BASF Corporation
McIntosh, Alabama
EPA I.D. Number ALD 001 221 902

FACT SHEET

A draft modification to the Alabama Hazardous Waste Management and Minimization Act (AHWMMA) permit has been prepared for the BASF Corporation facility. This hazardous waste facility is located in McIntosh, Alabama. This fact sheet has been prepared to briefly advise the public of the principal permitting, legal and policy issues of the draft permit.

I. PERMIT PROCESS

The purpose of the permitting process is to allow the State and the public to evaluate BASF's ability to comply with the hazardous waste management requirements of the AHWMMA, as amended. BASF must comply with hazardous waste management conditions set forth in the permit during the effective period of the permit, which is five (5) years from the last permit renewal (May 10, 2017).

II. PROCEDURES FOR REACHING A FINAL DECISION

The Alabama Department of Environmental Management (ADEM or Department) is proposing to issue BASF a permit modification for the operating permit.

ADEM Admin. Code r. 335-14-8-.08(6)(b)1. requires that the public be given a 45-day comment period for each draft permit. The comment period will begin November 27, 2020, which is the date of publication of the public notice in major local newspaper(s) of general circulation, and will end on January 11, 2021. The public notice will also be broadcast over local radio station(s).

Any person interested in commenting on the application or draft permit must do so within the 45-day comment period discussed above.

All persons wishing to comment on any of the permit conditions or the permit application should submit their comments in writing to the Alabama Department of Environmental Management, Permits and Services Division, 1400 Coliseum Blvd. (36110-2059), P.O. Box 301463 (36130-1463) Montgomery, Alabama, ATTENTION: Mr. Russell A. Kelly.

ADEM will consider all written comments received during the comment period while making a permit decision for this facility. When the Department makes its final permit decision, notice will be given to the applicant and each person who has submitted written comments or requested notice of the final permit decision.

III. FACILITY DESCRIPTION

BASF, formerly known as Ciba Specialty Chemicals, occupies approximately 1500 acres within an industrial park along the Tombigbee River. BASF manufactures additives used in plastics and lubricants.

To manage hazardous waste generated by their manufacturing processes, BASF operates an on-site treatment, storage, and disposal (TSD) facility. This facility consists of a hazardous waste above ground landvault and a hazardous waste fueled boiler. Approved on-site hazardous waste residuals as well as other on-site solid waste are transported by truck from process areas to the TSD. In order to operate a TSD facility, an AHWMMA operating permit is required.

The AHWMMA operating permit sets operating parameters in accordance with the ADEM Administrative Code to ensure the safe operation of the facility. The permit for this facility addresses the on-site hazardous waste disposal in the landvault and treatment in the boiler. Post-closure care for 7 closed landfill or surface impoundments addressing cover/cap maintenance and a leachate management system are included. A groundwater monitoring and corrective action program is also included to address groundwater contamination associated with the past operations of the closed units. The program currently includes a pump and treat system for the alluvial aquifer and an enhanced source control component for the Miocene aquifer.

IV. SUMMARY OF PROPOSED MODIFICATIONS

The proposed modification includes modifying Table 2-1 of Appendix I within the Permit Application. This modification will clarify the operation of the hazardous waste boiler and its waste streams.

V. CHANGES TO THE EXISTING PERMIT

The specific changes to the permit are explained below.

Section/Appendix	**Reason**
Permit Cover Page	Updated major modification date
Permit Signature Page	Updated major modification date
Permit Table of Contents	Updated major modification date
Appendix I of the Permit Application	Table 2-1 was modified to remove the exact percentages of constituents being burned in the boiler.

VI. TECHNICAL CONTACT

Ben King
Engineering Services Section
Industrial Hazardous Waste Branch, Land Division
Alabama Department of Environmental Management
1400 Coliseum Blvd (36110-2059)
P.O. Box 301463 (36130-1463)
Montgomery, Alabama
(334) 394-4330
Ben.king@adem.alabama.gov

HAZARDOUS WASTE FACILITY PERMIT

PERMITTEE:	**BASF Corporation**
ADDRESS:	**1379 Ciba Road** **McIntosh, AL 36553**
PERMIT NUMBER:	**ALD 001 221 902**
UNITS PERMITTED:	**Above Ground Landvault #2** **Closed Above Ground Landvault #1** **Closed Class "C" Landfill** **Closed Biological Sludge Landfill** **Closed Rectangular/Triangular Ponds** **Closed Sludge 1 - 4/5-day /10-day /Equalization Impoundments** **Closed Dilute/Diazinon Destruction Impoundments** **Closed GM-44 Impoundment** **Boiler #7**
ISSUANCE DATE:	**May 10, 2017** **June 21, 2019 Modification 1 - Minor** **XX/XX/XXXX Modification 2 – Major**
EFFECTIVE DATE:	**May 10, 2017**
EXPIRATION DATE:	**May 9, 2022**

This Permit is issued pursuant with the Code of Alabama 1975, §§ 22-30-1-et. seq., as amended, and regulations adopted thereunder and the Hazardous Wastes Management and Minimization Act and in accordance with the plans and specifications and applications filed with the Department subject to the conditions appended hereto, all of which are considered a part of this Permit. This Permit shall be subject to all applicable laws of the State of Alabama, rules and regulations and orders of the Department of Environmental Management and shall be effective from the date of issuance.

_____

Alabama Department of Environmental Management

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
HAZARDOUS WASTE PERMIT

Permittee:

OWNER:
BASF Corporation
100 Campus Drive
Florham Park, New Jersey 07932
Morris County

OPERATOR:
BASF Corporation
1379 Ciba Road
McIntosh, Alabama 36553
Washington County

Permit Number: ALD 001 221 902
Identification Number: ALD 001 221 902

Pursuant to the Alabama Hazardous Wastes Management and Minimization Act (AHWMMA), Code of Ala. 1975, Section 22-30-1, et. seq., as amended, and attendant regulations promulgated thereunder by the Alabama Department of Environmental Management (ADEM or the Department), a permit is issued to BASF Corporation for the facility located in McIntosh, Alabama, at latitude N 31° 16' 37" and longitude W 88° 00' 16".

The Permittee must comply with all terms and conditions of this permit, which consists of the conditions set forth herein (including those in any attachments), and the regulations applicable to the Permittee's facility contained in Chapters 335-14-1, 335-14-2, 335-14-5, 335-14-8, and 335-14-9 of the ADEM Administrative Code of Regulations (hereinafter referred to as the "ADEM Admin. Code r."). Applicable regulations are those which are in effect on the date of issuance of this permit.

This permit is based on the assumption that the information submitted in the permit application attached to the Permittee's letter dated April 6, 2016, as modified by subsequent amendments dated May 27, 2016, November 3, 2016, January 12, 2017, January 13, 2017, February 9, 2017, February 20, 2017, May 1, 2019, and September 1, 2020 (hereby incorporated by reference and hereafter referred to as the Application) is accurate and that the facility will be constructed and operated as specified in the Application. Any inaccuracies found in this information could lead to the termination or modification of this permit in accordance with ADEM Admin. Code r. 335-14-8-.04(2), 335-14-8-.04(3), and 335-14-8-.04(4) and could lead to potential enforcement action. The Permittee must inform ADEM of any deviation from or changes in the information provided in the Application that would affect the Permittee's ability to comply with the applicable regulations or permit conditions.

This permit is effective as of May 10, 2017, as modified on June 21, 2019 and XX/XX/XXXX and shall remain in effect until May 9, 2022 unless revoked and reissued, or terminated under ADEM Admin. Code r. 335-14-8-.04(2) and 335-14-8-.04(4) or continued in accordance with ADEM Admin. Code r. 335-14-8-.05(2).

Alabama Department of Environmental Management

Date Signed

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Documents Incorporated By Reference:

Part A and Part B Permit Application submitted on April 6, 2016, as modified by subsequent amendments dated May 27, 2016, November 3, 2016, January 12, 2017, January 13, 2017, February 9, 2017, February 20, 2017, May 1, 2019, and September 1, 2020.

Remediation Plan – Former Production Areas 7 and 8 dated October 2015, as modified by subsequent amendments dated January 29, 2016.

The following CERCLA documents are incorporated to serve as documentation of the Corrective Measures Implementation plan for the site:

Record of Decision (ROD) – Operable Unit (OU) 1 dated September 28, 1989

Remedial Investigation/Feasibility Study (RI/FS) and Remedial Design (RD), OU-1 dated September 1989

ROD– OU 2 dated September 30, 1991

RI/FS, OU-2 dated September 1991

RD, OU-2 dated September 1996

ROD – OU 3 dated July 25, 1995

RI/FS OU-3 dated August 1988

OU-3 Final RI Addendum Report dated July 1994

RD OU-3 dated October 1997

ROD – OU 4 dated July 14, 1992

RI/FS OU-4 dated July 1992

RD OU-4 dated September 1996

PART I

STANDARD AND GENERAL FACILITY CONDITIONS

I.A. EFFECT OF PERMIT

Issuance of this permit does not authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local law or regulations. Compliance with the terms of this permit does not constitute a defense to any action brought under the AHWMMA, or any other law governing the protection of public health or the environment, for any imminent and substantial endangerment to human health, welfare, or the environment.

I.B. SEVERABILITY

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.

I.C. DUTIES AND REQUIREMENTS

1. Duty to Comply

   The Permittee shall comply with all conditions of this permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit. Any permit noncompliance, other than noncompliance authorized by an emergency permit, constitutes a violation of the AHWMMA, and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application.

2. Duty to Reapply

   a. If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit.

   b. The Permittee must submit an application for a new permit for both post-closure and Solid Waste Management Unit (SWMU) corrective measures at least 180 calendar days before the expiration of this permit. The Permittee must reapply in order to fulfill the 30-year post-closure care period required by ADEM Admin. Code Rule 335-14-5-.07(8)(a)1. The Department may shorten or extend the post-closure care period applicable to the hazardous waste facility in accordance with ADEM Admin. Code Rules 335-14-5-.07(8)(a)2 and 335-14-8-.03(1)(b).

3. Need to Halt or Reduce Activity Not a Defense

   It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Duty to Mitigate

In the event of noncompliance with this permit, the Permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment.

5. Proper Operation and Maintenance

The Permittee shall, at all times, properly operate and maintain all facilities and systems of treatment, monitoring, and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance (O&M) includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this permit.

6. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause as specified in ADEM Admin. Code Rules 335-14-8-.04(2), 335-14-8-.04(3), and 335-14-8-.04(4). The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay any permit condition.

7. Property Rights

Issuance of this permit does not convey any property rights of any sort, nor any exclusive privilege.

8. Duty to Provide Information

The Permittee shall furnish to the Department, within a reasonable time as determined by the Department, any relevant information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Department, upon request, copies of records required to be kept by this permit.

9. Inspection and Entry

The Permittee shall allow duly designated officers and employees of the Department or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

a. Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and,

d. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the AHWMMA, any substances or parameters at any location. The Permittee shall have the opportunity to split samples during sampling.

