



Mel Carnahan, Governor · Stephen M. Mahfood, Director

# DEPARTMENT OF NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL QUALITY

P.O. Box 176 Jefferson City, MO 65102-0176

## MISSOURI HAZARDOUS WASTE MANAGEMENT FACILITY PERMIT PART I PERMIT NUMBER: MOD056389828

### PERMITTEE

Owner: Bayer Corporation  
100 Bayer Road  
Pittsburgh, PA 15205

Operator: Bayer Corporation  
8400 Hawthorn Road  
Kansas City, MO 64120

### FACILITY LOCATION

8400 Hawthorn Road  
Kansas City, MO 64120  
Jackson County  
North Latitude - 39°07'  
West Longitude - 94°28'

### FACILITY DESCRIPTION

The Kansas City facility of Bayer Corporation manufactures insecticides, herbicides, and fungicides by raw material synthesis to produce intermediates and the active ingredient, technical products. The active ingredients may be shipped from this facility, or they may be combined with other materials to produce a formulated finished product for agricultural or specialty applications.

### PERMITTED ACTIVITIES

This Permit allows for the storage, treatment and incineration of "Characteristic" hazardous waste as well as various "F, K, P, and U" listed hazardous wastes, as specified in the approved Permit application. This Permit requires Bayer Corporation to conduct further investigation and monitoring to determine the nature and extent of

hazardous waste, including hazardous constituents, that have been released to the environment as a result of past waste management practices, and/or to remediate any contaminated areas which pose a threat to human health or the environment.

EFFECTIVE DATES OF PERMIT: December 9, 1998 to December 9, 2008

December 9, 1998  
DATE

[Original Signed by Stephen Mahfood]  
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Stephen Mahfood, Director  
DEPARTMENT OF NATURAL RESOURCES

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## INTRODUCTION

After public notice in accordance with 10 CSR 25-8.010 and 40 CFR Part 124, and review of the Bayer Corporation's Hazardous Waste Facility Permit Application, the Missouri Department of Natural Resources (hereafter referred to as the Department) has determined that the application substantially conforms to the provisions of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (commonly known as RCRA) and regulations promulgated thereunder by the United States Environmental Protection Agency (codified and to be codified in Title 40 of the Code of Federal Regulations) and the Missouri Hazardous Waste Management Law (and all standards, rules, and regulations adopted under this act). In accordance with Section 260.375.13, RSMo, and the Solid Waste Disposal Act, the Department hereby approves the application and issues Permit Number MOD056389828 to Bayer Corporation as the owner and operator (hereafter referred to as the Permittee) for the construction and operation of the hazardous waste facility as set forth in the application and this Permit. This Permit also addresses corrective action requirements for solid waste management units and other requirements of the Hazardous and Solid Waste Amendments (HSWA) of 1984 as administered and enforced by the Department. Applicable regulations are found in 40 CFR Parts 124, 260 through 264, 268, and 270, as specified in this Permit. All portions of the Part I Permit are issued under state authority and the Part II Permit is issued under authority of the Environmental Protection Agency to address regulatory requirements of the HSWA of 1984 for which the state is not yet authorized. Part I of this Permit shall remain in effect even if Part II is terminated or has expired.

The Permit application that was submitted by Bayer Corporation dated November 26, 1996, and March 25, 1997, and the revisions dated November 17, 1997, will hereafter be referred to as the "approved Permit application." The approved Permit application, along with all of the additional documents to be submitted under SCHEDULE OF COMPLIANCE Item I.A. is defined as the "consolidated Permit application."

The Permittee's hazardous waste facility is located at 8400 Hawthorn Road, Kansas City, Missouri. Bayer Corporation is permitted to operate the hazardous waste storage and treatment facility as specified in this Permit.

Construction and operation of this hazardous waste facility and corrective action shall be in accordance with the provisions of this Permit, the Missouri Hazardous Waste Management Law (Sections 260.350 to 260.434, RSMo), the rules and regulations promulgated thereunder [Code of State Regulations, Title 10, Division 25 (10 CSR 25)] as effective on the date of this Permit, all the final engineering plans, petitions, specifications, and operating procedures which were submitted to the Department

during the Permit application review process and which are included in the final version of the Permit application, which is hereby approved by the Department, and any other conditions, changes, or additions to the plans, specifications, and procedures as specified in this Permit. The final approved Permit application, which includes engineering plans, specifications and operating procedures, is therefore incorporated into the conditions of this Permit. All conditions specified in this Permit supersede any conflicting information in the approved Permit application. Where conflicts arise between documents the latest revision shall be effective.

Any inaccuracies found in information submitted may be grounds for the termination, revocation and reissuance, or modification of this Permit in accordance with 40 CFR Part 270 Subpart D, incorporated by reference in 10 CSR 25-7.270(1) and modified in 10 CSR 25-7.270(2)(D), and for potential enforcement action. The Permittee shall inform the Department of any deviation from, or changes in, the information in the application, which 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 a facility's Permit. All such changes to the Permit will be in accordance with 10 CSR 25-7.270(2)(D), 10 CSR 25-8, and 40 CFR Part 270 Subpart D, as incorporated by reference in 10 CSR 25-7.270(1).

The Permittee is required to comply with all applicable environmental laws and regulations enforced by the Missouri Department of Natural Resources. The Air Pollution Control Program, the Hazardous Waste Program, the Land Reclamation Program, the Public Drinking Water Program, the Solid Waste Management Program, and the Water Pollution Control Program administer these environmental requirements. Noncompliance with these environmental laws and regulations may, in certain circumstances, result in the suspension or revocation of this Permit and may subject the permit holder to civil and criminal liability.

This Permit for operational, closure and corrective action activities is issued only to the Permittee named above. This Permit is issued for a period of ten years and expires at midnight on December 9, 2008. This Permit is subject to review and modification by the Department in accordance with Section 260.395.12, RSMo.

The provisions of this Permit are severable, and 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.

All citations to federal regulations throughout this Permit are for the sake of convenient reference. The federal regulations are adopted by reference in 10 CSR 25. In the instances where state regulations are more stringent, the appropriate state reference is given and shall apply.

Any appeals of the issuance or denial of the Permit or specific Permit conditions based on state authority shall be filed in accordance with Section 260.395.11, RSMo. The appeal shall be filed with the Missouri Hazardous Waste Management Commission within 30 days from the date of this Permit.

40 CFR 264.101(a), as incorporated by reference in 10 CSR 25-7.264(1), requires all owners or operators of facilities seeking a Permit for the treatment, storage, or disposal of hazardous waste to institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste or hazardous constituents from any solid waste management unit, regardless of the time at which waste was placed in such unit.

40 CFR 264.101 (b). as incorporated by reference in 10 CSR 25-7.264(1), requires that Permits issued under the Hazardous Waste Management Law, contain a schedule of compliance for corrective action (where corrective action cannot be completed prior to Permit issuance) and assurances of financial responsibility for completing such corrective action.

40 CFR 264.101(c), as incorporated by reference in 10 CSR 25-7.264(1), requires that corrective action 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/operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action. Further, 40 CFR 264.101(c), as incorporated by reference in 10 CSR 25-7.264(1), stipulates that the owner/operator is not relieved of any responsibility to cleanup a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis. In addition, assurances of financial responsibility for completing such corrective action must be provided.

40 CFR 270.32(b)(2), as incorporated by reference in 10 CSR 25-7.270(1), requires that each Permit issued under that section contain terms and conditions as the Department determines necessary to protect human health and the environment.

On April 25, 1994, Missouri received interim 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 had been previously adopted by the state. Thus, the corrective action requirements implemented by the state in lieu of EPA are incorporated into Part I of this Permit and are under state authority. EPA in Part II of the Permit retains Federal administrative authority for other HSWA requirements for which the state has not adopted the applicable federal regulation and for which it is not authorized.

## DEFINITIONS

For purposes of this Permit, terms used herein shall have the same meaning as those in RCRA and 40 CFR Parts 124, 260, 261, 264, 268, and 270, unless this Permit specifically provides otherwise. Where terms are not defined in RCRA, the regulations, this Permit or EPA guidance or publications, a standard dictionary reference or the generally accepted scientific or industrial meaning of the term shall define the meaning associated with such terms.

"Area of Concern (AOC)" means any area where an actual or potential release of hazardous waste or hazardous constituents which 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. Investigation and/or remediation of AOCs may be required pursuant to Section 260.395, RSMo, and 40 CFR 270.32(b)(2), as incorporated by reference in 10 CSR 25-7.270(1).

"Director" means the Director of the Missouri Department of Natural Resources.

"Facility" means:

All contiguous land, and structures, other appurtenances and improvement on the land, used for treating, storing, or disposing hazardous waste.

All contiguous property under the control of the owner/operator, for the purpose of implementing corrective action under 40 CFR 264.101, as incorporated by reference in 10 CSR 25-7.264(1) and as specified in Corrective Action Conditions I. through XVIII. of this Permit.

"Hazardous constituent" means any chemical compound listed in 40 CFR Part 261 Appendix VIII as incorporated in 10 CSR 25-4.261.

