
<td>Closed, post-closure care required</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>Hazardous Waste Container Storage Area</td>
<td>Closed, NFA</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>Building 82 Loading Dock</td>
<td>Inactive</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>Former Storage Area in Western Portion of Building 82</td>
<td>Inactive, NFA</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>Satellite Hazardous Waste Accumulation Area</td>
<td>NFA</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>Mercury Chloride Solution Pretreatment Tanks</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>Former Drum Storage Area</td>
<td>Inactive, NFA</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>Chemical Storage Area</td>
<td>Closed</td>
<td>6</td>
</tr>
<tr>
<td>10</td>
<td>Former Drum Storage Area</td>
<td>Inactive</td>
<td>6</td>
</tr>
<tr>
<td>11</td>
<td>Former Drum Storage Area</td>
<td>NFA</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>Former Drum Storage Area</td>
<td>Inactive</td>
<td>6</td>
</tr>
<tr>
<td>13</td>
<td>Former Mercury Process Waste Water Drain Line</td>
<td>Inactive</td>
<td>5</td>
</tr>
<tr>
<td>Number</td>
<td>SWMU Name</td>
<td>Status</td>
<td>Geographic Group</td>
</tr>
<tr>
<td>--------</td>
<td>-------------------------------------------------------</td>
<td>------------</td>
<td>------------------</td>
</tr>
<tr>
<td>14</td>
<td>Former Zinc/Silver Process Waste Water Drain Lines</td>
<td>Inactive</td>
<td>5</td>
</tr>
<tr>
<td>15</td>
<td>Former Mercury Process Waste Water Treatment System</td>
<td>Inactive</td>
<td>5</td>
</tr>
<tr>
<td>16</td>
<td>Former Zinc/Silver Process Waste Water Treatment System</td>
<td>Inactive</td>
<td>5</td>
</tr>
<tr>
<td>17</td>
<td>Former Process Water Treatment System</td>
<td>Inactive, NFA</td>
<td>7</td>
</tr>
<tr>
<td>18</td>
<td>Waste Water Drainage Line</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>19</td>
<td>Settling Basins for Chemicals Waste Water Treatment</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>20</td>
<td>Chemicals Waste Water Treatment System</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>21</td>
<td>Former Settling Basin</td>
<td>Inactive</td>
<td>6</td>
</tr>
<tr>
<td>22</td>
<td>Former Process Waste Water Drainage Ditch</td>
<td>Inactive</td>
<td>6</td>
</tr>
<tr>
<td>23</td>
<td>Waste Water Sump in Mercury Plating Area</td>
<td>NFA</td>
<td>5</td>
</tr>
<tr>
<td>24</td>
<td>Former Collection Sumo</td>
<td>Inactive</td>
<td>6</td>
</tr>
<tr>
<td>25</td>
<td>Refractory Furnace Maintenance Pit</td>
<td>Closed</td>
<td>6</td>
</tr>
<tr>
<td>26</td>
<td>Former Wood Reactor Vessel</td>
<td>NFA</td>
<td>6</td>
</tr>
<tr>
<td>Number</td>
<td>SWMU Name</td>
<td>Status</td>
<td>Geographic Group</td>
</tr>
<tr>
<td>--------</td>
<td>-------------------------------------------------------------------</td>
<td>-----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>27</td>
<td>Former Wood Reactor Vessel</td>
<td>NFA</td>
<td>6</td>
</tr>
<tr>
<td>28</td>
<td>Former Battery Testing Pit</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>29</td>
<td>Concrete Block Testing Unit within Battery Testing Area</td>
<td>NFA</td>
<td>1</td>
</tr>
<tr>
<td>30</td>
<td>Stained Area in Battery Testing Area</td>
<td>Inactive</td>
<td>1</td>
</tr>
<tr>
<td>31</td>
<td>Bulk Methanol Storage Tank</td>
<td>NFA</td>
<td>3, 5</td>
</tr>
<tr>
<td>32</td>
<td>Bulk Potassium Hydroxide Storage Tank</td>
<td>NFA</td>
<td>5</td>
</tr>
<tr>
<td>33</td>
<td>Empty Bulk Tank</td>
<td>NFA</td>
<td>5</td>
</tr>
<tr>
<td>34</td>
<td>Former Check Valve on Former Mercury Waste Surface Impoundment</td>
<td>Closed</td>
<td>6</td>
</tr>
<tr>
<td>35</td>
<td>Asbestos Scrap Landfill</td>
<td>Closed, NFA</td>
<td>6</td>
</tr>
<tr>
<td>36</td>
<td>Former Elevator Pit</td>
<td>NFA</td>
<td>6</td>
</tr>
<tr>
<td>37</td>
<td>Former Pump House</td>
<td>Inactive, NFA</td>
<td>6</td>
</tr>
<tr>
<td>38</td>
<td>Tailings Pile</td>
<td>Inactive</td>
<td>6</td>