10. Monitoring and Records

a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from ADEM Admin. Code Rule 335-14-2-Appendix I or the methods specified in Appendix B of the permit application. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846 (latest edition), Methods for Chemical Analysis of Water and Wastes (EPA-600/4-79-020), Standard Methods for the Examination of Water and Wastewater (latest edition), the methods specified in Appendix B of the permit application, or an alternative method approved by ADEM. [ADEM Admin. Code Rule 335-14-8-.03(1)(j)1.]

b. The Permittee shall maintain at the facility records of all monitoring information including all calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, the certification required by ADEM Admin. Code Rule 335-14-5-.05(4)(b)9., records of all data used to prepare documents required by this permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the certification, application, sample, measurement, report or record, or until corrective action is completed, whichever date is later. This period may be extended by the Department at any time and is automatically extended during the course of any unresolved enforcement action regarding this facility. [ADEM Admin. Code Rules 335-14-5-.05(5)(b) and 335-14-8-.03(1)(j)2.]

c. The Permittee shall maintain, at the facility, records of all groundwater monitoring wells, piezometers, and associated groundwater surface elevations throughout the post-closure care period. These records shall include the surveyed location, surveyed elevation, surveyed elevation reference point, total depth, screened interval, construction details, well log, and all other pertinent information for each well and piezometer.

d. Records for monitoring information shall include:

i. The date(s), exact place, and times of sampling or measurements;

ii. The names of individual(s) who performed the sampling or measurements;

iii. The date(s) analyses were performed;

iv. The names of individual(s) who performed the analyses;

v. The analytical techniques or methods used; and,

vi. The results of such analyses.

e. The following documents and information shall be maintained throughout the post-closure care period at the Facility.

i. Complete copy of this permit and the permit application.

ii. Operating record as required by ADEM Admin. Code Rule 335-14-5-.05(4) and this permit.

iii. Copies of all plans, reports, inspection schedules, inspection logs as required by ADEM Admin. Code Rule 335-14-5 and this permit.

11. Signatory Requirements

All applications, reports or information required by this permit and submitted to the Department shall be signed and certified in accordance with ADEM Admin. Code Rules 335-14-8-.02(2) and 335-14-8-.03(1)(k).

12. Reporting Requirements

a. Planned Changes

The Permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility and any solid waste management units identified under Part IV of this permit.

b. Anticipated Noncompliance

The Permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

c. Transfer of Permits

This permit may be transferred to a new owner or operator only if it is modified or revoked and reissued pursuant to ADEM Admin. Code Rule 335-14-8-.04(1) or 335-14-8-.04(3)(a)1.(vii). Before transferring ownership or operation of the facility during its post-closure period, the Permittee shall notify the new owner or operator, in writing, of the requirements of ADEM Admin. Code Rules 335-14-5 and 335-14-8 and this permit.

d. Monitoring Reports

Monitoring results shall be reported at the intervals specified elsewhere in this permit.

e. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted to the Department no later than 14 calendar days following each schedule date.

f. Twenty-Four Hour Reporting

i. The Permittee shall report to the Department any noncompliance with this permit that may endanger human health or the environment. Any such information shall be reported orally within 24 hours from the time the Permittee becomes aware of the circumstances. This report shall include, but is not limited to, the following:

(I) Information concerning the release of any hazardous waste which may endanger public drinking water supplies; and,

(II) Information concerning the release or discharge of any hazardous waste, or hazardous waste constituents, or of a fire or explosion at the facility, which could threaten the environment or human health outside the facility.

ii. The description of the occurrence and its cause shall include:

(I) Name, address, and telephone number of the owner or operator;

(II) Name, address, telephone number, and EPA Identification Number of the facility;

(III) Date, time, and type of incident;

(IV) Name and quantity of material(s) involved;

(V) The extent of injuries, if any;

(VI) An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and,

(VII) Estimated quantity and disposition of recovered material that resulted from the accident.

iii. A written submission shall also be provided within 5 calendar days of the time that the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its

cause; the periods of noncompliance (including exact dates and times); whether the noncompliance has been corrected, and if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

g. Other Noncompliance

The Permittee shall report to the Department all instances of noncompliance not otherwise required by Permit Conditions I.C.12.d., I.C.12.e., or I.C.12.f. at the time any other reports required by this permit are submitted. The reports shall contain the information required by Permit Condition I.C.12.f.

h. Other Information

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information. In addition, upon request, the Permittee shall furnish to the Department any information related to compliance with this permit.

13. Certification of Construction

The Permittee may not commence treatment, storage or disposal of hazardous waste or contaminated media at any new or modified portion of the facility until the Permittee has submitted to the Department, by certified mail or hand-delivery, a letter (together with the certification by the Construction Quality Assurance (CQA) officer required by ADEM Admin. Code Rule 335-14-5-.02(10)(d) and any other certifications required by this permit or ADEM Admin. Code Rule 335-14) signed by the Permittee and an Alabama-registered professional engineer, stating that the facility has been constructed or modified in compliance with this permit where appropriate; and,

a. The Department has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of this permit; or

b. The Department has either waived the inspection or has not notified the Permittee, within 15 calendar days of the notification from the Permittee, of its intent to inspect. [ADEM Admin. Code Rule 335-14-8-.03(1)(1)2.]

14. The Permittee shall assure that all measures necessary to maintain and/or achieve compliance with all applicable requirements of ADEM Admin. Code Rules 335-14 are taken during the active life of the facility and throughout the post-closure care period, corrective action period, and the term of this permit.

15. In the event that circumstances beyond the Permittee's control arise to prevent achievement of any deadline set forth by this permit, the Permittee may immediately, upon the occurrence thereof, request an extension by sending a written request to the Department explaining the need for the extension. The Department may, after consideration of the circumstances, grant the extension. Requests for extensions may require a permit modification pursuant to ADEM Admin. Code Rule 335-14-8-.04(2) or (3).

I.D. DEFINITIONS

For the purposes of this permit, terms used herein shall have the same meaning as those in ADEM Admin. Code Rules 335-14-1, 335-14-2, 335-14-5, and 335-14-8, unless this permit specifically provides otherwise. Where terms are not defined in the regulations or this permit, 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), for the purposes of this permit, includes any area having a probable release of a hazardous waste or hazardous constituent which is not from a solid waste management unit and is determined by the Department to pose a current or potential threat to human health or the environment. Such areas of concern may require investigations and remedial action as required under Section 3005(c)(3) of the Resource Conservation and Recovery Act and ADEM Admin. Code Rule 335-14-8-.03(3)(b)2. in order to ensure adequate protection of human health and the environment.

"Contamination," for the purposes of this permit, refers to the presence of any hazardous constituent in a concentration that exceeds the naturally occurring concentration of that constituent in the immediate vicinity of the facility (*i.e.*, areas not affected by the facility).

"Extent of contamination," for the purposes of this permit, is defined as the horizontal and vertical areas in which the concentrations of hazardous constituents in the environmental media being investigated are above detection limits or background concentrations indicative of the region, whichever is appropriate as determined by the Department.

"Hazardous constituents," for the purposes of this permit, are those substances listed in ADEM Admin. Code Rule 335-14-2-Appendix VIII and/or ADEM Admin. Code Rule 335-14-5-Appendix IX and include hazardous constituents released from solid waste, hazardous waste, and hazardous waste constituents that are reaction by-products.

“Land Use Controls,” for the purposes of this permit, is as defined by ADEM Admin. Code Rule 335-5-1-.03.

“Method detection limit” (MDL), for the purposes of this permit, means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

“Mixed waste,” for the purposes of this permit, means a solid waste that is a mixture of hazardous waste (as defined in ADEM Admin. Code Rule 335-14-2-.01(3)) and radioactive waste (as defined in 10 CFR 61.2). The radioactive component of mixed waste is subject to regulation by the Atomic Energy Act (AEA)/Nuclear Regulatory Commission (NRC). The non-radioactive chemically hazardous component of mixed waste is subject to regulation by the AHWMMA and ADEM Admin. Code Rule 335-14.

“Operating day,” for the purposes of this permit, means any day on which hazardous waste is treated, stored, or disposed of in a unit. For example, each day that a hazardous waste storage unit contains hazardous waste is an operating day; as is each day that a disposal unit contains or receives hazardous waste, or each day that hazardous waste is treated in a treatment unit.

"Release," for the purposes of this permit, includes any spilling, leaking, pouring, emitting, emptying, discharging, injecting, escaping, leaching, pumping, or disposing into the environment of any hazardous waste or hazardous constituent.

"Solid waste management unit" (SWMU), for the purposes of this permit, includes any unit that has been used for the treatment, storage or disposal of solid waste at any time, irrespective of whether the unit is or ever was intended for the management of solid waste. RCRA-regulated hazardous waste management units are also solid waste management units. SWMUs include areas that have been contaminated by routine and systematic releases of hazardous waste or hazardous constituents, excluding one-time accidental spills that are immediately remediated and cannot be linked to solid waste management activities (*e.g.*, product or process spills).

“Storm event,” for the purposes of this permit, is defined as a 1-year, 24-hour storm event or rainfall that measures 1-inch or greater in 1 hour or less. Rainfall measurements may be taken at the site, or the closest official weather monitoring station may be used.

I.E. EXPIRATION AND CONTINUATION OF PERMIT

This permit and all conditions herein will remain in effect beyond this permit's expiration date if the Permittee has submitted a new application as required by Permit Condition I.C.2. and, through no fault of the Permittee, the Department has not issued a new permit.

I.F. WASTE MINIMIZATION

1. Certification Requirements

   Pursuant to ADEM Admin. Code Rule 335-14-5-.05(4)(b)9., the Permittee must certify, no less often than annually, that:

   a. The Permittee has a program in place to reduce the volume and toxicity of hazardous waste to the degree determined by the Permittee to be economically practicable; and,

   b. The proposed method of treatment, storage or disposal is the most practicable method available to the Permittee and that it minimizes the present and future threat to human health and the environment.

2. Recording Requirements

   The Permittee shall maintain copies of this certification in the facility operating record as required by ADEM Admin. Code Rule 335-14-5-.05(4).

I.G. COST ESTIMATES

1. The Permittee shall maintain detailed written cost estimates, in current dollars, at the location specified in Permit Condition I.C.10.e. and on file with ADEM in accordance with ADEM Admin. Code Rules 335-14-5-.08(3), (5), and (10).

2. All cost estimates must be updated annually as required by ADEM Admin. Code Rules 335-14-5-.08(3)(b), 335-14-5-.08(5)(b), and 335-14-5-.08(10)(b).

3. The cost estimate shall be maintained and submitted in the form designated by the Department.

4. The Permittee must update the cost estimate no later than 30 calendar days after the Department has approved a modification to the Closure Plan, Post-Closure Plan, or Corrective Action Plan, or any other plan required or referenced by this permit, if the change in the plan results in an increase in the amount of the cost estimate.

I.H. FINANCIAL ASSURANCE

1. The Permittee shall demonstrate continuous compliance with ADEM Admin. Code Rule 335-14-5-.08 by providing documentation of financial assurance in at least the amount that equals or exceeds the cost estimate. Changes in financial assurance mechanisms must be approved by the Department.

2. The Permittee shall submit itemized statements for all capital expenditures and a complete, revised post-closure and corrective action cost estimate to the Department when requesting approval for a reduction in the financial assurance mechanism.

I.I. PERMIT MODIFICATIONS

The Permittee shall request a permit modification whenever changes in operating plans or facility design affect any plan (*e.g.*, closure, groundwater monitoring, post-closure, or corrective action) required or referenced by this permit. The Permittee must submit a written request for a permit modification, pursuant to the requirements of ADEM Admin. Code Rule 335-14-8-.04(2), at least 60 calendar days prior to the proposed change in the facility design or operation.

I.J. REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE DEPARTMENT

One hard and one electronic (an optical character recognition or text searchable) copy of all reports, notifications, or other submissions that are required by this permit should be sent via certified mail or given to:

Chief, Land Division
Alabama Department of Environmental Management
P.O. Box 301463 (Zip 36130-1463)
1400 Coliseum Boulevard (Zip 36110-2059)
Montgomery, Alabama

PART II

POST-CLOSURE CARE

II.A. POST-CLOSURE CARE PERIOD

The post-closure care period shall extend for a period of thirty (30) years after the date of issuance of a post-closure permit unless shortened or extended pursuant to ADEM Admin. Code Rule 335-14-5-.07(8). The post-closure care period shall automatically extend through the end of the compliance period specified in Part III of this permit.

II.B. POST-CLOSURE PROCEDURES AND USE OF PROPERTY

1. Post-Closure Activities

   The Permittee shall conduct post-closure care activities, in accordance with Appendix K of the permit application and as required by ADEM Admin. Code Rules 335-14-5-.07 and 335-14-5-.14(11)(d), for each hazardous waste management unit listed in Table II.1. Post-closure care shall continue from the effective date of this permit and shall continue throughout the post-closure care period.