"Hazardous waste" means any waste, or combination of wastes as defined by or listed in 10 CSR 25-4 or 10 CSR 25-11, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible, illness; or which may pose a threat to the health of humans or other living organisms.

"Release" means any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous wastes

(including hazardous constituents) into the environment (including the abandonment or discarding of 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 the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

"Stabilization" means actions to control or abate threats to human health and/or the environment from releases at RCRA facilities and/or to prevent or minimize the further spread of contamination while long-term remedies are pursued.

## SCHEDULE OF COMPLIANCE

- I. Within 60 calendar days of the effective date of this Permit, the Permittee shall:
  - A. Submit to the Department two copies of the consolidated Permit application as required by 10 CSR 25-7.270(2)(B)7. This consolidated Permit application shall include the following:
    - The "approved Permit application," as defined in the Introduction of this Permit; and
    - All changes made to the application as a result of the public comment period.
  - B. Submit to the Department a certification by the Permittee that the Permittee has read the Permit in its entirety and understands all Permit conditions contained herein.
  - C. Submit to the Department a check or money order payable to the State of Missouri for any outstanding engineering review costs.
  - D. Submit to the Department a check or money order payable to the State of Missouri for \$1,000 for each year the Permit is to be in effect beyond the first year. This Permit is effective for ten years. Since the Permittee has submitted a check for \$1,000 with the RCRA Permit application, the remaining balance to be submitted by the Permittee is \$9,000 less an equivalent of \$1,000 for the period of time from the effective date of this ten-year Permit to April 13, 1999. For the purpose of calculating the equivalent per day cost of \$1,000/year, the factor of 365 days/year shall be used. This check shall be directed to the Hazardous Waste Program, Permits Section.
  - E. Submit to the Department a schedule for lining and installing floor drain plugs in the secondary containment system for Container Storage Area 2. This schedule shall include a statement that the Permittee will notify the Department a minimum of 15 days before the anticipated date that the area will begin to be used for storage of hazardous wastes, as noted in 40 CFR 270.30(l)(2).
  - F. Submit to the Department a letter with a statement that the Permittee will notify the Department a minimum of 15 days before the anticipated date that the

Tanks Storage Area secondary containment upgrade will begin. Also, this letter shall include a statement that the Permittee will notify the Department a minimum of 15 days before the date that storage will resume within individual tanks, as noted in 40 CFR 270.30(I)(2).

- G. The Permittee shall demonstrate compliance with the seismic requirements through a report certified by a qualified independent professional engineer registered in Missouri. This report shall be submitted to the Director within one year of the effective date of this Permit. If there are substantial alterations required to bring the existing units up to specification, this report shall identify the necessary changes and include a schedule for demonstrating compliance with 10 CSR 25-7.270(2)(B)4. The proposed schedule shall provide for compliance within two years of the effective date of this Permit, and provide interim milestones and dates for their achievement. Failure to provide this report may result in modification, revocation, or reissuance of this Permit pursuant to 40 CFR 270.41.
  
- II. The Permittee shall comply with all applicable corrective action requirements of this Permit as specified in the Corrective Action Conditions Section.

## STANDARD PERMIT CONDITIONS

The Permittee shall comply with the requirements set forth in the Missouri Hazardous Waste Management Law (and all standards, rules, and regulations adopted under this act), Section 260.350, et seq., RSMo, 40 CFR Part 264 Subpart H, 40 CFR 270.30, 40 CFR 270.40, 40 CFR 270.42, and 40 CFR 270.51 as incorporated and modified in 10 CSR 25-7 and 10 CSR 25-8.

## GENERAL PERMIT CONDITIONS

- I. The Permittee shall comply with the requirements set forth in 40 CFR Part 264 Subpart B, 40 CFR Part 264 Subpart C, 40 CFR Part 264 Subpart D, 40 CFR Part 264 Subpart E, 40 CFR Part 264 Subpart H, 40 CFR Part 268, and 40 CFR Part 270 as incorporated and modified in 10 CSR 25-7 and 10 CSR 25-8.
- II. The Permittee shall at the earliest practical moment upon discovery of an emergency involving the hazardous waste under their control, notify the Department's emergency response hotline at (573) 634-2436 and the National Response Center at 1-800-424-8802, as noted in Chapter 260.505.4, RSMo.

## SPECIAL PERMIT CONDITIONS

The Department has established the following additional Permit conditions for the Permittee's hazardous waste management facility.

### I. Storage in Containers [40 CFR Part 264 Subpart I]

- A. Waste Identification. The Permittee may store only the hazardous wastes identified in the approved Permit application. All stored wastes are subject to the terms of this Permit.
- B. Waste Quantities. The combined maximum quantity of hazardous wastes that may be stored in both Container Storage Area No. 1 and Container Storage Area No.2 is 12,375 gallons at any time.

The Permittee shall store containers in a manner that ensures physical stability and allows for visual inspection of each container. For containers that are stacked on pallets, the maximum stacking height shall not exceed 96 inches. All container labels shall be visible from an aisle. All containers shall be accessible from an aisle. A minimum of two feet of aisle space shall be maintained between rows of adjacent containers to allow for inspection of each container. When containers are stored on pallets, a minimum of one-half foot of spacing shall be maintained between the pallets within the row.

### C. Condition of Containers [40 CFR 264.171].

- 1. If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the Permittee shall transfer the hazardous waste from this container to a container that is in good condition or manage the waste in some other way that complies with the conditions of this Permit, such as over-packing.
- 2. Containers storing hazardous wastes shall be labeled and marked in accordance with the applicable, currently-effective U.S. Department of Transportation (DOT) regulations regarding hazardous materials, 49 CFR Part 172, during the entire on-site storage period. [10 CSR 25-7.264(2)(l)2.]

- D. Compatibility of Waste with Containers [40 CFR 264.172].
1. The Permittee shall use a container, which is made of, or lined with, materials, which will not react with and are otherwise compatible with the hazardous waste to be stored so that the ability of the container to contain the waste is not impaired. The storage of containers with free liquids in Container Storage Area 1 is prohibited unless the Permittee uses individual covered containment systems, as described in the approved Permit application.
  2. Each container shall be packaged following the applicable currently-effective DOT regulations regarding hazardous materials pursuant to 49 CFR Part 173, except for the assignment of manifest numbers to the container, during the entire period the containerized hazardous waste is in storage on site.
- E. Management of Containers [40 CFR 264.173]. A container holding hazardous waste shall always be closed during storage except when it is necessary to add or remove waste. A container holding hazardous waste shall not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.
- F. Inspections [40 CFR 264.174]. At least weekly, the Permittee shall inspect areas where containers are stored looking for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors.
- G. Containment [40 CFR 264.175]. The Permittee shall design and operate containment systems for the container storage areas as follows:
1. A base shall underlie the containers, which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed.
  2. The base shall be sloped or the containment system shall be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation unless the containers are elevated or are otherwise protected from contact with accumulated liquids.

3. The containment system shall have sufficient capacity to contain 10% of the volume of all containers or 100% of the volume of the largest container, whichever is greater. Containers that do not contain free liquids need not be considered in this determination.
4. Spilled or leaked waste shall be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system.

H. Special Requirements for Ignitable or Reactive Waste [40 CFR 264.176 and 10 CSR 25-7.264(2)(I)].

Containers holding ignitable or reactive waste shall be located at least 50 feet from the facility's property line.

I. Special Requirements for Incompatible Wastes [40 CFR 264.177].

1. The Permittee shall not place incompatible wastes or incompatible wastes and materials in the same container unless such action is in compliance with the requirements of 40 CFR 264.17(b).
2. The Permittee shall not place hazardous waste in an unwashed container that previously held an incompatible waste or material.
3. The Permittee shall separate by a device (i.e., a dike or other physical means) containers of incompatible waste or materials. No incompatible waste or materials may be stored together in the storage area without providing separation sufficient to prevent the mixing of any spilled materials, which may be incompatible.

J. Closure [40 CFR 264.178 and 10 CSR 25-7.264(2)(I)].

At closure, the Permittee shall remove all hazardous waste and hazardous waste residues from the container storage areas and containment systems and close in accordance with the approved Closure Plan for the hazardous waste management facility.

II.

Storage in Tanks [40 CFR Part 264 Subpart J]

- A. Waste identification. The Permittee may store only the hazardous wastes identified in the approved Permit application. All stored wastes are subject to the terms of this Permit.
- B. Waste quantities. The Permittee shall utilize the following tanks at the facility, subject to the terms of this Permit.

Tank I.D. Number	Tank Description	Total Volume (gallons)	Working Volume (gallons)
6.1-B1	Aqueous Waste Tank	28,354	27,000
6.1-B2	Slurry Waste Tank	28,354	27,000
6.1-B3	Organics Waste Tank	28,354	27,000
6.1-B4	Residue Waste Tank	28,354	27,000

- C. Assessment of existing tank system's integrity [40 CFR 264.191]. The Permittee's waste storage tanks qualify as existing tank systems. Tank integrity assessments have been performed.
- D. Design and installation of new tank systems or components [40 CFR 264.192]
1. Prior to operation of new tank systems at the facility, the Permittee shall obtain and submit to the Director, a written assessment, reviewed and certified by an independent qualified professional engineer registered in the State of Missouri which includes, at a minimum, the requirements of 40 CFR 264.192(a)(1) through 40 CFR 264.192(a)(3). In addition, this certification must be in accordance with 40 CFR 270.11(d). This assessment shall include a final design set of certified construction drawings, and must show that the foundation, structural supports, seams, connections, and pressure controls are adequately designed to ensure that the tank systems will not collapse, rupture, or fail. This assessment will be subject to regulatory review and approval procedures.