</tr>
<tr>
<td>39</td>
<td>Insulation Waste Pile</td>
<td>Inactive, NFA</td>
<td>6</td>
</tr>
<tr>
<td>40</td>
<td>Former Line to Mercury Waste Surface Impoundment</td>
<td>Inactive</td>
<td>6</td>
</tr>
<tr>
<td>41</td>
<td>Former Drainage System</td>
<td>Inactive</td>
<td>6</td>
</tr>
<tr>
<td>42</td>
<td>Former Unlined Pit</td>
<td>NFA</td>
<td>6</td>
</tr>
<tr>
<td>Number</td>
<td>SWMU Name</td>
<td>Status</td>
<td>Geographic Group</td>
</tr>
<tr>
<td>--------</td>
<td>---------------------------------------------------------------</td>
<td>---------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>43</td>
<td>Former Drainage Ditch</td>
<td>NFA</td>
<td>6</td>
</tr>
<tr>
<td>44</td>
<td>Line to Couples Waste Water Treatment Plant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>Drain Line to Old Waste Water Treatment System in Building G</td>
<td>Inactive</td>
<td>3</td>
</tr>
<tr>
<td>46</td>
<td>Quonset Hut</td>
<td>NFA</td>
<td>6</td>
</tr>
<tr>
<td>47</td>
<td>Satellite Waste Accumulation Area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>Former Gas-Fired Furnace</td>
<td>Inactive, removed</td>
<td>3</td>
</tr>
<tr>
<td>49</td>
<td>Former Gas-Fired Furnace</td>
<td>Inactive, removed</td>
<td>3</td>
</tr>
<tr>
<td>50</td>
<td>Former Waste Storage Pad</td>
<td>Inactive</td>
<td>3</td>
</tr>
<tr>
<td>51</td>
<td>Cyclone</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>52</td>
<td>Former Nickel-Cadmium Waste Water Treatment System</td>
<td>Inactive</td>
<td>3</td>
</tr>
<tr>
<td>53</td>
<td>Former Settling Basin</td>
<td>Inactive</td>
<td>3</td>
</tr>
<tr>
<td>54</td>
<td>Two Former Wooden Settling Tanks</td>
<td>Inactive</td>
<td>3</td>
</tr>
<tr>
<td>55</td>
<td>Former Waste Methanol Storage Pad</td>
<td>Inactive</td>
<td>5</td>
</tr>
<tr>
<td>56</td>
<td>Former Copper/Zinc Storage Area</td>
<td>Closed, NFA</td>
<td>5</td>
</tr>
<tr>
<td>Number</td>
<td>SWMU Name</td>
<td>Status</td>
<td>Geographic Group</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------</td>
<td>-----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>57</td>
<td>Bulk Hydrochloric Acid Storage Tank</td>
<td>NFA</td>
<td>5</td>
</tr>
<tr>
<td>58</td>
<td>Former Blotter Paper Storage Area</td>
<td>Inactive</td>
<td>5</td>
</tr>
<tr>
<td>59</td>
<td>Couples Hazardous Waste Storage Area</td>
<td>Closed, NFA</td>
<td>5</td>
</tr>
<tr>
<td>60</td>
<td>Battery Reclaim Area</td>
<td>NFA</td>
<td>5</td>
</tr>
<tr>
<td>61</td>
<td>Former Calcium Deactivation System</td>
<td>Inactive, NFA</td>
<td>5</td>
</tr>
<tr>
<td>62</td>
<td>New Couples Waste Water Treatment System</td>
<td>NFA</td>
<td>6</td>
</tr>
<tr>
<td>63</td>
<td>Waste Water Storage Tanks</td>
<td>NFA</td>
<td>6</td>
</tr>
<tr>
<td>64</td>
<td>Bulk Hydrochloric Acid Storage Tank</td>
<td>NFA</td>
<td>6</td>
</tr>
<tr>
<td>65</td>
<td>Bulk Potassium Hydroxide Storage Tank</td>
<td>NFA</td>
<td>6</td>
</tr>
<tr>
<td>66</td>
<td>Former Hazardous Waste Storage Area</td>
<td>Closed</td>
<td>2</td>
</tr>
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<td>Lithium Debris Accumulation and Deactivation Area</td>
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<td>128</td>
<td>Drain Line to New Couples Waste Water Treatment Plant from Special Products</td>
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Table 6 - List of Areas of Concern (AOCs)

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<th>Designation</th>
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<tr>
<td>AOC A</td>
<td>Former Storm Water Outfall #1</td>
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<td>Former Cooling Water Basin</td>
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<td>AOC C</td>
<td>Exhaust Fan Discharge Area for Former Silver Plating Area</td>
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<td>AOC D</td>
<td>Erosion Gully between Former Building 54 and Building 1</td>
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<td>NE Parcel Area</td>
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