2. Security

   The Permittee shall comply with the security provisions of ADEM Admin. Code Rule 335-14-5-.02(5) and as described in Appendix C of the permit application.

3. Disturbance of Closed Unit(s)

   The Permittee shall not allow the disturbance of the integrity of the final cover, liners, any components of the containment system, or the function of the facility's monitoring systems during the post-closure care period for any unit identified in Table II.1.

4. The Permittee shall comply with the requirements for landfills, as follows (ADEM Admin. Code R. 335-14-5-.14(11)(b)):

   a. Maintain the integrity and effectiveness of the landfills' final cover, including making repairs to the cap, as necessary, to correct the effects of settling, subsidence, erosion, or other events;

   b. Maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of ADEM Admin. Code Rule 335-14-5-.06 and Part III of this permit;

   c. Prevent run-on and run-off from eroding or otherwise damaging the final cover; and,

   d. Protect and maintain surveyed benchmarks used in complying with the surveying and recordkeeping requirements of ADEM Admin. Code Rule 335-14-5-.14(10).

II.C. INSPECTIONS

1. The Permittee shall inspect the components, structures, and equipment at the site in accordance with the inspection schedule as described in Appendix D of the permit application, the post-closure care plan as described in Appendix K of the permit application, and as required by ADEM Admin. Code Rule 335-14-5-.07.

2. Monitoring and Inspection

   The Permittee shall inspect the closed hazardous waste management unit(s) listed in Table II.1 in accordance with the inspection schedule provided in Section 5.0 of Appendix D to detect any evidence of deterioration or improper operation as described in Appendix D of the permit application and as required under ADEM Admin. Code Rules 335-14-5-.07 and 335-14-5-.14. The inspections shall specifically include evaluation of the following items:

   a. Integrity of the final cover (erosion, ponding, subsidence, cracking, surface seeps *etc.*);

   b. Growth and stabilization of vegetative cover;

   c. Run-on and run-off control system;

   d. Groundwater monitoring wells;

   e. Survey benchmarks;

   f. French drains; and,

   g. Gas vents risers.

TABLE II.1

POST-CLOSURE CARE UNITS

UNIT NAME	UNIT DESCRIPTION	CLOSED-IN-PLACE CAPACITY (yd^3)	DESCRIPTION OF UNIT*	LOCATION OF UNIT**
Landvault #1	Landvault	185,530[1]	Appendix K-Part II.C	N23+12.00 E68+34.00[3]
Class "C" Landfill	Landfill	116,970[1,7]	Appendix K-Part II.A.1	N24+45.00 E73+77.00
Biological Sludge Landfill	Landfill	116,741[1,7]	Appendix K-Part II.A.2	N02+48.00 E46+17.00
Rectangular/Triangular Ponds	Pond	23,064[1,7,8]	Appendix K-Part II.A.3	N02+48.00 E46+17.00[4]
Sludge 1 - 4/5-day /10-day /Equalization Impoundments	Impoundment	733,419[1,7]	Appendix K-Part II.B.4 - 7	N22+68.00 E61+03.00[6]
Dilute / Diazinon Destruction Impoundments	Impoundment	534,825[1,7,8]	Appendix K-Part II.B.2 - 3	N07+00.00 E55+07.00[5]
GM-44 Impoundment	Impoundment	149,102[1,7,8]	Appendix K-Part II.B.1	N04+09.00 E32+15.00

Footnote:

* Location in permit application containing description (text) and location (figure) of unit.

** Unit(s) Eastings and Northings coordinates

1 Total in-place capacity excludes cap (generally cap thickness is 3 to 4 ft).

2 Location of descriptive text and other pertinent data in the permit application.

3 Coordinates of the geographical center of the unit.

4 The Rectangular and Triangular Ponds were closed as a single unit.

5 The Diazinon Destruct and Dilute Impoundments were closed as a single unit.

6 Sludge Impoundments #1 through #4, the 5-day Impoundment, the 10-day Impoundment, and the Equalization Impoundment were closed as a single unit.

7 Closed in place capacities not available for the "Class C", Biological Sludge Landfills nor the Sludge Impoundments #1 through #4. The listed capacities were estimated.

8 Closed as "Contingency Closures" with all hazardous wastes removed from the unit.

PART III

GROUNDWATER MONITORING AND CORRECTIVE ACTION

III.A. REQUIRED PROGRAM(S)

1. Groundwater monitoring shall consist of the General Groundwater Monitoring Program of Permit Condition III.B. and the corrective action program contained in Permit Condition III.E.

2. The Permittee shall commence groundwater monitoring as required by this permit no later than 120 calendar days after the effective date of this permit.

III.B. GENERAL GROUNDWATER MONITORING PROGRAM

1. Well Location, Installation and Construction

The Permittee shall install and/or maintain a groundwater monitoring system to comply with the requirements of ADEM Admin. Code Rules 335-14-5-.06(8), 335-14-5-.06(9), 335-14-5-.06(10), and 335-14-5-.06(11) as applicable and as specified below:

a. The Permittee shall maintain all groundwater monitoring wells at the facility as identified in Table III.1. of this permit, at the locations specified on Figure L-1 of the permit application, and any other groundwater monitoring wells specified by Permit Condition III.B.1.d. and III.B.1.e.

i. All groundwater monitoring wells shall be maintained in accordance with the plans and specifications presented in Appendix L of the permit application and in accordance with ADEM Admin. Code Rule 335-14-5-.06.

ii. A groundwater monitoring well shall not be removed from any monitoring program specified in this permit without an approved permit modification pursuant to Permit Condition III.I.

iii. If a groundwater monitoring well is damaged, the Permittee shall immediately notify the Department in writing, which includes a description of the well repair activities to be conducted. The well repair procedures must be approved by the Department prior to implementation. Within 30 calendar days after the well is repaired, the Permittee shall submit a written notification to the Department that the well repair activities were conducted in accordance with the approved procedures.

iv. If a groundwater monitoring well is deleted from the monitoring program(s) required by this permit in accordance with Permit Conditions III.B.1.a.ii. and I.I., it shall be abandoned within 90 calendar days after deletion using procedures to be approved by the Department. Within 30 calendar days after the well is abandoned, the Permittee shall submit a

written notification to the Department that the well abandonment activities were conducted in accordance with the approved procedures.

b. Groundwater monitoring wells OW-1, M-3, M-4, M-5, M-6, M-7, M-8, M-9, M-10, M-11, M-13, M-14, M-15, MD-2, MD-9, MD-11 and MD-12,shall define the point of compliance for the entire facility, including all operating and closed units.

c. The Permittee shall maintain groundwater monitoring well(s) MD-1, MD-5, M-1, M-2, and MW-12A as the background monitoring well(s) for the entire facility as specified in Appendix L of the permit application.

d. The Permittee shall install and maintain additional groundwater monitoring wells as necessary to assess changes in the rate and extent of any plume of contamination or as otherwise deemed necessary to maintain compliance with ADEM Admin. Code Rules 335-14-5-.06(6), 335-14-5-.06(8), 335-14-5-.06(9), 335-14-5-.06(10), and 335-14-5-.06(11), as applicable. A plan in the form of a permit modification request specifying the design, location and installation of any additional monitoring wells should be submitted to the Department at least 90 calendar days prior to installation which, at a minimum, shall include:

i. Well construction techniques including casing depths and proposed total depth of well(s);

ii. Well development method(s);

iii. A complete description of well construction materials;

iv. A schedule of implementation for construction; and,

v. Provisions for determining the lithologic characteristics, hydraulic conductivity, grain size distribution, and porosity for the applicable aquifer unit(s) at the location of the new well(s).

e. Reserved

2. General Groundwater Monitoring Requirements

a. The Permittee shall determine the groundwater surface elevation from all monitoring wells listed in Table III.1. of this permit at least semi-annually and each time a sampling event is conducted. The results of these determinations should be submitted in accordance with Permit Condition III.B.6. Elevation data should be recorded and reported as mean sea level (MSL) and referenced to an appropriate national geodetic vertical datum (NGVD) benchmark.

b. The Permittee shall determine the groundwater flow rate and direction in the underlying aquifer(s) at least annually and submit the results in accordance with Permit Condition III.B.6.

c. The Permittee shall determine background concentrations of hazardous constituents and other chemical parameters required to be monitored by this

permit in accordance with Appendix L of the permit application and ADEM Admin. Code Rule 335-14-5-.06(8)(g).

3. Groundwater Protection Standard

   a. The groundwater protection standard, as required under ADEM Admin. Code Rule 335-14-5-.06(3), shall consist of Table III.3 of this permit which lists the hazardous constituents and their respective concentration limits.

   b. The groundwater protection standard applies to all hazardous waste or hazardous constituent releases as deemed appropriate by the Department to protect human health and the environment.

4. Compliance Period

   a. The compliance period, during which the groundwater protection standard specified in Permit Condition III.B.3. applies, shall begin at the time of the first sampling event of the compliance monitoring program (Permit Condition III.D.), or the corrective action monitoring program (Permit Condition III.E.), whichever is earlier.

   b. The compliance period shall continue (after beginning pursuant to Permit Condition III.B.4.a.) until the groundwater protection standard as defined by Permit Condition III.B.3.a. has not been exceeded for a period of three consecutive years.

   c. If the Permittee is engaged in a corrective action program pursuant to Permit Condition III.E., then the compliance period shall continue as required by ADEM Admin. Code Rule 335-14-5-.06(7)(c) until the groundwater protection standard has not been exceeded for a period of three consecutive years after corrective action has been terminated and this permit has been modified, in accordance with Permit Condition III.I., to implement a compliance monitoring program pursuant to Permit Condition III.D. or a detection monitoring program pursuant to Permit Condition III.C., as required by ADEM Admin. Code Rule 335-14-5-.06(11)(f).

5. Sampling and Analysis Procedures

   The Permittee shall use the following techniques and procedures when obtaining and analyzing samples from the groundwater monitoring wells described in Permit Condition III.B.1. to provide a reliable indication of the quality of the groundwater as required under ADEM Admin. Code Rules 335-14-5-.06(8)(d), (e), and (g):

   a. Samples shall be collected, preserved, and shipped (when shipped off-site for analysis) in accordance with the procedures specified in Appendix B of the permit application.

   b. Samples shall be analyzed according to the procedures specified in Appendix B of the permit application, the most recent edition of SW-846 or other appropriate methods approved by the Department. Analytical method detection limits shall

be less than or equal to the concentration limits specified in Table III.3, unless otherwise approved in writing by the Department.

c. Samples shall be tracked and controlled using the chain-of-custody procedures specified in Appendix B of the permit application.

d. Statistical analyses used to evaluate the groundwater monitoring data shall be as described in Appendix B of the permit application and ADEM Admin. Code Rule 335-14-5-.06(8)(h).

e. All samples taken in accordance with this permit shall not be filtered prior to analysis.

6. Recordkeeping and Reporting

a. The Permittee shall keep and maintain all monitoring, testing, and analytical data obtained in accordance with Permit Conditions III.B., III.C., III.D., and III.E. as required by Permit Condition I.C.10.

b. The Permittee shall submit to the Department a written report to include all analytical sampling data, established background values, statistical evaluations, groundwater elevations, associated potentiometric maps, and the annual groundwater flow rate and direction determinations. The analytical method and the method detection limit (MDL) for each constituent must be integrated into all reports of analysis. The report shall be submitted within 60 calendar days after the first sampling event and on an annual basis thereafter. Copies of this report shall be kept at the facility in accordance with Permit Conditions I.C.10.c. and I.C.10.e.

c. The Permittee shall submit progress reports to the Department describing implementation of groundwater monitoring and/or corrective action activities at the site as required by Part III of this permit on a quarterly basis. The first progress report shall be submitted to the Department within 90 calendar days after the effective date of this permit. The progress reports shall continue until such time as the required monitoring and/or corrective action systems and activities required by this permit are fully constructed and operational. In the event that additional monitoring and/or corrective action requirements are imposed through a permit modification, in accordance with Permit Condition I.I., the quarterly reporting requirement shall resume, commencing upon the effective date of the permit modification and continuing until the required monitoring and/or corrective action systems and activities are again fully constructed and operational.