2. The Permittee shall ensure that proper handling procedures are adhered to in order to prevent damage to new tank systems during installation. Prior to placing a new tank system in use, an independent qualified installation inspector or an independent qualified professional engineer registered in the State of Missouri, either of whom is trained and experienced in the proper installation of tank systems or components, shall inspect the systems for weld breaks, punctures, scrapes of protective coatings, cracks, corrosion, and other structural damage or other inadequate construction/installation. All discrepancies shall be remedied before the tank systems are placed in use.
  3. The Permittee shall test all new tanks and ancillary equipment for tightness prior to being placed in use. If a tank system is not tight, all repairs necessary to remedy the leak(s) in the system shall be performed prior to the tank system being placed into use.
  4. The Permittee shall obtain and keep on file at the facility written statements by those persons certifying to the design of the tank systems and supervising the installation of tank systems in accordance with the requirements of 40 CFR 264.192(b) through 40 CFR 264.192(f).
- E. Containment and detection of releases [40 CFR 264.193].
1. In order to prevent the release of hazardous waste or hazardous constituents to the environment, the Permittee shall provide secondary containment that meets the requirements of 40 CFR 264.193 for all of its tank systems.
  2. Secondary containment systems shall be:
    - a. Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, groundwater, or surface water at any time during the use of the tank system; and
    - b. Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

3. To meet the requirements of 40 CFR 264.193(b), secondary containment systems shall be, at a minimum:
  - a. Constructed of, or lined with, materials that are compatible with the wastes to be placed in the tank systems and shall have sufficient strength and thickness to prevent failure owing to pressure gradients (including static head and hydrological forces), physical contact with the waste to which they are exposed, climatic conditions, and the stress of daily operation (including stresses of nearby traffic).
  - b. Placed on a foundation or base capable of providing support to the secondary containment system, resistance to pressure gradients above and below the system, and capable of preventing failure due to settlement, compression, or uplift.
  - c. Provided with a leak detection system that is designed and operated so that it will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours, or at the earliest practicable time if the owner or operator can demonstrate to the Department that existing detection technologies or site conditions will not allow detection of a release within 24 hours.
  - d. Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked waste and accumulated precipitation shall be removed from the secondary containment system within 24 hours, or in as timely a manner as is possible to prevent harm to human health and the environment, if the owner or operator can demonstrate to the Department that removal of the released waste or accumulated precipitation cannot be accomplished within 24 hours. If the collected material is a hazardous waste as defined in 40 CFR Part 261, it shall be managed as a hazardous waste. If the collected material is discharged through a point source to waters of the state or it is discharged to a Publicly Owned Treatment Works, it is subject to the requirements of Chapter 644, RSMo, and 10 CSR 20. If the collected material is released to the environment, it may be subject to the reporting requirements of 40 CFR Part 302 and §260.500, et seq., RSMo.

4. Secondary containment for tanks shall include one or more of the following devices: a liner (external to the tank); a vault; a double-walled tank; or an equivalent device as approved by the Director. The design, construction, and operation of these devices shall satisfy the requirements of 40 CFR 264.193(e).
5. Ancillary equipment shall be provided with secondary containment (e.g., trench, jacketing, double-walled piping) that meets the requirements of 40 CFR 264.193(b) and 40 CFR 264.193(c), except for the following tank system components that are visually inspected for leaks on a daily basis: aboveground piping (exclusive of flanges, joints, valves, and other connections); welded flanges, welded joints, and welded connection; sealless or magnetic coupling pumps and sealless valves; and pressurized aboveground piping systems with automatic shut-off devices.

F. General operating requirements [40 CFR 264.194].

1. The Permittee shall not place hazardous waste or treatment reagents in a tank system if they would cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail.
2. The Permittee shall use appropriate controls and practices to prevent spills and overflows from the tank or containment systems. These include, at a minimum:
  - a. Spill prevention controls, such as, but not limited to, check valves, dry disconnect couplings; and
  - b. Overfill prevention controls, such as, but not limited to, level sensing devices, high level alarms, automatic feed cut-offs, or bypass to standby tanks which limit tank working volumes.

G. Inspections [40 CFR 264.195]. The Permittee shall inspect all tanks and tank systems as specified in the inspection schedules contained in the approved Permit application. A qualified professional engineer registered in the State of Missouri shall test all of the permitted tanks by ultrasonic external thickness testing, internal visual lining inspections, and spark testing of the internal liner.

The spark testing shall be performed when conditions deem this testing necessary. These tests and inspection shall be made at intervals not to exceed 12 months.

1. The Permittee shall inspect overfill controls on an interval not to exceed 12 months.
  2. The Permittee shall inspect at least each operating day:
    - a. Aboveground portions of the tank systems to detect corrosion or releases of wastes;
    - b. Data gathered from monitoring and leak detection equipment to ensure that the tank system is being operated according to its design; and
    - c. The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system to detect erosion or signs of releases of hazardous waste.
  3. The Permittee shall document these inspections in the operating record of the facility. Any deterioration or malfunction found shall be remedied in accordance with 40 CFR 264.15(c).
- H. Response to leaks or spills and disposition of leaking or unfit-for-use tank systems [40 CFR 264.196 and 10 CSR 25-7.264(2)(J)4.]. A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, shall be removed from service immediately, and the Permittee shall satisfy the following requirements:
1. The Permittee shall immediately stop the flow of hazardous waste into the tank or secondary containment system and inspect the system to determine the cause of the release.
  2. Removal of waste from tank systems or secondary containment systems:

- a. If the release was from the tank system, the Permittee shall, within 24 hours after detection of the leak, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.
  - b. If the material released was to a secondary containment system, the Permittee shall remove all released materials within 24 hours.
3. Containment of releases to the environment. The Permittee shall immediately conduct an inspection of the release and, based upon that inspection, shall:
  - a. Prevent further migration of the leak or spill to soils or surface water; and
  - b. Remove, and properly dispose of, any contamination of the soil or surface water.
4. Notifications and reports.
  - a. Any release to the environment, except a release, which is exempted under 40 CFR 264.196(d)(2), shall be reported to the Director within 24 hours of its detection or discovery. If the release has been reported pursuant to 40 CFR Part 302 or §260.500, et seq., RSMo, that report will satisfy this requirement.
  - b. A leak or spill of hazardous waste is exempted from notification and reporting requirements if it is less than or equal to a quantity of one pound, and is immediately contained and cleaned up.
  - c. Within 30 days of detection of a release to the environment, the Permittee shall submit a report to the Director which details the likely route of migration of the release, characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate), the results of any monitoring or sampling conducted in connection with the release (if available; when these results are not available within 30 days, these results shall be submitted as soon as they become available), proximity to downgradient drinking water, surface water and populated areas, and descriptions of response actions taken or planned.

5. The tank system shall be closed in accordance with 40 CFR 264.197 and 10 CSR 25-7.264(2)(J) unless the Permittee satisfies the following requirements:
  - a. If the cause of the release was a spill that has not damaged the integrity of the system, the Permittee may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.
  - b. If the cause of the release was a leak from the primary tank system into the secondary containment system, the system shall be repaired prior to returning the tank system to service.
  - c. If the source of the release was a leak to the environment from a tank system component without secondary containment, the Permittee shall comply with the provisions of 40 CFR 264.196(e)(4).
6. The Permittee shall provide certification of major repairs to tank systems from which there has been a leak or spill, or which are/were unfit for use, in accordance with 40 CFR 264.196(f).
- I. Special requirements for ignitable or reactive waste [40 CFR 264.198 and 10 CSR 25-7.264(2)(J)].
  1. The Permittee shall not place ignitable or reactive waste in tank systems unless:
    - a. The waste is treated, rendered, or mixed before or immediately after placement in the tank system so that the resulting waste, mixture, or dissolved material no longer meets the definition of ignitable or reactive waste under 40 CFR Part 261, and 40 CFR 264.17(b) is complied with;
    - b. The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite or react; or
    - c. The tank system is used solely for emergencies.

2. The Permittee shall comply with the requirements for the maintenance of protective distances between tanks storing ignitable or reactive wastes and any public ways, streets, alleys, or any adjoining property that can be built upon as required in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code" (1977 or 1981, incorporated by reference in 40 CFR 260.11).

J. Special requirements for incompatible wastes [40 CFR 264.199].

1. The Permittee shall not place incompatible wastes, or incompatible wastes and material, in the same tank system, unless Permittee complies with 40 CFR 264.17(b).

2. The Permittee shall not place hazardous waste in a tank system that has not been decontaminated and that previously held an incompatible waste or material, unless Permittee complies with 40 CFR 264.17(b).

K. Closure [40 CFR 264.197 and 10 CSR 25-7.264(2)(J)].

At closure, the Permittee shall remove or decontaminate all hazardous waste, and hazardous residues, from the tank systems, including, but not limited to, contaminated tank system components (liners, etc.), contaminated soils, and contaminated equipment and structures, and shall close in accordance with the approved Closure Plan for the hazardous waste management facility.

III. Miscellaneous Treatment [40 CFR Part 264 Subpart X]

A. The Permittee shall meet the standards for miscellaneous physical and chemical treatment units in 40 CFR Part 264 Subpart X. The miscellaneous treatment process identified in this Permit is carbon regeneration.

B. Waste identification. The Permittee may treat only the hazardous wastes identified in the approved Permit application in the carbon regeneration unit at the facility, subject to the terms of this Permit.

C. Carbon regeneration description. The carbon regeneration furnace reactivates the carbon used in the tertiary wastewater treatment adsorption columns, various production facilities and formulation plants, and from satellite facilities. A dewatering screw feeds the carbon up an incline from the furnace feed tank to the top of the furnace. Excess free water drains back to the feed hopper as carbon travels upwards to the furnace and onto the drying bed. The remaining absorbed water and volatile impurities are driven off in the drying bed. The organic impurities removed from the carbon are oxidized in an afterburner. The dried carbon is then metered into the regeneration bed. In the regeneration bed, high temperature and steam gasify the remaining residues of dry organic matter. The reactivated carbon is then quenched with water and transferred to storage. The following table identifies the major components of the carbon regeneration unit:

Equipment I.D. Number	Equipment Description	Working Capacity (gallons)	Nominal Dimensions (feet)
4.3-B2	Carbon Transfer Tank	2,950	6 dia. x 12
4.3-B4	Spent Carbon Storage Tank	54,589	18 dia. x 27.5
4.3-B5	Overflow Collection Tank	3,800	10 dia. x 8
4.3-B6	Furnace Feed Tank	7,800	10 dia. x 12
4.4-D1	Carbon Regeneration Furnace	NA	7 dia. x 27.5

D. Operating requirements. The Permittee shall operate the carbon regeneration system under the following conditions when hazardous wastes are being treated:

1. The feed rate of carbon to the regeneration furnace shall not exceed 2083 lb/hr on a rolling or daily average basis. The feed rate shall be calculated using the number of 4.3-82 Carbon Transfer Tank to 4.3-B6 transfers completed in a 24 hour period.
2. The afterburner shall be maintained at or above 900 degrees centigrade.
3. The stack carbon monoxide concentration shall not exceed 100 ppmv.

4. The stack gas total hydrocarbon concentration shall not exceed 10 ppmv.
  5. The acid gas scrubber liquid pH shall not be less than 5.5 pH units.
  6. The acid gas scrubber recirculation flow rate shall not be less than 40 gpm.
  7. The venturi scrubber pressure drop shall not be less than 30 inches water column.
- E. Monitoring Requirements. The Permittee shall maintain the monitoring equipment and record the data in the operating record for this Permit while treating hazardous wastes.
- F. Process Upsets. The Permittee shall discontinue the application of heat to the carbon regeneration furnace if any of the conditions specified in Special Permit Conditions III.D.2. through IIID.7. are not maintained.
- G. Closure (40 CFR 264.197).

At closure, the Permittee shall remove and properly dispose of all hazardous waste and hazardous waste residues from the miscellaneous treatment unit and follow the procedures in the approved Closure Plan.

IV. Incineration [40 CFR Part 264 Subpart O]

- A. Description of the incineration system. The incineration system consists of a pressurized down-fired liquid injection furnace and integral quench tank, a venturi scrubber, a cyclone separator, a packed bed caustic scrubbing tower, a sulfite oxidation tower, an acid neutralization tank, a solids recovery and handling facility, and a stack. The incineration system described herein and in the approved Permit application shall hereafter be referred to as the "incinerator."
- B. Construction, instrumentation, and operational performance requirements.
1. The Permittee shall construct and maintain the incinerator in accordance with the design plans and specifications contained in the approved Permit application and this Permit.

2. The Permittee shall install and test all instrumentation in accordance with the design plans, performance specifications, and maintenance procedures contained in the approved Permit application and this Permit prior to treating hazardous waste in the incinerator.
3. The Permittee shall construct and maintain the incinerator so that when operated in accordance with the operating conditions specified in this Permit, it will meet the following performance standards.
  - a. The incinerator shall achieve a destruction and removal efficiency (DRE) of 99.99% for the principal organic hazardous constituents (POHCs) tetrachloroethylene and 1,2-dichloroethane. The DRE shall be calculated using the method specified in 40 CFR 264.343(a).
  - b. Hydrogen chloride (HCl) emissions shall be controlled such that the rate of emission does not exceed the larger of either 4.0 pounds per hour or 1% of the HCl in the stack gas prior to entering any pollution control equipment. If the emissions are based on the 1% of the HCl in the stack gas prior to entering any pollution control equipment, the HCl emissions shall never exceed 21.9 pounds per hour, based on the Reference Air Concentration and the site specific modeling dilution factor.
  - c. Chlorine (Cl<sub>2</sub>) emissions shall not exceed 1.3 pounds per hour, based on the Reference Air Concentration and the site specific modeling dilution factor.
  - d. Particulate matter emissions shall not exceed 0.08 grains per dry standard cubic foot, corrected to 7% oxygen in the stack gas.
  - e. The emission rates of arsenic (As), beryllium (Be), cadmium (Cd), chromium-VI (Cr-VI) shall be limited to an extent such that the following equations are satisfied, based on the Risk Specific Dose and the site specific dilution factor for each element.

$$\frac{\text{AER of As}}{9.09\text{E-}04} + \frac{\text{AER of Be}}{1.66\text{E-}04} +$$

$$\frac{\text{AER of Cd}}{2.21 \text{ E-}03} + \frac{\text{AER of Cr}}{3.28\text{E-}04} \leq 1.0$$

where AER = Actual Emission Rate in pounds per hour.

- f. Compliance with the operating conditions specified in this Permit will be regarded as compliance with the above performance standards. However, evidence that compliance with such Permit conditions is insufficient to ensure compliance with the above performance standards may be an information justifying modification, revocation, or reissuance of this Permit pursuant to 40 CFR 270.41.

C. Limitations on wastes.

1. The Permittee may incinerate hazardous waste identified in the approved Permit application, as specified in this Permit and only under the terms of this Permit.
2. Throughout operation, the Permittee shall conduct sufficient waste analyses, and in accordance with the procedures specified in the Waste Analysis Plan contained in Section 2 of the approved Permit application and this Permit, to verify that hazardous waste fed to the incinerator is within the physical and chemical composition limits specified in this Permit.
3. The Permittee shall not incinerate any hazardous waste containing a significant concentration (>100 ppm) of any hazardous constituent as listed in 40 CFR Part 261 Appendix VIII which has a heat of combustion less than tetrachloroethylene, 1.19 kcal/g.
4. The maximum feed rate of hazardous waste to the incinerator shall not exceed 21 gallons per minute, of which 6.0 gallons per minute can be from the organic residue waste stream.

5. The maximum total heat input to the incinerator shall be 41 MMBTU per hour including the heating values contributed by hazardous waste, non-hazardous waste and auxiliary fuel.
6. The hourly average ash loading to the incinerator shall not exceed 300 pounds per hour. The total ash loading to the incinerator shall be calculated once every minute. The average of the preceding sixty one-minute values shall be recorded once per hour.
7. The hourly average organic chlorine loading to the incinerator shall not exceed 330 pounds per hour. The total organic chlorine loading to the incinerator shall be calculated once every minute. The average of the preceding sixty one-minute values shall be recorded once per hour.
8. The physical form of the waste shall be liquid having a viscosity not exceeding 150 centistokes (CS) at 100 degrees F.
9. The feed rates of antimony (Sb), barium (Ba), beryllium (Be), mercury (Hg), silver (Ag), and thallium (Tl) in all feed streams (i.e., hazardous waste and fuels) shall not exceed the following limits. These limits are based on Adjusted Tier I Feed Rate Limits.

METAL	FEED RATE LIMIT (pounds/hour)
Antimony (Sb)	0.94
Barium (Ba)	157
Beryllium (Be)	3.66E-3
Mercury (Hg)	0.29
Silver (Ag)	9.4
Thallium (Tl)	1.57

10. The feed rates of Arsenic (As), Cadmium (Cd), total Chromium (Cr) and Lead (Pb) in all feed streams (i.e., hazardous waste and fuels) shall not exceed the following limits. These limits are based on Tier III Emissions Limits for these metals and the arithmetic average feed rate successfully demonstrated for these metals during the trial burn.