III.C. DETECTION MONITORING PROGRAM (Reserved)

III.D. COMPLIANCE MONITORING PROGRAM (Reserved)

III.E. CORRECTIVE ACTION MONITORING PROGRAM

The requirements of this Condition are applicable to the entire facility. Except as specified otherwise in this permit, the Corrective Action Monitoring Program shall be implemented in accordance with Appendix L of the permit application and ADEM Admin. Code Rule 335-14-5-.06(11).

1. Monitoring Systems

   In addition to the point of compliance and background monitoring well systems identified in Permit Conditions III.B.1.b. and III.B.1.c., the Permittee shall:

   a. Maintain groundwater monitoring wells MD-3B, MD-6, MD-7, and MD-8 as boundary wells for the entire facility as specified in Table III.1. of this permit and as shown on Figure L-1 of the permit application.

   b. Maintain groundwater monitoring wells CA-4A, OW-2, OW-4, OW-6, M-12, MW-9A, MW-10A and MD-4 as effectiveness wells as specified in Table III.1. of this permit and as shown on Figure L-1 of the permit application.

   c. Maintain wells PW-1, PW-2, PW-3, PW-6, PW-7, PW-8, PW-9, and PW-10 as recovery wells as specified in Table III.1. of this permit and as shown on Figure L-1 of the permit application.

   d. Maintain wells CA-1, CA-2 and CA-3 as corrective action wells as specified in Table III.1. of this permit and as shown on Figure L-1 of the permit application.

2. Corrective Action Program

   a. The Permittee shall conduct a Corrective Action Program, as described in Appendix L of the permit application, to remove or treat in place all hazardous constituents that exceed their respective groundwater protection standards as described in Table III.3. of this permit at the point of compliance, between the point of compliance and the down-gradient facility property boundary, and beyond the facility boundary in accordance with ADEM Admin. Code Rule 335-14-5-.06(11)(e)2.

   b. Pursuant to ADEM Admin. Code Rules 335-14-5-.06(11)(c) and 335-14-5-.06(11)(e)3., the Permittee shall continue to implement the corrective action program as described in Appendix L of the permit application within 120 calendar days after the effective date of this permit.

   c. The Permittee shall handle or treat groundwater in accordance with Appendix L of the permit application and with the applicable requirements of NPDES permit number(s) AL0003093, as issued by the Department.

3. Monitoring Requirements

In addition to the general groundwater monitoring requirements as specified in Permit Condition III.B.2., the Permittee shall:

a. Sample select point of compliance wells, and all corrective action and effectiveness monitoring wells as explained in Table III.1. of this permit and analyze for the constituents listed in Table III.2. of this permit on a semi-annual basis beginning within 120 calendar days of the effective date of this permit and continuing through the end of the compliance period.

b. Sample select background and point of compliance wells, and all corrective action, effectiveness, and boundary monitoring wells as explained in Table III.1. of this permit and analyze for the constituents listed in Table III.3. of this permit on an annual basis beginning within 120 calendar days of the effective date of this permit and continuing through the end of the compliance period.

c. Sample select background and point of compliance wells, corrective action, effectiveness, recovery and boundary monitoring wells as described in Table III.1. of this permit and analyze for temperature (degrees F or C), specific conductance (Mhos/cm), and pH (standard units) each time the well is sampled. The data obtained should be submitted as raw data in the reports required by Permit Condition III.B.6.

d. Sample and analyze for select constituents listed in Table III.3, all wells as described in Table III.1 at least once every 5 calendar years beginning within 120 calendar days of the fifth anniversary of the effective date of this permit and continuing through the end of the compliance period.

e. When evaluating the monitoring results to determine the effectiveness of the corrective measures, in accordance with Permit Condition III.E.4., the Permittee shall:

i. Determine if the corrective action system effectively addresses the entire plume of contamination;

ii. Determine if the concentration of the hazardous constituents are decreasing (pH increasing or decreasing toward neutrality, as applicable) in the effectiveness wells specified in Permit Condition III.A.1.;

iii. Determine if hazardous waste or hazardous constituents are being released into the environment; and,

iv. Determine if hazardous constituents have been detected in the boundary wells specified in Permit Condition III.A.1.

4. Reporting and Response Requirements

In addition to the recordkeeping and reporting requirements specified in Permit Condition III.B.6.:

a. The Permittee shall report the effectiveness of the corrective action program annually, as required under ADEM Admin. Code Rule 335-14-5-.06(11)(g). These reports shall be submitted to the Department within 60 calendar days of each annual anniversary of this permit after corrective action is initiated and continue until corrective action is completed. The Permittee must provide data from groundwater monitoring along with an analysis of that data and any conclusions regarding the effectiveness of the program in accordance with Permit Condition III.E.3.d. If the analysis of the data warrants any change to the corrective action program, the Permittee must include these revisions in the annual report, which will be followed-up within 90 calendar days with an application for permit modification in accordance with Permit Condition I.I.

b. If corrective action is terminated under Permit Condition III.B.4.c., the Permittee must sample all background, point of compliance, effectiveness, recovery and boundary sampling locations for the compounds listed in ADEM Admin. Code Rule 335-14-5-Appendix IX, which must include all constituents listed in Appendix L of the permit application. Based upon the sampling results, the Permittee may petition the Department, in accordance with Permit Condition I.I., for a permit modification to implement either a detection monitoring program or a compliance monitoring program.

TABLE III.1

MONITORING WELL DESIGNATIONS

WELL NUMBER	WELL TYPE **	WELL LATITUDE	WELL LONGITUDE	UNIT(S) MONITORED	WELL DEPTH (ft)	GROUND ELEVATION (ft.MSL)	TOP-OF-RISER ELEVATION (ft.MSL)	SCREENED INTERVAL (ft. MSL)	MONITORED ZONE
M-1#	BKG	31° 17.236’	088° 00.531’	Entire Facility	76.5	55.65	42.62	29.66/40.34	Alluvial
M-2#	BKG	31° 17.230’	087° 59.789’	Entire Facility	69.5	36.75	39.08	29.66/40.34	Alluvial
M-3	POC	31° 16.514’	087° 59.879’	Entire Facility	74.0	42.7	44.95	19.42/-43.82	Alluvial
M-4	POC	31° 16.523’	087° 59.680’	Entire Facility	57.0	28.95	29.73	24.71/-19.29	Alluvial
M-5*	POC	31° 16.525’	087° 59.593’	Entire Facility	60.0	31.00	33.60	22.68/-21.32	Alluvial
M-6	POC	31° 16.537’	087° 59.383’	Entire Facility	61.0	36.55	38.38	21.26/-23.74	Alluvial
M-7	POC	31° 16.615’	087° 59.264’	Entire Facility	75.0	52.55	54.63	33.20/-16.80	Alluvial
M-8*	POC	31° 16.666’	087° 59.228’	Entire Facility	80.0	52.15	52.91	32.80/5.56/ -6.20/-32.20	Alluvial
M-	POC	31° 16.698’	087° 59 075’	Entire Facility	85.0	35.35	37.50	11.98/-42.62	Alluvial
MW-9A	EFF	31° 16.491’	087° 59.729’	Entire Facility	58.05	26.75	29.98	12.22/-28.25	Alluvial
M-10*	POC	31° 16.785’	087° 58.994’	Entire Facility	89.0	33.48	35.42	14.94/-26.04/ -31.04/-52.04	Alluvial
MW-1OA	EFF	31°16.486’	087° 59.511’	Entire Facility	54.80	30.15	32.88	18.32/-22.15	Alluvial
M-11*	POC	31° 16.956’	087° 58.999’	Entire Facility	69.0	27.00	28.44	18.22/-52.86	Alluvial
M-12	EFF	31° 16.479’	087° 59.361’	Entire Facility	60.0	41.60	43.81	14.23/-12.79	Alluvial
MW-12A#	BKG	31° 17.243’	087° 59.306"	Entire Facility	75.25	31.65	34.43	47.65/22.60/ 12.55/2.83	Alluvial
M-13*	POC	31°16.998’	087° 59.043’	Entire Facility	68.74	29.05	31.10	56.89/2.04	Alluvial
M-14*	POC	31° 17.110’	087° 59 050’	Entire Facility	56.55	27.45	30.42	48.03/3.23	Alluvial
M-15*	POC	31° 17.202’	087° 59.042’	Entire Facility	53.80	28.05	31.31	43.66/3.90	Alluvial
OW-l*	POC	31° 16.491’	088° 00.206’	Entire Facility	77.24	53.95	56.71	38.90/-21.10	Alluvial
OW-2	EFF	31° 16.442’	088° 00.142’	Entire Facility	85.66	51.60	52.58	28.89/-33.11	Alluvial
OW-4	EFF	31° 16.444’	088° 00.017’	Entire Facility	76.93	48.45	50.17	32.41/-27.59	Alluvial
OW-6	EFF	31° 16.392’	087° 59.741’	Entire Facility	7308	33.65	34.27	22.01/-22.99	Alluvial
CA-l	CAM	31° 16.249’	088° 00.076’	Entire Facility	88.54	49.90	53.69	17.8/-37.2	Alluvial
CA-2	CAM	31° 16.261’	087° 59.701’	Entire Facility	60.72	32.55	33.18	22.4/-27.6	Alluvial
CA-3	CAM	31° 16.377’	087° 59.431’	Entire Facility	55.61	35.15	37.74	20.9/-19.1	Alluvial
CA-4A	EFF	31° 16.512'	087° 59.194'	Entire Facility	53.42	14.30	17.49	4.21/-35.79	Alluvial
PW-1	RCY	31° 16.487’	087° 59.344’	Entire Facility	58.73	44.15	45.81	13.3/-11.9	Alluvial
PW-2	RCY	31° 16.474’	087° 59.556’	Entire Facility	56.64	30.75	32.59	17.2/-23.9	Alluvial
PW-3	RCY	31° 16.391’	087° 59.773’	Entire Facility	68.55	39.05	40.99	18.2/-26.8	Alluvial
PW-6	RCY	31° 16.370’	088° 00.075’	Entire Facility	95.33	48.45	50.42	20.8/-44.13	Alluvial
PW-7	RCY	31° 16.396’	088° 00.099’	Entire Facility	84.12	50.15	52.41	25.7/-36.24	Alluvial
PW-8	RCY	31° 16.382’	088° 00.265’	Entire Facility	94.0	52.25	53.60	24.9/-40.99	Alluvial
PW-9	RCY	31° 16.550’	087° 59317’	Entire Facility	62.93	43.65	45.48	9.7/-19.5	Alluvial
PW-10^	RCY	31° 16.429’	087° 59.758’	Entire Facility	63.05	41.15	43.47	31.15/-18.85	Alluvial
MD-1	BKG	31° 17.241’	088° 00.533’	Entire Facility	247.0	40.45	41.49	-186.15/-206.15	Miocene
MD-2	POC	31° 16.538’	087° 59.381’	Entire Facility	160.0	36.50	38.05	-99.15/-119.15	Miocene
MD-3B	BDY	31° 16.257’	088° 00.320’	Entire Facility	220.0	41.37	44.01	-158.631-178.63	Miocene
MD-4	EFF	31° 16.712’	087° 59.061’	Entire Facility	159.28	34.40	36.81	-76.10/-114.74	Miocene
MD-5	BKG	31° 17.038’	087° 59.363’	Entire Facility	177	39.79	42.31	-122.21/-137.21	Miocene
MD-6	BDY	31° 16.262’	087° 59.702’	Entire Facility	197.25	32.64	34.92	-149.61/-164.61	Miocene
MD-7	BDY	31° 16.240’	087° 59.456’	Entire Facility	160	32.79	35.61	-107.21/-127.21	Miocene
MD-8	BDY	31° 16.454’	087° 59.794’	Entire Facility	235	42.46	42.26	-215/-235	Miocene
MD-9	POC	31° 16.45’	087° 59.516’	Entire Facility	160	27.45	29.76	-112.55/-132	Miocene
MD-11	POC	31° 16.520’	087° 59.204’	Entire Facility	111	16.52	20.72	-65.94/-85.94	Miocene
MD-12	POC	31° 16.553’	087° 59.243’	Entire Facility	135	19.3	22.43	-95.8/-115.8	Miocene
MD-13	Offsite	31° 16.104’	087° 59.729’	Entire Facility	285	30.52	33.00	-199.48/-219.48	Miocene
MD-14	Offsite	31° 16.107’	087° 59.917’	Entire Facility	300	42.74	45.44	-156.77/-176.77	Miocene

** Well Type:
POC – Point of Compliance Wells: *(M-5, M-8, M-9, M-10, M-11, M-13, M-14, M-15 & OW-1 are monitored semi-annually for depth to groundwater data only per App-L)
EFF – Effectiveness Monitoring Wells
PGM – Piezometers and/or General Monitoring Wells
BKG – Background Wells (# one BG well is sampled each year for each Aquifer on an annual rotation basis per App L)
BDY – Boundary Monitoring Wells
RCY – Recovery Wells (backup well PW-10 is monitored semi-annually for depth to groundwater data only)
CAM – Corrective Action Monitoring Wells
Offsite – Offsite Miocene Monitoring Wells
^PW10 was shutdown on October 15, 2014 and now is used as a backup well when PW-3 is down for maintenance.