METAL	FEED RATE LIMIT (pounds/hour)
Arsenic (As)	0.03
Cadmium (Cd)	0.01
Chromium (Cr)	0.40
Lead (Pb)	1.57

- D. Operating conditions (40 CFR 264.345). The Permittee shall feed only the wastes described in Special Permit Condition IV.C.1. to the incinerator and only under the following conditions:
1. Combustion temperature in the incinerator, measured as specified in Special Permit Condition IV.F., shall be maintained at or above 900°C without exceeding 1053 °C at any time.
  2. Combustion air flow, measured as specified in Special Permit Condition IV.F., shall be greater than 3,500 and less than 7,800 standard cubic feet per minute (SCFM).
  3. The incinerator exhaust gas concentration of carbon monoxide, measured as specified in Special Permit Condition IV.F., shall not exceed 400 ppm as an hourly rolling average, and shall not exceed 1,000 ppm at a time. The Permittee shall report in writing to the Department if the incinerator exhaust gas concentration of total hydrocarbons, measured as specified in Special Permit Condition IV.F., exceeds 20 ppm on an hourly rolling average as propane. The report shall include the time, combustion temperature, carbon monoxide level, and total hydrocarbon level and shall be submitted within 30 days of exceeding the value in this Special Condition.

4. The pH of the scrubbing liquid in the acid gas scrubber tank, measured as specified in Special Permit Condition IV.F., shall not be less than 5.9 pH units.
  5. The recirculation liquid flow rate to the acid gas scrubber, measured as specified in Special Permit Condition IV.F., shall be maintained at no less than 457 gallons per minute (gpm) at any time.
  6. The pressure drop across the venturi, measured as specified in Special Permit Condition IV.F., shall be no less than 41 inches water column, based on the arithmetic average over a period of 15 minutes, and 39 inches water column at any time.
  7. The liquid to gas ratio (L/G), measured as specified in Special Permit Condition IV.F., shall be maintained at no less than 25 gallons per minute per 1,000 standard cubic feet per minute.
  8. During start-up and shut-down of the incinerator, hazardous wastes must not be introduced into the incinerator unless the incinerator is operating within the conditions specified in Special Permit Condition E.
  9. The Permittee shall control fugitive emissions from the incineration system through a vigorous inspection and maintenance program. Any time fugitive emissions from the incineration system are detected, all hazardous waste to the incinerator must be shut off and remain shut off until repairs which prevent fugitive emissions have been completed.
- E. Automatic waste feed cut-off requirements.
1. The Permittee shall construct, maintain, and calibrate the monitoring equipment specified in Special Permit Condition IV.F. to automatically take corrective action whenever the operating conditions of the incinerator meet or deviate from within the limits set as follows:

<b>OPERATING CONDITION</b>	<b>AUTOMATIC CUT-OFF LIMIT</b>	<b>CORRECTIVE ACTION</b>
Minimum Combustion Temperature	900°C	Instantaneous Automatic Waste Feed Cut-off
Maximum Combustion Temperature	1053 °C	Instantaneous Automatic Waste Feed Cut-off
Minimum Combustion Air Flow Rate	3500 SCFM	Instantaneous Automatic Waste Feed Cut-off
Maximum Combustion Air Flow Rate	7800 SCFM	Instantaneous Automatic Waste Feed Cut-off
Maximum Stack Gas Carbon Monoxide Concentration	400 ppm hourly rolling average	Instantaneous Automatic Waste Feed Cut-off
Maximum Stack Gas Carbon Monoxide Concentration	1000 ppm	Instantaneous Automatic Waste Feed Cut-off
Maximum Stack Gas Total Hydrocarbon Concentration	20 ppm hourly rolling average	Instantaneous Automatic Waste Feed Cut-off with Reporting
Minimum Venturi Pressure Drop	41 in. water average over 15 minutes	Instantaneous Automatic Waste Feed Cut-off
Minimum Venturi Pressure Drop	39 in. water	Instantaneous Automatic Waste Feed Cut-off
Minimum Liquid/Gas Ratio	25 gal/1000 SCFM	Instantaneous Automatic Waste Feed Cut-off
Minimum pH of Liquid to Acid Gas Scrubber	5.9 pH units	Instantaneous Automatic Waste Feed Cut-off
Minimum Acid Gas Scrubber Flow Rate	457 gpm	Instantaneous Automatic Waste Feed Cut-off

F. The Permittee shall monitor and record the facility operating parameters as specified below:

SYSTEM PARAMETER	ID. NUMBER	MONITORING SYSTEM *	INSTRUMENT RANGE	MONITORING FREQUENCY	CALIBRATION FREQUENCY
Waste Organic Flow	F6.2A 1-2	Mass Flowmeter	0-6 gpm	Continuously	Monthly
Residue Waste Flow	F6.2A1-3	Mass Flowmeter	0-6 gpm	Continuously	Monthly
Waste Aqueous Flow	F6.2A 1-6	Magnetic Flowmeter	0-16 gpm	Continuously	Monthly
Slurry Waste Flow	F6.2A1-7	Magnetic Flowmeter	0-16 gpm	Continuously	Monthly
Combustion Temperature	T6.2A1-1	Type K Thermal Couple	0-1200°C	Continuously	Semi-Annually
Combustion Flow Rate	F6.2A 1-5	Orifice Meter Pressure Transmitter	0-10,000 CFM	Continuously	Semi-Annually
Carbon Monoxide Concentration	Q6.2K2-5	NDIR (Anarad Analyzer)	0-1000 ppm	Continuously	Weekly
Total Hydrocarbon Concentration	Q6.2K2-6	Beckman 400A or Compur	0-50 ppm as propane	Continuously	Weekly
Venturi Differential Pressure	P6.2K1-1	Pressure Transmitter	0-100 in. water	Continuously	Semi-Annually
Venturi Flow Rate	F6.2K1-2	Magnetic Flowmeter	0-300 gpm	Continuously	Semi-Annually
Venturi L/G Ratio	G6.2A1-3	Magnetic Flowmeter/ Orifice Meter	0-100 gpm/ 1000 SCFM	Continuously	Semi-Annually

\* Monitoring System means the total equipment required for determination of a specified parameter (e.g., combustion temperature, CO concentration, etc.). Total equipment could include, but is not limited to, primary measuring device or sample interface, parameter analyzer, transmitter and data recording system.

SYSTEM PARAMETER	ID. NUMBER	MONITORING SYSTEM *	INSTRUMENT RANGE	MONITORING FREQUENCY	CALIBRATION FREQUENCY
Acid Gas Scrubber pH	Q6.2K2-1	pH Probe	0-10 pH	Continuously	Weekly
Acid Gas Scrubber Flow Rate	F6.2K2-1	Orifice Meter Pressure Transmitter	0-1000 gpm	Continuously	Semi-Annually

\* Monitoring System means the total equipment required for determination of a specified parameter (e.g., combustion temperature, CO concentration, etc.). Total equipment could include, but is not limited to, primary measuring device or sample interface, parameter analyzer, transmitter and data recording system.

- G. Upon request of the Department, the Permittee shall perform sampling and analysis of the waste and stack gas to verify that the operating requirements established in this Permit achieve the performance standards.
- H. The Permittee shall test the waste feed cut-off system as required by 40 CFR 264.347(c). This testing shall be performed as described in the approved permit application and shall be demonstrated to be working at the request of a representative of the Department during any compliance inspection.
- I. The Permittee shall record and maintain the monitoring and inspection data as required by 40 CFR 264.347(d).
- J. The Permittee shall cease operation when changes in the waste feed or operating conditions deviate or exceed conditions and/or limitations designated in this Permit.
- K. Monitoring and inspection requirements (40 CFR 264.347).
  - 1. The Permittee shall conduct operational testing of the waste feed cutoff system and associated alarms at least once per month to verify operability. A functional shutdown will be acceptable to verify operability, if it is properly documented and recorded in accordance with the operating record required in 40 CFR 264.73.

2. The Permittee shall conduct weekly testing to verify the instrumentation associated with the waste feed cutoff system and its respective acoustic and light alarm indicators. This testing will be performed as described in the approved permit application.
3. The Permittee shall provide the following information on all strip chart recordings or Automated Industrial Monitoring and Control System's (AIM) unalterable historical data charts associated with the incinerator instrumentation and this information shall be available for display in a manner sufficient to enable the person reading the chart(s) to immediately obtain the value of the parameter being recorded:
  - a. Units of measurement for the parameter being charted;
  - b. The minimum and maximum values of the chart; and
  - c. The length of time over which the parameter is being charted.

L. Closure (40 CFR 264.351).

At closure, the Permittee shall remove and properly dispose of all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the incinerator site.

V. Location Standards [40 CFR 264.18 and Section 260.395.9. RSMo]

The Permittee is in compliance with the location standards of 40 CFR 264.18. The Permittee shall follow the contingency procedures for potential flooding as described in the approved Permit application.

VI. Waste Minimization

Pursuant to 40 CFR 264.73(b)(9), the facility operating record shall contain a certification by the Permittee, made no less often than annually, that the Permittee has a program in place to reduce the volume and toxicity of hazardous waste that he generates to the degree determined by the Permittee to be economically practicable; and the proposed method of treatment, storage, or disposal is that practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment.

VII.

Seismic Evaluation Requirements [10 CSR 25-7.270(2)(B)4.]

The Permittee shall demonstrate compliance with the seismic requirements, as noted in the Schedule of Compliance, through a report certified by a qualified independent professional engineer registered in the state of Missouri. This report shall be submitted to the Director within one year of the effective date of this Permit. Failure to provide this report may result in modification, revocation, or reissuance of this Permit pursuant to 40 CFR 270.41.

VIII. Air Emissions From Equipment Leaks

- A. The Permittee shall comply with 40 CFR Part 264 Subpart BB for air emissions from pumps, valves, compressors, sampling, connecting systems, open-ended valves or lines, pressure relief devices, flanges, and other connectors, and closed-vent systems and control devices, that contain or contact hazardous waste with organic concentrations of at least 10 percent by weight.
- B. The Permittee shall comply with the test methods and procedures, record keeping, and reporting requirements of 40 CFR Part 264 Subpart BB.

## CORRECTIVE ACTION CONDITIONS

### I. Identification of Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs)

A. The United States Environmental Protection Agency (USEPA) evaluated potential releases of hazardous waste and hazardous constituents via a hydrogeologic investigation completed in July 1988, by Geraghty and Miller, Inc., as part of the RCRA Facility Assessment (RFA). This occurred following issuance of the original Permit dated April 13, 1987. Based on the RFA, three SWMUs (Disposal Areas A, B, and C) were identified as requiring further investigation. The three disposal areas underwent further investigation pursuant to EPA's original Permit due to actual releases of hazardous waste and/or hazardous constituents to soils and groundwater. The RFA also identified one AOC (Drainage Ditch) requiring further investigation due to the presence of hazardous waste and/or hazardous constituents in the sediments of the drainage ditch. Figure 1 shows the location of the SWMUs and AOC listed below which require further corrective action pursuant to this Permit:

SWMU 1: Disposal Area A.

SWMU 2: Disposal Area B.

SWMU 3: Disposal Area C.

AOC 1: Drainage Ditch

This Permit requires the Permittee to conduct further investigation(s) and/or take corrective action as deemed appropriate by the Department for the above-listed SWMUs/AOCs, any newly-identified SWMUs/AOCs, and/or any release(s) from previously identified SWMUs/AOCs, at the facility as specified in the Corrective Action Conditions of this Permit.

### II. Notification Requirements for, and Assessment of, Newly-identified SWMU(s) and Areas of Concern (AOCs)

A. The Permittee shall notify the Department and EPA in writing of any SWMU(s) or AOC(s) identified subsequent to the issuance of this Permit no later than 15 days after discovery.

- B. The Department may require a SWMU/AOC Assessment Work Plan for conducting an investigation of any newly-identified SWMU(s) or AOC(s). Within 60 days of receipt of the Department's request for a SWMU/AOC Assessment Work Plan, the Permittee shall submit a SWMU/AOC Assessment Work Plan which shall include a discussion of past waste management practices at the unit, as well as a sampling and analysis program for all appropriate media of concern including soil, sediment, bedrock, surface water, groundwater and/or air, as necessary to determine whether a release of hazardous waste, including hazardous constituents, from such unit(s) has occurred, or is occurring. The sampling and analysis program shall be capable of yielding representative samples and shall include monitoring parameters sufficient to assess the release of hazardous waste and/or hazardous constituents from the newly-identified SWMU(s)/AOC(s) to the environment. The SWMU/AOC Assessment Work Plan shall specify any data to be collected to provide for a complete SWMU/AOC Assessment Report, as specified below.
- C. The SWMU/AOC Assessment Work Plan will be reviewed in accordance with the procedures set forth in Corrective Action Condition XIV. The Permittee shall initiate implementation of said plan within 90 days of receipt of Departmental approval and shall complete the implementation in accordance with the schedule contained in the approved plan.
- D. The Permittee shall submit a SWMU/AOC Assessment Report to the Department and EPA 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 from implementation of 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/AOC:
1. The location of the newly-identified SWMU/AOC in relation to any other SWMUs/AOCs;
  2. The type and function of the unit;
  3. The general dimensions, capacities, and structural description of the unit;
  4. The period during which the unit was operated;

5. The physical and chemical properties of all wastes that have been or are being managed at the SWMU/AOC, to the extent available;
  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/AOC;
  9. Amounts of waste handled; and
  10. Drainage areas and/or drainage patterns near the SWMU(s)/AOC(s).
- E. The SWMU/AOC Assessment Report will be reviewed in accordance with the procedures set forth in Review and Approval Procedures, Corrective Action Condition XIV. Based on the findings of this report, the Department will determine the need for further investigations, including stabilization, or a RCRA Facility Investigation (RFI), at specific unit(s) identified in the SWMU/AOC Assessment Report.
- F. If the Department determines that additional investigations are needed, the Department may require the Permittee to prepare and submit for approval a Work Plan for such investigations. This Work Plan for additional investigations will be reviewed in accordance with the procedures set forth in Review and Approval Procedures, Corrective Action Condition XIV. The Permittee shall initiate implementation of said plan within 90 days of receipt of Departmental approval and shall complete implementation in accordance with the schedule contained in the plan.
- III. Notification Requirements for, and Assessment of, Newly-identified Releases from Previously Identified SWMUs/AOCs
- A. No later than 15 days after discovery, the Permittee shall notify the Department and EPA, in writing, of any newly-identified release(s) of hazardous waste, including hazardous constituents from previously identified SWMUs/AOCs which are discovered during the course of groundwater monitoring, field investigation, environmental auditing, or other activities undertaken after issuance of this Permit.

- B. The Department may require a Newly-identified Release Work Plan for conducting an investigation of the newly-identified release(s). Within 60 days of receipt of notice that the Department requires a Newly-identified Release Work Plan, the Permittee shall submit a Newly-identified Release Work Plan which shall include a discussion of the waste/chemical management practices related to the release; a sampling and analysis program for all appropriate media of concern including soil, sediment, bedrock, surface water, groundwater and/or air, as necessary to determine whether the release poses a threat to human health or the environment; and a proposed schedule for implementation and completion of the Newly-identified Release Work Plan. The sampling and analysis program shall be capable of yielding representative samples and shall include monitoring parameters sufficient to assess the release of hazardous waste and/or hazardous constituents to the environment. The Newly-identified Release Work Plan shall specify any data to be collected to provide for a complete Newly-identified Release Report, as specified below.
- C. The Newly-identified Release Work Plan will be reviewed in accordance with the procedures set forth in Review and Approval Procedures, Corrective Action Condition XIV. The Permittee shall initiate implementation of said plan within 90 days of Departmental approval and shall complete implementation in accordance with the schedule contained in the plan.
- D. The Permittee shall submit a Newly-identified Release Report to the Department and EPA 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 during implementation of 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 any other SWMU(s)/AOC(s);
  2. The general dimensions of the release;
  3. The period during which the Permittee suspects release occurred;
  4. The physical and chemical properties of all wastes that comprise 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; and
  9. Drainage areas and/or drainage patterns near and at the location of the release.
- E. The Newly-identified Release Report will be reviewed in accordance with the procedures set forth in Review and Approval Procedures, Corrective Action Condition XIV. Based on the findings of the report and any other available information, the Department will determine the need for further investigation, including stabilization, or a RCRA Facility Investigation.

#### IV. Stabilization

- A. If the Permittee becomes aware of a situation that may require stabilization measures to protect human health or the environment, the Permittee shall notify the Department and EPA within 24 hours of the time the Permittee becomes aware of the situation.
- B. If during the course of any activity initiated under this Permit, the Permittee or the Department determines that a release or potential release of hazardous waste, including hazardous constituents, poses a threat to human health or the environment, the Department may require stabilization measures to slow or stop the further spread of contamination until final corrective action measures can be implemented. The Department will determine the specific action(s) that shall be taken to implement stabilization, including the need for potential Permit modifications, and the schedule for implementing the stabilization requirements, and will inform the Permittee of decisions regarding the action(s), in writing.
- C. If at any time, the Permittee determines or should have known that the stabilization program is not effectively limiting or stopping the further spread of contamination, the Permittee shall notify the Department in writing no later than ten days after such a determination is made. The Department may require that

the stabilization program be revised to make it effective in limiting or stopping the spread of contamination, or that final corrective action measures are required to remediate the contaminated media.

V. RCRA Facility Investigation (RFI) Work Plan

- A. Pursuant to the RFI requirements of Bayer's original HSWA Permit issued on April 13, 1987, by EPA, the Permittee submitted to EPA a RCRA Facility Investigation (RFI) Work Plan in October 1994. A Description of Current Conditions Report dated June 1996, prepared by Geraghty & Miller on behalf of the Permittee, was submitted in response to a series of November 1995 comments from EPA concerning the October 1994, RFI Work Plan. Four RFI Work Plan revisions were subsequently submitted to EPA in response to EPA's comment letters concerning investigation of the nature, rate of migration and extent of contamination related to SWMUs 1, 2, 3 and AOC 1.