TABLE III.2

GROUNDWATER QUALITY MONITORING CONSTITUENTS*

HAZARDOUS CONSTITUENT	Zone
Alpha-BHC	Alluvial, Upper Miocene
Arsenic	Alluvial, Upper Miocene
Benzene	Alluvial, Upper Miocene
Beta-BHC	Alluvial, Upper Miocene
Carbon Tetrachloride	Alluvial, Upper Miocene
Chlorobenzene	Alluvial, Upper Miocene
Delta-BHC	Alluvial, Upper Miocene

* The constituents listed herein are the subset of the Groundwater Protection Standard listed in Table III.3 for which monitoring is required and are analyzed semi-annually.

TABLE III.3

GROUNDWATER PROTECTION STANDARD

HAZARDOUS CONSTITUENT	CONCENTRATION LIMIT (mg/L)
Acetone*	0.55
Alpha-BHC	0.000011
Aldrin	0.00000092
Aniline*	0.012
Arsenic	0.01
Barium*	2.0
Benzene	0.005
Benzo(b)fluoranthene*	0.000092
Benzo(k)fluoranthene*	0.00092
Beta-BHC	0.000037
Bis (2-Ethylhexyl) phthalate*	0.006
Cadmium*	0.005
Carbon Tetrachloride	0.005
Chloroprene*	MDL
Chlorobenzene	0.1
Chloroethane*	0.0046
Chloroform	0.08
2-Chlorophenol	0.0091
Chromium (total)*	0.1
Chlorobenzilate	0.00025
Cobalt *	0.073
Cyanide, Total*	0.2
4,4-DDD	0.00028
4,4 DDE	0.0002
4,4-DDT	0.00020
Delta-BHC	MDL
1,2 – Dichlorobenzene*	0.600
1,4 – Dichlorobenzene	0.075
Dichloroethene	0.007
Dieldrin	0.0000018
1,2-Diphenylhydrazine	0.000084
Lead	0.015
Lindane	0.0002
Mercury*	0.002
Methylene Chloride*	0.005
Naphthalene	0.00062
Nitrobenzene	0.00034
Strontium (Total)*	2.2
Thallium, Total*	0.002
Trichloroethylene*	0.005
1,2,4-Trimethylbenezene	0.0012
Vanadium (Total)	0.0036
Vinyl chloride	0.002

* Identifies the parameter(s) which are to be analyzed every five years; all other parameters are analyzed annually.

PART IV

SOLID WASTE MANAGEMENT UNIT IDENTIFICATION AND EVALUATION

IV.A. APPLICABILITY

The Conditions of this Part apply to:

1. The solid waste management units (SWMUs) and areas of concern (AOCs) identified in Table IV.1, which require investigation and/or remediation;

2. The SWMUs identified in Table IV.2, which require no further investigation under this permit at this time;

3. Any additional SWMUs or AOCs discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means; and,

4. Contamination beyond the facility boundary, if applicable. The Permittee shall implement corrective actions beyond the facility boundary where necessary to protect human health and the environment, unless the Permittee demonstrates to the satisfaction of the Department that, despite the Permittee's best efforts, as determined by the Department, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis. Assurances of financial responsibility for completion of such off-site corrective action will be required.

IV.B. NOTIFICATION AND ASSESSMENT REQUIREMENTS FOR NEWLY IDENTIFIED SWMUs AND AOCs

1. The Permittee shall notify the Department in writing, within 15 calendar days of discovery, of any additional AOC(s) as described under Permit Condition IV.A.3. The notification shall include, at a minimum, the location of the AOC(s) and all available information pertaining to the nature of the release (*e.g.*, media affected, hazardous constituents released, magnitude of release, *etc.*). If the Department determines that further investigation of an AOC is required, the permit will be modified in accordance with ADEM Admin. Code Rule 335-14-8-.04(2).

2. The Permittee shall notify the Department in writing, within 15 calendar days of discovery, of any additional SWMUs as described under Permit Condition IV.A.3.

3. The Permittee shall prepare and submit to the Department, within 90 calendar days of notification, a SWMU Assessment Report (SAR) for each SWMU identified under Permit Condition IV.B.2. At a minimum, the SAR shall provide the following information:

a. Location of unit(s) on a topographic map of appropriate scale such as required under ADEM Admin. Code Rule 335-14-8-.02(5)(b)19.

b. Designation of type and function of unit(s).

c. General dimensions, capacities and structural description of unit(s) (supply any available plans/drawings).

d. Dates that the unit(s) was operated.

e. Specification of all wastes that have been managed at/in the unit(s) to the extent available. Include any available data on hazardous constituents in the wastes.

f. All available information pertaining to any release of hazardous waste or hazardous constituents from such unit(s) (to include groundwater data, soil analyses, air, and/or surface water data).

4. Based upon the results of the SAR, the Department shall determine the need for further investigations at the SWMUs covered in the SAR. If the Department determines that such investigations are needed, the Permittee shall initiate an investigation as outlined in Permit Condition IV.D.1 immediately upon receiving notification of the Department's determination.

IV.C. NOTIFICATION REQUIREMENTS FOR NEWLY DISCOVERED RELEASES AT PREVIOUSLY IDENTIFIED SWMUs or AOCs

1. The Permittee shall notify the Department in writing of any newly discovered release(s) of hazardous waste or hazardous constituents discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means, within 15 calendar days of discovery. Such newly discovered releases may be from SWMUs or AOCs identified in Permit Condition IV.A.2 or SWMUs or AOCs identified in Permit Condition IV.A.3 for which further investigation was not required.

2. If the Department determines that further investigation of the SWMUs or AOCs is needed, the Permittee shall initiate an investigation as outlined in Permit Condition IV.D. immediately upon receiving notification of the Department's determination.

IV.D. RCRA FACILITY INVESTIGATION (RFI)

1. The Permittee must perform a RCRA Facility Investigation (RFI) for any SWMU and AOC identified by the Department in accordance with Permit Conditions IV.A.1, IV.B.4, and IV.C.2.

2. The RFI must completely identify the concentration of hazardous constituents released from each SWMU and AOC and fully delineate the area where such hazardous constituents have come to be located.

3. The RFI must fully characterize the nature and extent of contamination released from each SWMU or AOC under investigation.

4. The RFI must be performed in a manner consistent with the most recent edition of the Alabama Environmental Investigation and Remediation Guidance.

5. Except as provided by Permit Condition IV.D.6., the RFI must be completed within 180 calendar days from the effective date of this permit or, for SWMUs or AOCs identified pursuant to Permit Condition IV.B. and C., within 180 calendar days from the receipt of notification from the Department that an RFI is required. If, prior to the effective date of this permit, the Department has approved a work plan that includes a schedule for completing the RFI, the RFI shall be completed in accordance with the approved schedule.

6. RFI Schedule of Compliance

    a. For RFIs expected to require greater than 180 calendar days to complete, the Permittee may submit a schedule of compliance subject to Departmental approval and/or modification.

    b. Submittal of an RFI Schedule of Compliance does not delay or otherwise postpone the Permittee's obligation to initiate the RFI.

    c. The Schedule of Compliance must include:

        i. A detailed narrative discussion, which explains why the RFI cannot be completed within 180 days; and,

        ii. A detailed and chronological listing of milestones with estimated durations that provides sufficient information to track the progress of the investigation.

    d. The RFI Schedule of Compliance shall be reviewed by the Department in accordance with Permit Condition IV.G.

    e. The Permittee shall complete the RFI in accordance with the approved RFI Schedule of Compliance.

7. RFI Progress Reports

    a. For an RFI being conducted in accordance with the approved RFI Schedule of Compliance, the Permittee must submit progress reports on a monthly basis.

    b. The RFI Progress Reports must include:

        i. A description of the RFI activities completed during the reporting period;

        ii. Summaries of any problems or potential problems encountered during the reporting period;

        iii. Actions taken to rectify problems;

        iv. Changes in relevant personnel;

v. Projected work for the next reporting period;

vi. Any proposed revisions to the RFI Schedule of Compliance. Modifications of the RFI Schedule of Compliance are subject to approval by the Department; and,

vii. A summary of any data collected during the reporting period, including:

A. The location of each sampling point identified on a site map;

B. The concentration of each hazardous constituent detected at each sampling point; and,

C. Submittal of RFI Progress Reports, work plans, or other documents during the RFI does not alter the approved RFI Schedule of Compliance.

8. RFI Reports

a. The Permittee shall prepare and submit to the Department an RFI Report within 60 calendar days from the completion of investigation activities in accordance with the approved RFI Schedule of Compliance, if applicable.

b. The RFI Report must provide a detailed description of all required elements of the investigation as described in the most recent edition of the Alabama Environmental Investigation and Remediation Guidance.

c. The RFI Report shall be reviewed by the Department in accordance with Permit Condition IV.G.

IV.E. SELECTION OF CORRECTIVE MEASURES AND PERMIT MODIFICATION

1. The Permittee shall develop and submit to the Department a Corrective Measures Implementation (CMI) Plan for any areas of the Permittee's site where hazardous constituents have come to be located at concentrations exceeding those appropriate for the protection of human health and the environment. The CMI Plan must include all applicable elements of the proposed remedy pursuant to the most recent edition of the Alabama Environmental Investigation and Remediation Guidance.

2. The CMI Plan shall be submitted to the Department within 120 calendar days following the Permittee's submittal of the RFI Report indicating that hazardous constituents have come to be located at any area of the Permittee's facility, or beyond the facility, at concentrations exceeding those appropriate for the protection of human health and the environment, or within 120 calendar days following notification from the Department that a CMI Plan is required, whichever occurs earlier.

3. The CMI Plan shall be submitted along with a request for permit modification pursuant to ADEM Admin. Code R. 335-14-8-.04(2), and shall include any applicable fees pursuant to ADEM Admin. Code R. 335-1-6. This modification will serve to incorporate the

proposed final remedy, including all procedures necessary to implement and monitor the remedy, into this permit.

4. Within 120 calendar days after this Permit has been modified in accordance with Permit Condition IV.E.3., the Permittee shall demonstrate financial assurance for completing the approved remedy.

IV.F. INTERIM MEASURES (IM)

1. IM Work Plan(s)

   a. Upon notification by the Department, the Permittee shall prepare and submit an Interim Measures (IM) Work Plan for any SWMU or AOC that the Department determines is necessary. IM are necessary in order to minimize or prevent further migration of contaminants and limit human and environmental exposure to contaminants while long-term corrective measures are evaluated and, if necessary, implemented. The IM Work Plan shall be submitted within 30 calendar days of such notification and shall include the elements listed in Permit Condition IV.F.1.b. Such IM may be conducted concurrently with investigations required under the terms of this permit. The Permittee may initiate IM by submitting an IM Work Plan for approval and reporting in accordance with the requirements under Permit Condition IV.F.

   b. The IM Work Plan shall ensure that the IM are designed to mitigate any current or potential threat(s) to human health or the environment and is consistent with and integrated into any long-term solution at the facility. The IM Work Plan shall include: the IM objectives, procedures for implementation (including any designs, plans, or specifications), and schedules for implementation.

   c. The IM Work Plan must be approved by the Department, in writing, prior to implementation. The Department shall specify the start date of the IM Work Plan schedule in the letter approving the IM Work Plan.

   d. The IM Report shall be reviewed by the Department in accordance with Permit Condition IV.G.

2. IM Implementation

   a. The Permittee shall implement the IM in accordance with the approved IM Work Plan.

   b. The Permittee shall give notice to the Department as soon as possible of any planned changes, reductions or additions to the IM Work Plan.

   c. Final approval of corrective action required under ADEM Admin. Code Rule 335-14-5-.06(12), which is achieved through IM, shall be in accordance with ADEM Admin. Code Rule 335-14-8-.04(2) and Permit Condition IV.E.

3. IM Reports

a. If the time required for completion of IM is greater than one year, the Permittee shall provide the Department with Progress Reports at intervals specified in the approved work plan. The Progress Reports shall, at a minimum, contain the following information:

i. A description of the portion of the IM completed;

ii. Summaries of any deviations from the IM Work Plan during the reporting period;

iii. Summaries of any problems or potential problems encountered during the reporting period;

iv. Projected work for the next reporting period; and,

v. Copies of laboratory/monitoring data.

b. The Permittee shall prepare and submit the IM Report to the Department within 90 calendar days of completion of IM conducted under Permit Condition IV.F. The IM Report shall, at a minimum, contain the following information:

i. A description of IM implemented;

ii. Summaries of results;

iii. Summaries of all problems encountered;

iv. Summaries of accomplishments and/or effectiveness of IM; and,

v. Copies of all relevant laboratory or monitoring data, *etc.*, in accordance with Permit Condition I.C.10.

IV.G. SUBMITTALS

1. All work plans, reports, schedules, and other documents ("submittals") required by this permit shall be subject to approval by the Department to assure that such submittals and schedules are consistent with the requirements of this Permit and with applicable regulations and guidance. The Permittee shall revise all submittals and schedules as directed by the Department.

2. The Department will review all submittals in accordance with the conditions of this permit. The Department will notify the Permittee in writing of any submittal that is disapproved, and the basis therefore. If the Department disapproves a submittal, the Department shall: (1) notify the Permittee in writing of the submittal's deficiencies and specify a due date for submission of a revised submittal, (2) revise the submittal and notify the Permittee of the revisions, or (3) conditionally approve the submittal and notify the Permittee of the conditions. Permit Condition IV.H. shall apply only to submittals that have been disapproved and revised by the Department, or that have been disapproved

by the Department, then revised and resubmitted by the Permittee, and again disapproved by the Department.

3. All submittals shall be submitted within the time frame specified by the Department and in accordance with the approved schedule of compliance. Extensions of the due date for submittals may be granted by the Department based on the Permittee's demonstration that sufficient justification for the extension exists.

4. All submittals required by this permit shall be signed and certified in accordance with ADEM Admin. Code Rule 335-14-8-.02(2).

5. Two (2) copies of all submittals shall be provided by the Permittee to the Department in accordance with Permit Condition I.J.

IV.H. DISPUTE RESOLUTION

Notwithstanding any other provision in this permit, in the event the Permittee disagrees, in whole or in part, with the Department's revision of a submittal or disapproval of any revised submittal required by this Part, the following may, at the Permittee's discretion, apply:

1. In the event that the Permittee chooses to invoke the provisions of this section, the Permittee shall notify the Department in writing within 30 calendar days of receipt of the Department's revision of a submittal or disapproval of a revised submittal. Such notice shall set forth:

   a. The specific matters in dispute;

   b. The position the Permittee asserts should be adopted as consistent with the requirements of this permit;

   c. The basis for the Permittee's position; and,

   d. Any matters considered necessary for the Department's determination.

2. The Department and the Permittee shall have additional 30 calendar days from the Department's receipt of the notification provided for in Permit Condition IV.H.1. to meet or confer to resolve any disagreement.

3. In the event agreement is reached, the Permittee shall submit and implement the revised submittal in accordance with and within the time frame specified in such agreement.

4. If agreement is not reached within the 30-day period, the Department will notify the Permittee in writing of his/her decision on the dispute, and the Permittee shall comply with the terms and conditions of the Department's decision in the dispute. For the purposes of this provision in this permit, the responsibility for making this decision shall not be delegated below the Land Division Chief.

5. With the exception of those conditions under dispute, the Permittee shall proceed to take any action required by those portions of the submission and of this permit that the Department determines are not affected by the dispute.

Table IV.1

The following Solid Waste Management Unit(s) (SWMU) and/or Area(s) of Concern (AOC) numbers and descriptions correspond with those noted in the RCRA Facility Assessment (RFA) Report. Where discrepancies exist, the permit will take precedence.

List of SWMUs and AOCs requiring a RCRA Facility Investigation (RFI):

SWMU/AOC NUMBER	SWMU/AOC NAME	UNIT COMMENT	POTENTIALLY AFFECTED MEDIA

There are no required RFI activities at this time

Table IV.2

The following Solid Waste Management Unit(s) (SWMU) and/or Area(s) of Concern (AOC) numbers and descriptions correspond with those noted in the RCRA Facility Assessment (RFA) Report. Where discrepancies exist, the permit will take precedence.

List of SWMUs and AOCs requiring no further action at this time:

SWMU/AOC NUMBER	SWMU/AOC NAME	UNIT COMMENT	POTENTIALLY AFFECTED MEDIA
15B	Activated Carbon Treatment System	Unit manages leachate from Land Vault Nos. 1 & 2	NA
16	Container Storage Area	Unit closed with Incinerator #1	Soil, Groundwater
17	Rotary Kiln Incinerator #1	Unit closed in 1999	Air, Soil
18A-T	Rotary Kiln Incinerator #2	Unit Closed in 2006	Air, Soil
19	Tank Farm 1 (V-0700-07, V-1003)	Unit closed with Incinerator #1	Soil, Groundwater
20	Tank Farm 2 (V-1002, V-2499)	Unit closed with Incinerator #1	Soil, Groundwater
21	Tank Farm 3 (15-V-091, 15-V-092)	Unit closed with Incinerator #1	Soil, Groundwater
22A-E	Tank Farm 4 (15-V-202, 15-V-203, 15-V-204, 15-V-234, 15-V-205)	Unit closed with Incinerator #2	Soil, Groundwater
32	Warehouse No. 218	Unit managed pesticide residues and by-products	NA
34A-EE	Area 15 Waste Water Treatment System	Unit manages process unit waste waters, storm waters, and groundwater	NA
35A-C, F-M, O-R, T, V-BB	Main Wastewater Sumps	NA	NA
36	Air Curtain Incinerator (Area 15)	Unit managed wood pallets, wood construction debris, and wood generated from clearing	NA
37A	Former Underground Injection Well No. 1	Unit managed high salt content waste waters	NA
37B	Former Underground Injection Well No. 2	Unit managed high salt content waste waters	NA
38A-C, L-N, Q, U, V, Z-CC*	≤90 day hazardous waste storage tanks, containers and areas	NA	NA
38D, E, J, K, O, P, R, S, T, W, X, Y	≤90 day hazardous waste storage tanks, containers and areas	Units are no longer in use	NA
39A-C, K-M, Q-R, T, V, W, DD, FF, GG, II, KK, SS, TT*	Satellite Accumulation Areas	NA	NA
39D-J, N-P, S, U, X-CC, HH, JJ	Closed Satellite Accumulation Areas	Units are no longer in use	NA
40A-D, F-H, K	Waste Loading Areas	NA	NA

41A-F, N-Z	Wastewater Trenches and Sumps	NA	NA
43A-F	Area 14 Waste Water Treatment System	Unit managed wastewaters from Area 14	NA
44A, C-E*	Used Oil Storage Areas	NA	NA
44B	Fire Station/Building 1010 Used Oil Storage Tank (6-V-1)	NA	NA
45A*	Universal Waste Area/Building 113	Unit manages universal wastes	NA
46	Non-hazardous Waste Storage Area/Building 212	Unit manages non-hazardous wastes	NA
47	Huntsman Environmental Areas	Unit manages various plant wastes	NA

* BASF should continue to manage these <90 Day Hazardous Waste Storage Tanks, Containers, and Areas as required by Division 14 of the ADEM Administrative Code.

Table IV.3

The following Solid Waste Management Unit(s) (SWMU) and/or Area(s) of Concern (AOC) numbers and descriptions correspond with those noted in the RCRA Facility Assessment (RFA) Report. Where discrepancies exist, the permit will take precedence.

List of SWMUs and AOCs regulated by Parts II and III of this permit.

SWMU/AOC NUMBER	SWMU/AOC NAME	POTENTIALLY AFFECTED MEDIA
1	Class C Landfill	Soil, Groundwater
2	Biological Sludge Landfill	Soil, Groundwater
3	Rectangular/ Triangular Pond	Soil, Groundwater
4	Sludge Impoundment # 1	Soil, Groundwater
5	Sludge Impoundment # 2	Soil, Groundwater
6	Sludge Impoundment # 3	Soil, Groundwater
7	Sludge Impoundment # 4	Soil, Groundwater
8	5-Day Impoundment	Soil, Groundwater
9	10-Day Impoundment	Soil, Groundwater
10	Equalization Impoundment	Soil, Groundwater
11	Dilute Impoundment	Soil, Groundwater
12	Diazinon Destruction Impoundment	Soil, Groundwater
13	GM-44 Impoundment	Soil, Groundwater
14	Aboveground Landvault #1	Soil, Groundwater
15A	Aboveground Landvault #2	Soil, Groundwater
AOC B*	Lower Dilute Ditch	Sediment, Surface Water

* BASF should continue to inspect AOC B on a quarterly basis for integrity of the final cover, animal disturbance, and obstruction or impediment of drainage.

PART V

MANAGEMENT IN ABOVEGROUND LANDVAULT #2

V.A. WASTE IDENTIFICATION

1. The Permittee may dispose of the hazardous wastes listed in Appendix A of the permit application in the landvault, subject to the terms of this permit. The disposal of any hazardous waste not listed in Appendix A of the permit application or is prohibited.

2. The Permittee is prohibited from disposing of any hazardous waste in the landvault which does not meet all applicable treatment standards.

3. The Permittee shall not dispose of mixed waste in landvault # 2.

V.B. DISPOSAL IN THE LANDVAULTS

1. The Permittee shall not exceed the total disposal capacity of 290,000 cubic yards for the landvault unit as described in Appendix H of the permit application.
2. The Permittee shall maintain and operate the landvault in accordance with the procedures specified in Appendix H of the permit application.
3. Disposal capacity in each landvault cell shall be measured as the in-place total volume of hazardous waste and operational fill/cover material combined.

V.C. DESIGN AND OPERATING REQUIREMENTS

The Permittee shall operate the landvault as described in Appendix H of the permit application, and as required under ADEM Admin. Code R. 335-14-5-.14(2). In addition, the Permittee shall design and operate the landvault in accordance with the following conditions:

1. The Permittee shall install two liners and associated leachate collection and removal systems (one above the primary liner and one between the liners) for each cell, in accordance with the design plans and reports as described in Appendix H, Section 3.0 of the permit application and as required by ADEM Admin. Code R. 335-14-5-.14(2)(b).