On March 24, 1997, EPA approved the RFI Work Plan with modifications. EPA's and MDNR's coordinated evaluation of the RFI preliminary results indicated a series of data gaps bearing on determination of the nature and horizontal/vertical extent of groundwater contamination related to SWMU 1, 2, and 3. In addition, certain questions remain relative to hydraulic control of the groundwater contaminant plume by the existing on-site production wells and the significance of chemicals of concern detected in the sediments of the drainage ditch, AOC 1. The remaining outstanding RFI issues are generally outlined in Bayer's letter to EPA, dated January 27, 1998.

Further investigation to meet the RFI objectives contained herein will be required before the RFI can be considered complete. Within 60 days of the effective date of this Permit, the Permittee shall prepare and submit an RFI Work Plan Addendum to the Department and EPA to address the outstanding RFI issues contained in Bayer's January 27, 1998, letter. The RFI Work Plan Addendum shall contain a schedule for conducting further investigations and submitting a RFI Report. The RFI Work Plan Addendum will be reviewed in accordance with the procedures set forth in Review and Approval Procedures, Corrective Action Condition XIV. The Permittee shall initiate implementation of said addendum within 90 days of Departmental approval and shall complete implementation in accordance with the schedules contained in the RFI Work Plan Addendum.

- B. If the Department determines that a RFI is necessary for any Newly-identified SWMUs/AOCs or releases from previously identified SWMUs/AOCs, the

Department shall notify the Permittee of this determination in writing. The Permittee shall prepare and submit an RFI Work Plan to the Department and EPA within 90 days of being notified of the requirements to conduct an RFI. The RFI Work Plan shall be designed to investigate releases of hazardous waste, including hazardous constituents, to all appropriate media of concern including soil, sediment, bedrock, surface water, groundwater and/or air. In order to substantiate future corrective action decisions, the RFI Work Plan shall contain provisions, which meet the following objectives:

1. Full characterization of the nature, vertical and horizontal extent, and rate of migration of releases of hazardous waste and/or hazardous constituents from newly-identified SWMUs and AOCs at the facility and their actual or potential receptors; and
  2. Collection of any other pertinent data which may be utilized to substantiate future corrective action decisions, including completion of characterization to complete the RFI and/or to define the nature and scope of corrective measures study, if required.
- C. The content of any new RFI Work Plan shall be appropriate for site-specific conditions and shall be consistent with and address all applicable investigation elements described in the most recent version of the EPA document entitled, RCRA Facility Investigation Guidance: EPA 530/SW-89-031. At a minimum, the RFI Work Plan shall detail all proposed activities and procedures to be conducted at the facility, the schedule for implementing and completing such investigations, and for submission of reports (including the final RFI Report), the qualifications of personnel performing or directing the investigations, including contractor personnel, and the overall management of the RFI.
- D. The RFI Work Plan shall include a Quality Assurance Project Plan (QAPP). The QAPP shall present the policies, organization, objectives, functional activities, and specific quality assurance and quality control activities designed to achieve the data quality goals of the RFI. It shall include the 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 may either create a new QAPP for each RFI Work Plan or incorporate an existing approved QAPP into the RFI Work Plan, provided that the information/data in the existing approved QAPP is relevant, appropriate

and meets standard QAPP requirements in accordance with SW-846 and/or addresses applicable elements of other EPA QA/QC related guidance as it relates to the SWMUs/AOCs and/or releases subject to investigation.

- E. The Permittee shall prepare and maintain a Health and Safety Plan during the project that assures the RFI activities are conducted in a manner that is protective of human health and the environment.
- F. Due to the uncertainty related to releases from certain SWMUs/AOCs and the complexity of defining the extent of contamination, the Permittee may be required to implement a phased investigation approach that necessitates the submittal of a supplemental RFI Work Plan(s).
- G. The RFI Work Plan(s) will be reviewed in accordance with the procedures set forth in Review and Approval Procedures, Corrective Action Condition XIV. The Permittee shall initiate implementation of said plan(s) within 60 days of receipt of Departmental approval and shall complete implementation in accordance with the schedules contained in the plan(s).

VI. RCRA Facility Investigation (RFI) Report

- A. The Permittee shall submit a RFI Report to the Department and EPA according to the schedule contained in the approved RFI Work Plan Addendum. The RFI Report shall present all information gathered under the EPA-approved RFI Work Plan and Department-approved RFI Work Plan Addendum including a facility description and map showing the property boundary and all SWMUs/AOCs. The RFI Report must contain adequate information to support further corrective action decisions at the facility. Information contained in the RFI Report shall be presented in a format that is consistent with Section 5 of the most recent version of the EPA publication entitled, RCRA Facility Investigation Guidance: EPA 530/SW-89-031.
- B. The RFI Report shall provide an interpretation of the RFI information gathered, supported with documentation, to enable the Department to determine whether stabilization and/or a Corrective Measures Study may be necessary. The RFI Report shall describe the procedures, methods, and results of all investigations of SWMUs/AOCs and associated releases including, as appropriate, but not limited to the following:

1. Characterization of the nature, concentration(s), horizontal and vertical extent and direction/rate of movement of releases from SWMUs/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/AOCs from which releases have been or may be occurring, including 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/AOCs.
5. Assessment of potential risks to the human and environmental receptors (e.g., Baseline Risk Assessment) exposed to release(s) from SWMUs/AOCs.
6. Extrapolations of future contaminant movement 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 the interpretation of data.
9. Results of any stabilization measures previously implemented.

10. Evaluation of data quality which may affect the nature and scope of a Corrective Measure Study as well as the evaluation of corrective measure alternatives thereunder (e.g., identification of any potential bias in the RFI data, and documentation of its precision, accuracy, representativeness, completeness, comparability, validation, etc.).

C. The RFI Report will be reviewed in accordance with the procedures set forth in Review and Approval Procedures, Corrective Action Condition XIV. After review of the RFI Report, if the Department determines that the objectives of the RFI have not been met, the Department may require additional investigation. Upon approval of the RFI Report by the Department, the Department shall advise the Permittee as to the next step in the corrective action process, which may include submittal of a Corrective Measures Study (CMS) Work Plan pursuant to Corrective Action Condition VIII.

VII. Interim Groundwater Monitoring Plan for SWMUs

A. Continued groundwater monitoring is necessary to ensure adequate delineation of the horizontal and vertical extent of groundwater contamination and to demonstrate hydraulic control of the contaminant plume. Within 60 days of receipt of approval of the RFI Report, the Permittee shall prepare and submit to the Department an interim groundwater monitoring plan for existing SWMUs specifying the wells to be monitored, the frequency of monitoring and the analytical parameters/methods based on the findings of the RFI and current site-specific conditions. Additional groundwater monitoring may be necessary for any newly-identified SWMUs, AOCs, or releases from previously identified SWMUs/AOCs.

B. The interim groundwater monitoring plan will be reviewed in accordance with the procedures set forth in Review and Approval Procedures, Corrective Action XIV. The Permittee shall initiate implementation of said plan within 90 days of Departmental approval and shall continue groundwater monitoring in accordance with the approved interim groundwater monitoring plan until approval of a final remedy. At the time of final remedy approval, the Permittee's groundwater monitoring program may be modified to reflect the long-term strategy for demonstrating the effectiveness of the Permittee's groundwater corrective action program.

C. Upon approval of the Permittee's interim groundwater monitoring plan, groundwater-related information and analysis results collected pursuant to the

approved interim groundwater monitoring plan shall be submitted as part of the Quarterly Progress Reports required by Corrective Action Permit Condition XII. Quarterly Progress Reports to which groundwater analysis results are attached shall include a summary and analysis of the groundwater monitoring results for the reporting period, groundwater potentiometric surface maps, groundwater quality trend graphs and a map delineating the boundaries of the contaminant plume. The Quarterly Progress Reports shall identify and discuss any obvious trends, increasing levels of contamination and/or any abnormalities in the data.

VIII. Corrective Measures Study (CMS) Work Plan

- A. If the Department determines that there has been a release of hazardous waste and/or hazardous constituents from a SWMU/AOC that may present a threat to human health or the environment, the Department may require a Corrective Measures Study (CMS), including submittal of a CMS Work Plan and/or CMS Report, and will notify the Permittee in writing of this decision. This notice will identify the hazardous constituent(s) of concern and may specify remedial alternatives to be evaluated by the Permittee during the CMS.
- B. The Department may require the Permittee to evaluate, as part of the CMS, one or more specific potential remedies. These remedies may include a specific technology or combination of technologies that, in the Department's judgment, may be capable of achieving standards for protection of human health and the environment.
- C. The Permittee shall submit a CMS Work Plan to the Department and EPA within ninety (90) days of being notified of the requirement to conduct a CMS. The CMS Work Plan shall be consistent with guidance contained in EPA's RCRA Corrective Action Plan: (Final). May 1994. OSWER Directive 9902.3-2A. At a minimum, the CMS Work Plan shall provide the following information, as applicable:
  - 1. A description of the general approach to investigating and evaluating potential remedies;
  - 2. A definition of the specific objectives of the study;
  - 3. A description of the remedies which will be studied;

4. A description of those potential remedies, which were preliminarily considered, but were dropped from further consideration, including the rationale for elimination;
  5. The specific plans for evaluating remedies to ensure compliance with remedy standards;
  6. The schedules for conducting the study and submitting a Corrective Measures Study Report;
  7. The proposed format for the presentation of information; and
  8. 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.
- D. The CMS Work Plan will be reviewed in accordance with the procedures set forth in Review and Approval Procedures, Corrective Action Condition XIV. The Permittee shall initiate implementation of said plan within sixty (60) days of receipt of Departmental approval and shall complete implementation in accordance with the schedules contained in the plan.