2. Collected leachate must be managed in accordance with the design plans and reports contained in Appendix H of the permit application.

3. The Permittee shall locate, construct, operate, and maintain the landvault as specified in Appendix H of the permit application, so as to prevent the migration of any hazardous constituent into the groundwater or surface water, at least as effectively as the liners and leachate collection and removal systems outlined in ADEM Admin. Code R. 335-14-5-.14(2).

4. The Permittee shall construct, operate, and maintain the leachate collection and removal systems as described in Appendix H, Section 3.0 of the permit application.

a. The Permittee shall not allow leachate to accumulate to a depth of more than one foot over the liner of each landvault cell, in accordance with the requirements of ADEM Admin. Code R. 335-14-5-.14(2)(b)2. and as described in Appendix H of the permit application.

b. The Permittee shall operate the leak detection system in accordance with the requirements of ADEM Admin. Code R. 335-14-5-.14(2)(b)3., 335-14-5-.14(2)(b)4., and 335-14-5-.14(2)(b)5., and as described in Appendix H of the permit application so as to minimize the head on the bottom liner of each landvault cell.

c. The Permittee shall comply with the action leakage rate requirements of ADEM Admin. Code R. 335-14-5-.14(3), for all future cell construction. The Permittee shall submit action leakage rates to the Department for approval prior to initiating construction activities.

d. The Permittee shall record, at least once each week, the amount of liquids removed from each leachate collection system and from each leak detection system during the active life and closure period of each landvault cell. (ADEM Admin. Code R. 335-14-5-.14(4)(c))

5. The Permittee shall design, construct, operate, and maintain a run-on control system in accordance with the design plans, specifications and operating practices contained in Appendix H of the permit application and as required by ADEM Admin. Code R. 335-14-5-.14 (2)(c).

6. The Permittee shall design, construct, operate, and maintain a run-off control system in accordance with the design plans, specifications and operating practices contained in Appendix H of the permit application (ADEM Admin. Code R. 335-14-5-.14 (2)(d)).

7. The Permittee shall prevent wind dispersal of hazardous wastes and hazardous constituents from the landvaults as described in Appendix H of the permit application and as required by ADEM Admin. Code R. 335-14-5-.14(2)(f).

8. All waste placed into the landvault shall be tested, prior to placement, in accordance with the Waste Analysis Plan as described in Appendix B of the permit application and ADEM Admin. Code R. 335-14-5-.02.

9. The Permittee shall prepare a response action plan as required by ADEM Admin. Code R. 335-14-5-.14(5) prior to placing waste in future landvault cells. If the flow rate into the leak detection system exceeds the action leakage rate set forth in Part V.C.4.c. of this permit, the Permittee shall implement the response action plan. At a minimum, as required by ADEM Admin. Code R. 335-14-5-.14(5), the Permittee must:

a. Notify the Department in writing of the exceedance within seven calendar days of the determination;

b. Submit a preliminary written assessment to the Department within 14 calendar days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;

c. Determine to the extent practicable the location, size, and cause of any leak;

d. Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;

e. Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and

f. Within 30 calendar days after the notification that the action leakage rate has been exceeded, submit to the Department the results of the analyses specified in Parts V.C.9.c., V.C.9.d., and V.C.9.e. of this permit, the results of actions taken, and actions planned. At least once monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the Permittee must submit to the Department a written report summarizing the results of any remedial actions taken and actions planned.

g. To make the leak and/or remediation determinations required by Parts V.C.9.c., V.C.9.d., and V.C.9.e. of this permit, the Permittee must:

i. (I) Assess the source(s) of liquids and amounts by source;

(II) Conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and

(III) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or

ii. Document why the assessments required by Part V.C.9.g.i. of this permit are not necessary.

10. All precipitation which falls into a landvault and contacts hazardous waste or other disposed materials (e.g., non-hazardous waste, daily cover materials, etc.) must be managed as hazardous waste leachate (EPA Hazardous Waste Number F039). Any precipitation which is collected prior to contact with hazardous waste or other disposed materials may be managed in accordance with the applicable requirements of the Permittee's NPDES discharge permit (Permit No. AL003093) issued by the Department.

V.D. INSPECTION SCHEDULES

The Permittee shall inspect the landvault in accordance with the following conditions:

1. The Permittee shall inspect the liners and cover systems during construction and installation for uniformity, damage and imperfections (e.g., holes, cracks, thin spots or foreign materials) (ADEM Admin. Code R. 335-14-5-.14(4)(a))

2. The Permittee shall inspect all new landvault cells immediately after construction or installation for the following: (ADEM Admin. Code R. 335-14-5-.14(4)(a))

    a. Synthetic liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures or blisters.

    b. Soil-based and admixed liners and covers must be inspected for imperfections including lenses, cracks, channels, root holes, or other structural non-uniformities that may cause an increase in the permeability of the liner or cover.

3. The Permittee shall inspect all constructed systems (e.g., bottom liners, sand windows, sidewall liners, etc.) immediately prior to covering to ensure that the subject system has not been compromised (e.g., rips, tears, UV degradation, silting of sand or fabrics, etc.).

4. The Permittee shall inspect all landvaults (including the liner, leachate collection system, temporary covers, and final cover systems) in accordance with Appendix D of the permit application and Part V.D.5. of this permit (ADEM Admin. Code R. 335-14-5-.02(6))

5. The landvault must be inspected weekly and after storms to detect evidence of the following: (ADEM Admin. Code R. 335-14-5-.14(4)(b))

    a. Deterioration, malfunctions, or improper operation of run-on and run-off systems.

    b. The presence of leachate in, and proper functioning of, leachate collection and removal systems.

V.E. CELL LOCATION SURVEYING

The Permittee shall maintain the following items in the operating record as required by ADEM Admin. Code R. 335-14-5-.05(4) and 335-14-5-.14(10)

1. A map with the exact location and dimensions (including depth and top and bottom elevations) of each cell with respect to permanently surveyed benchmarks.

2. The types of waste in each cell.

3. At least once annually the approximate elevation of the loads of hazardous waste placed within each cell.

V.F. SPECIAL LANDVAULT PROVISIONS FOR IGNITABLE OR REACTIVE WASTES

The Permittee shall not place ignitable or reactive waste in any landvault cell, except as provided by ADEM Admin. Code R. 335-14-5-.14(13).

V.G. SPECIAL LANDVAULT PROVISIONS FOR INCOMPATIBLE WASTES

The Permittee shall not place incompatible wastes, or incompatible wastes and materials, in the same landvault cell, except as provided by ADEM Admin. Code R. 335-14-5-.14(14).

V.H. SPECIAL LANDVAULT PROVISIONS FOR HAZARDOUS WASTES RESTRICTED FROM LANDVAULT UNITS

1. The Permittee shall not place any hazardous waste(s) which is prohibited from land disposal, or which does not meet all applicable land disposal restrictions (LDRs) (as listed in ADEM Admin. Code R. 335-14-9 [40 CFR 268]), in any landvault cell.

2. The Permittee shall not dispose of any F020, F021, F022, F023, F026, F027, or F028 listed hazardous waste(s) in any landvault unit, except in a form (e.g., incineration residues) which meets all applicable requirements of ADEM Admin. Code R. 335-14-9, pursuant to ADEM Admin. Code R. 335-14-5-.14(18).

V.I. SPECIAL LANDVAULT PROVISIONS FOR LIQUID WASTES

1. The Permittee shall not place bulk or non-containerized liquid wastes, or waste containing free liquids, in any landvault unit, in accordance with ADEM Admin. Code R. 335-14-5-.14(15)(b). [Note: The application of non-contaminated water for dust control purposes within the landvault is not prohibited by this permit

2. The Permittee shall demonstrate the absence of free liquids in all containerized or a bulk waste which is suspected (by the Permittee or the Department) to contain free liquids. This demonstration shall be made by: Method 9095 (Paint Filter Liquid Test) as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Publication No. SW-846, as incorporated by reference in ADEM Admin. Code R. 335-14-1-.02(2)).

3. Containers holding free liquids shall not be placed in any landvault unit unless the requirements of ADEM Admin. Code R. 335-14-5-.14(15)(d) are met.

4. All sorbents used to treat free liquids (whether containerized or non-containerized) to be disposed of in the landvault shall be non-biodegradable, and shall comply with the requirements of ADEM Admin. Code R. 335-14-5-.14(15)(e).

V.J. SPECIAL LANDVAULT PROVISIONS FOR CONTAINERS

1. Except as provided in Part V.J.3. of this permit, the Permittee shall not dispose of any containers in any landvault that are larger than ampoules unless they are filled at least 90% full or are crushed, shredded or similarly reduced in volume to the maximum practical extent before placement in the landvault (ADEM Admin. Code R. 335-14-5-.14(16))

2. The Permittee shall not dispose of small containers of hazardous waste in overpacked drums (i.e., lab packs), except as provided by ADEM Admin. Code R. 335-14-5-.14(17).

3. The Permittee may place empty metal containers in a landvault unit provided each such container is crushed to the maximum practical extent before burial, in accordance with the provisions of ADEM Admin. Code R. 335-14-5-.14(16)(b). [Note: Empty intact plastic containers shall not be placed in the landvault.]

V.K. REPORTING REQUIREMENTS

The Permittee shall submit written reports to the Department, beginning within 60 calendar days after the first anniversary of the effective date of this permit, and within 60 calendar days after each subsequent anniversary, which include:

1. All data collected in accordance with Parts V.C.4.d. of this permit;

2. The total tonnage, by major waste category (e.g., RCRA, TSCA, CERCLA, non-hazardous, etc.), of waste disposed each calendar month of the preceding year.

V.L. CLOSURE AND POST-CLOSURE CARE

The Permittee shall conduct closure and post-closure activities in accordance with the following conditions:

1. The Permittee shall close each landvault in accordance with the closure plan in Appendix J of the permit application, the requirements of ADEM Admin. Code Rules 335-14-5-.07 and 335-14-5-.14 (11), and Part II.N. of this permit. Until plant growth has been established on the cap(s), the topsoil shall be stabilized through chemical or physical means to prevent erosion.

2. The Permittee shall monitor and maintain each landvault in accordance with the post-closure plan in Appendix K of the permit application and ADEM Admin. Code R. 335-14-5-.07 [(8) through (11)] and 335-14-5-.14(11) and Part VI of this permit.

PART VI

CORRECTIVE MEASURES IMPLEMENTATION

VI.A. APPLICABILITY

The conditions of this Part apply to SWMUs and AOCs identified in Table VI.1.

VI.B. GENERAL CONDITIONS

1. The Permittee is required to perform corrective measures for the SWMUs and AOCs identified in Condition VI.A. The approved remedy for these defined units, waterway areas, or land parcels, includes any and all actions set forth in this permit and in the approved Record of Decisions (RODs), Interim Measures Plans, Corrective Measures Studies (CMSs), and Corrective Measures Implementation (CMI) Plans approved by the Department, as noted below:

Applicable SWMU/AOC	CMS/CMI	Approval Date
Alluvial Groundwater Aquifer	ROD – Operable Unit (OU) 1	9/28/89
	Remedial Investigation/Feasibility Study (RI/FS) and Remedial Design (RD), OU-1	9/1989
SWMU 23 – 29, 31 – 33	ROD – OU 2	9/30/1991
	RI/FS, OU-2	9/1991
	RD, OU-2	9/1996
AOC B, AOC C	ROD – OU 3	7/25/1995
	RI/FS OU-3	8/1988
	OU-3 Final RI Addendum Report	7/1994
	RD OU-3	10/1997
SWMU 30, AOC A	ROD – OU 4	7/14/1992
	RI/FS OU-4	7/1992
	RD OU 4	9/1996
Former Production Areas 7 and 8	Remediation Plan	5/10/2017

2. Remedial Cleanup Levels

   Pursuant to Part VI of this permit, as outline of the ROD designating applicable cleanup level(s), the cleanup level(s) for the areas specific to the ROD will be deemed to be a condition of this permit.