IX. Corrective Measures Study (CMS) Report

- A. The Permittee shall submit a CMS Report to the Department and EPA according to the schedule contained in the approved CMS Work Plan. The CMS Report shall present all information gathered under the approved CMS Work Plan and shall be consistent with guidance contained in EPA's RCRA Corrective Action Plan: (Final). May 1994. OSWER Directive 9902.3-2A. The CMS Report shall summarize the results of the investigations for each remedy studied and of any bench-scale or pilot tests conducted. The CMS Report shall include, but not be limited to, the following information:
1. Evaluation of performance, reliability, ease of implementation, and potential impacts of each remedy studied, including safety impacts, cross-media impacts, and control of exposure to any residual contamination.

2. Assessment of the effectiveness of each remedy in achieving adequate control of sources and cleanup of the hazardous waste or hazardous constituents released from SWMUs/AOCs.
  3. Assessment of the time required to begin and complete each remedy.
  4. Estimate of the costs of implementing each remedy.
  5. Recommendation of remedy and rationale for selection.
  6. Assessment of institutional requirements, such as state or local Permit requirements, or other environmental or public health requirements which may substantially affect implementation of the remedy.
- B. The CMS Final Report shall contain adequate information to support the Department in the remedy approval decision-making process.
- C. The CMS Final Report will be reviewed in accordance with the procedures set forth in Review and Approval Procedures, Corrective Action Condition XIV. The Department will approve a final remedy as specified in Corrective Action Condition X.

X. Final Remedy Approval

Following approval of the CMS Final Report or equivalent, the Department will prepare a Statement of Basis (SB) summarizing the corrective measures alternatives that were evaluated, including justification for the final remedy proposed by the Permittee.

Following preparation of the SB by the Department, a Permit modification will be initiated pursuant to 40 CFR 270.41 or 270.42(c), as applicable, to implement the final remedy.

Upon completion of the public participation activities associated with the permit modification to implement the proposed final remedy, the Department will approve a final remedy that will: 1) be protective of human health and the environment; 2) 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 might pose a threat to human health and the environment; and 3) meet all applicable federal, state, and local laws and regulations.

XI. Financial Assurance for Corrective Action

- A. Within 120 days after this Permit has been modified to include a final remedy for any SWMU/AOC or release, the Permittee shall demonstrate continuous compliance with the RCRA financial assurance requirements in effect at that time for corrective action being performed under state law. The effective financial assurance requirements for corrective action shall be consistent with and/or substantially equivalent to that specified in either final 40 CFR Part 264 Subpart S corrective action regulations or 40 CFR Part 264 Subpart H, as incorporated by reference in 10 CSR 25-7.264. The amount of financial assurance shall be based on the Permittee's cost estimate for the approved final remedy, which is contained in the approved CMS Final Report or equivalent.
- B. Annually by March 1, the Permittee shall adjust the corrective action cost estimate to account for inflation in accordance with 40 CFR 264.142(b) and any other changes in the costs associated with implementation, operation, maintenance and monitoring of the approved final remedy. If the cost estimate increases, documentation of adequate financial assurance for that increase shall be provided to the Department within 60 days following the increase in the cost estimate.

XII. Quarterly Progress Reports

- A. The Permittee shall submit to the Department and EPA signed Quarterly Progress Reports covering all corrective action activities (e.g., Stabilization, RCRA Facility Investigation, Interim Groundwater Monitoring, Corrective Measures Study) conducted during the preceding calendar quarter pursuant to the provisions of this Permit. Each Quarterly Progress Report shall be due no later than 30 days following the end of the preceding calendar quarter. The first Quarterly Progress Report is due within 30 days of the end of the calendar quarter in which this Permit becomes effective. These Quarterly Progress Reports shall be submitted until such time as the corrective action activities required by this Permit have been completed. The Quarterly Progress Reports shall address the reporting requirements of Corrective Action Condition VII. for the time period being reported and shall include the following information:
  - 1. A description of the work completed.
  - 2. Summaries of all problems or potential problems encountered during the reporting period and actions taken to rectify the problems.

3. Projected work for the next reporting period.
4. Any instances of noncompliance with the corrective action requirements of this Permit not otherwise required to be reported elsewhere in this Permit.
5. Groundwater-related information and analysis results collected pursuant to the approved interim groundwater monitoring plan.

B. Upon request, the Permittee shall make copies of other information (e.g., field notes/log book entries, etc.) available to the Department and EPA.

### XIII. Supplemental Data

All raw data, such as laboratory reports, field notes, 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 at the permitted facility during the term of this Permit, including the term of any reissued Permits.

### XIV. Review and Approval Procedures

Following submission of any plan or report pertaining to corrective action activities (excluding the Quarterly Progress Reports), the Department will review and either approve or disapprove the plan or report in writing. The Permittee shall implement all approved plans in accordance with the provisions of this Permit and the schedule(s) contained in such plan(s).

If the Department disapproves a plan or report, the Department will notify the Permittee in writing of the plan's or report's deficiencies and specify a due date for submittal of a revised plan or report.

If the Department disapproves a revised plan or report, the Department may modify the plan or report and notify the Permittee of the modifications. The plan or report as modified by the Department is the approved plan or report, and shall become part of this Permit.

If the Permittee disagrees with any Department-initiated plan or report modifications, and a mutually acceptable resolution of such modifications can not be informally reached, any appeal of the Department-initiated modifications shall be filed in accordance with Section 260.395.11, RSMo., and 10 CSR 25-8.

### XV.

Corrective Action Schedule of Compliance

- A. The Permittee shall comply with the schedule for the planned activities as summarized on Table I attached hereto.
- B. The Permittee shall comply, as necessary, with the schedule(s) for contingent corrective action activities as specified in the Corrective Action Conditions Section of this Permit and as summarized on Table II, attached hereto.

XVI. Submittal of Required Information

- A. The Permittee shall submit three copies of all reports, documents, or plans/specifications required under the Corrective Action Conditions of this Permit to:

Chief, Permits Section  
Missouri Department of Natural Resources  
Hazardous Waste Program  
1730 E. Elm Street  
P.O. Box 176  
Jefferson City, MO 65102

- B. The Permittee shall submit two copies of all reports, documents, or plans/specifications required under the Corrective Action Conditions of this Permit to:

Chief, RCRA Corrective Action and Permits Branch  
U.S. Environmental Protection Agency Region VII  
Air, RCRA and Toxics Division  
726 Minnesota Avenue  
Kansas City, KS 66101

XVII.

Corrective Action Summary Tables

TABLE I. Summary of Planned Corrective Action Submittals Pursuant to this Permit.

PLANNED REQUIREMENTS	DUE DATE	CORRECTIVE ACTION CONDITION
RFI Work Plan Addendum	Within 60 days of the effective date of this Permit.	V.A.
RFI Report	In accordance with the schedule in the approved RFI Work Plan Addendum.	VI.A.
Interim Groundwater Monitoring Plan	Within 60 days of RFI Report Approval.	VII.A.
Interim Groundwater Monitoring Plan Data	In the Quarterly Progress Report following each groundwater monitoring event.	VII.B.
CMS Work Plan	Within 90 days of receipt of Department's notification.	VIII. C
CMS Report	In accordance with the schedule in the approved CMS Work Plan.	IX.A.
Corrective Action Financial Assurance	Within 120 days of Permit modification to include final remedy and within 60 days following any increase in the cost estimate.	XI.A. and XI.B.
Quarterly Progress Reports	No later than 30 days following the end of the preceding calendar quarter. First quarterly report is due within 30 days of the end of the calendar quarter in which this Permit becomes effective.	XII. A.

TABLE II. Summary of Contingent Corrective Action Submittal Pursuant to this Permit.

CONTINGENT REQUIREMENTS	CONTINGENT REQUIREMENTS	CORRECTIVE ACTION CONDITION
Written Notification of- Newly-identified SWMU(s) and AOC(s)	No later than 15 days after discovery	II.A.
SWMU/AOC Assessment Work Plan	Within 60 days of receipt of Department's request.	II.B.
SWMU/AOC Assessment Report	In accordance with the schedule in the approved SWMU/AOC Assessment Work Plan.	II.D
Written Notification of Newly-identified Releases	No later than 15 days after discovery.	III A.
Newly-identified Release Work Plan	Within 60 days of receipt of Department's request.	III.B.
Newly-identified Release Report	In accordance with the schedule in the approved New-Identified Release Work Plan.	III.D.
Stabilization Notification	Within 24 hours of discovery of need for stabilization.	IV.A.
Written notification than Stabilization is not Effective	No later than 10 days after determination.	IV.C.
Other Information	As requested by the Department	XII.B.

XVIII. Corrective Action Figures

FIGURE 1. Facility Diagram Depicting SWMUs/AOC.