3. Groundwater Monitoring and Remediation

   Where required pursuant to Conditions VI.B.1 and VI.C. of this permit, the Permittee shall comply with the general groundwater monitoring requirements of Part III of this permit.

4. Land Use Controls

Where required pursuant to Conditions VI.B.1 and VI.C. of this permit, the Permittee shall establish appropriate land use controls to achieve protection of human health and the environment. The Permittee shall comply with Conditions VI.B.5 and VI.B.6 of this permit when implementing corrective measures requiring land use controls. In the event an off-site property owner will not allow an environmental covenant to be imposed, the Permittee shall notify the Department within 14 calendar days of receipt of such written notification of the refusal by the off-site property owner. If the property owner does not provide a written refusal of the request to allow an environmental covenant to be imposed, the Permittee shall notify the Department within 14 days of delivery of the request to the off-site property owner. In such cases, the Department may allow the Permittee to propose an alternate area-specific land use control in accordance with ADEM Admin. Code Rule 335-5-1-.02(i), subject to the Department's review and approval.

5. Survey Plat

For corrective measures where residual concentrations of contaminants will remain in-place at levels greater than those appropriate for unrestricted land use, or for corrective measures that rely on land use controls, the Permittee must:

a. Within 90 calendar days following the effective date of a permit modification addressing remedy selection, submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the Department, a survey plat indicating the location and dimensions of the SWMUs, AOCs, and capped or partially remediated areas with respect to permanently surveyed benchmarks, the locations of sampling points, and the concentrations of hazardous constituents detected. This plat must be prepared and certified by a professional land surveyor registered in the State of Alabama. The plat must be filed with the local zoning authority or the authority with jurisdiction over local land use and must contain a note, prominently displayed, which states the Permittee's obligation to limit the property to the specified restricted uses.

b. Maintain the survey plat as described in Condition VI.B.5.a. of this permit and in the Record of Decision(s) for OU-1, OU-2, OU-3, and OU-4 until the Permittee has demonstrated, to the satisfaction of the Department, that the levels of hazardous constituents in all contaminated media are within limits appropriate for unrestricted land uses.

6. Environmental Covenant

No later than the submission of the survey plat required in Condition VI.B.5., the Permittee must:

a. Record in the probate judges office of the county in which the property is located an environmental covenant in accordance with ADEM Admin. Code R. 335-5 that will in perpetuity notify any potential purchaser of the property that:

i. The land is contaminated with hazardous constituents in concentrations that exceed unrestricted use standards;

ii. The use of the property is restricted by this permit for certain residential, municipal, or industrial purposes and may lead to an increased risk of exposure to hazardous constituents depending upon the activities initiated at the site. Such activities may yield an increased level of human health risk to the owner;

iii. The potential purchaser or entity that desires to work in the contaminated area should notify the Permittee before mobilizing to the area covered by the land use control.

b. Submit to the Department a certification, signed by the Permittee in accordance with Permit Condition I.C.11., that the environmental covenant specified in this part has been performed. This certification must include a copy of the document in which the notation has been placed.

c. Maintain the environmental covenant described in Permit Condition V.B.6. until the Permittee has demonstrated, to the satisfaction of the Department, that the levels of hazardous constituents in all contaminated media are within limits appropriate for unrestricted land uses.

7. Security

Security measures, where required by Conditions VI.B.1. and VI.C. of this permit, will be conducted in accordance with ADEM Admin. Code R. 335-14-5-.02(5) and as prescribed in the approved CMI Plan.

8. Inspection

Where corrective measures addressed in Conditions VI.B.1., include provisions to cap in place or partially remediate properties or land areas, whether owned or not owned by the Permittee, the Permittee shall specify inspection protocols on a scheduled basis to ensure continued integrity of the remedy and to ensure that land use remains appropriately restricted per the environmental covenant established pursuant to Permit Condition VI.B.6. Inspection provisions shall be as prescribed in the approved CMI Plan

VI.C. AREA SPECIFIC DESCRIPTIONS AND CONDITIONS

The specific areas identified in this section have been designated by the US Environmental Protection Agency under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) program.

1. OU – 1: Contamination of the shallow (alluvial) groundwater aquifer.

a. Area Description

As defined in the 1989 ROD, contaminant plumes containing organics, such as solvents and production by-products, and inorganics, were identified in the part of BASF's Plant south of the developed areas, which include manufacturing and infrastructure facilities and waste management systems. The contaminant plumes were within BASF's south property boundary. Olin Corporation property adjoins BASF along the complete south property line. The alluvial aquifer begins at a nominal 50 feet below the land surface and extends to a depth of an additional nominal 50 feet.

b. Area Conditions

1. The Permittee shall maintain the groundwater extraction/treatment system described in Appendix L of the permit application and as required by Part III of this permit.

2. The Permittee shall maintain all groundwater wells associated with the alluvial and Miocene aquifers monitoring program as described in Appendix L of the permit application and as required by Part III of this permit.

3. The Permittee shall keep and maintain all monitoring, testing, and analytical data obtained in accordance with Permit Conditions III.B., III.C., III.D., and III.E. as required by Permit Condition I.C.10.

4. The Permittee shall continue to monitor and maintain records of the following parameters in addition to those outlined in Part III of this permit.

    a. System effluent volume,
    b. Surface water discharge concentrations to the Tombigbee River; and
    c. Corrective action well pumping rates.

2. OU -2: Contamination of soils at ten of eleven former waste management areas.

a. Area Description

Contamination of both surface and deeper soils was identified and characterized by the extensive site investigation which was performed according to CERCLA RI guidance. The facility property was investigated to locate all former waste management or waste impacted areas. The ten areas of contamination, which were collectively specified as OU-2, were generally east of the manufacturing portion of the plant. The predominant class of contaminants was commercial pesticides and the byproduct isomers and metabolites of these pesticide compounds. Contamination of the soil was the result of leaching from 10 hazardous waste management areas which included former waste storage piles, and in some cases, sub-surface disposal of solid waste materials.

The ten areas are described below:

1. SWMU 23 is a former wastewater impoundment currently filled-in with material from sandblasting activities. The waste at Area 1 was sludge containing pesticide residues, by-products, and intermediates from pesticide manufacturing.

2. SWMU 24 is a small, former disposal pit covered by fill located immediately east of Area 1. The pit contained wastes such as trash, pesticide residues, byproducts, and intermediates from pesticide manufacturing.

3. SWMU 25 is an area consisting of five discrete past waste management areas evidencing broad surficial contamination based on the field work conducted during the RI/FS. This unit was divided into five specific areas and a general area of contamination based on differences in color and type of the waste.

4. SWMU 26 consists of three isolated, shallow pits which are covered by clay fill. The pits contained pesticide residues and intermediates from pesticide manufacturing.

5. SWMU 27 is an area where open burning was formerly practiced. The area was covered by clay fill and contained trash, burned demolition debris, pesticide residues, byproducts, and intermediates from pesticide manufacturing.

6. SWMU 28 is the location of two adjacent former trash staging areas covered by clay fill. The site contained trash consisting of combustible refuse such as plastic, paper, cardboard, and rubber intermixed with manufactured pesticides and metals.

7. SWMU 29 is a former disposal pit covered with clay fill. The area contained drums, solid waste, jars, bulk solid wastes, and trash. The waste was comprised of pesticide residues, byproducts, and intermediates from pesticide manufacturing.

8. SWMU 31 is a chemical material burial area covered with clay fill. The area contained bulk pesticide byproducts, predominantly isomers of hexachlorocyclohexane (BHC), and residues.

9. SWMU 32 consists of a thin layer of waste partially covered by an existing storage warehouse. The area contained solid waste consisting of pesticide residues and byproducts. The waste was overlain by approximately eight feet of compacted clay fill. The ground surface is primarily covered with reinforced concrete.

10. SWMU 33 consists of intermixed soil and waste underlying the current trash staging area. The intermixed soil and waste consisted of pesticide byproducts and was overlain by approximately four feet of compacted clay fill. The surface is covered with reinforced concrete except for a small portion along the southern and eastern edges, which is bare ground.

b. Area Conditions

   i. The Permittee shall maintain the operation and maintenance requirements for the landvaults described in Appendix L of the permit application and as required by Part V of this permit. The landvault(s) shall be monitored and maintained for a minimum of thirty years;

   ii. The Permittee shall inspect the vegetated areas and maintain the established vegetated cover in such a manner to not allow any disturbance of the integrity of

the final cover, liners, any components of the containment system, or the function of the facility's monitoring systems. The inspections shall specifically include evaluation of the following items:

a. Integrity of the final cover (erosion, ponding, subsidence, cracking, etc.);

b. Growth and stabilization of vegetative cover;

c. Run-on and run-off control system;

d. Groundwater monitoring wells; and,

e. Survey benchmarks.

iii. Institutional controls for land use and groundwater use restrictions; inspections of areas quarterly and after storms as described in Appendix D;

iv. The Permittee shall maintain the final cover system as described in the Final Remedial Design Report of OU – 2.

v. The Permittee shall submit to the Department a written report which compiles the quarterly inspection reports. The report shall be submitted within 180 calendar days after the issuance of this permit and on an annual basis thereafter. Copies of this report shall be kept at the facility in accordance with Permit Conditions I.C.10.c. and I.C.10.e.

3. OU-3: Contamination within the floodplain, the effluent ditch (previously called the lower portion of the dilute ditch) and areas in the Tombigbee River within close proximity to the Site.

a. Area Description

Contamination of surface soil and sediment in the floodplain was characterized by the site investigation. OU-3 consists of the effluent ditch and 370 acres of the Tombigbee River floodplain and the adjacent areas in the Tombigbee River. This area is separated from the rest of the facility by the bluff line. The source of contamination was primarily from the effluent ditch and runoff from the waste management areas. Additional characterization was performed in conjunction with the extensive ecological risk assessment phase preceding EPA's ROD, and during soil treatability studies conducted during the remedy evaluation phase. The principal contaminant of concern was DDT and its metabolites DDD and DDE (collectively known as DDTR).

b. Area Conditions

i. The Permittee shall maintain the operation and maintenance requirements for the floodplain area described in ROD as well as the Final design report for OU-3.

ii. The Permittee shall conduct annual fish sampling as described in most current version of the OU-3 Operation and Maintenance (O&M) plan, to evaluate the

effectiveness of the remedial action completed in the area. At such time that the cleanup levels, as established in the OU-3 ROD, have been achieved and maintained for three consecutive years, the Permittee may request that the sampling frequency be reduced.

iii. The Permittee shall inspect the sand capped areas and maintain the established cover in such a manner to not allow any disturbance of the integrity of the final cover. The inspections shall specifically include evaluation of the following items:

a. Integrity of the final cover (erosion, subsidence, scouring, cracking, etc.);

b. Sediment deposition/erosion at each station;

c. Survey benchmarks, where necessary.

iv. The Permittee shall include information regarding the effectiveness of the OU-3 remedial action, which should include a compilation of the fish sampling results and cap inspections, annually.

4. OU-4: Contamination of soils in former waste management area designated as SWMU 30 (or bluff line area).

a. Area Description

Contamination of both surface and deeper soils was characterized by the site investigation. The bluff line area is located at the extreme east side of the BASF property, and is roughly bisected by an escarpment which separates the upland portion of the property from the floodplain of the Tombigbee River. An elevation change of approximately 45 feet occurs moving west to east across the site. The principal contaminants in the soil were pesticides, and additionally, commercial herbicides. Contamination of the soil resulted from past waste management practices such as open burning and solid waste disposal in subsurface pits.

b. Area Conditions

i. The Permittee shall maintain the operation and maintenance requirements for the landvaults described in Appendix L of the permit application and as required by Part V of this permit. The landvault(s) shall be monitored and maintained for a minimum of thirty years;

ii. The Permittee shall inspect the vegetated areas and maintain the established vegetated cover in such a manner to not allow any disturbance of the integrity of the final cover, liners, any components of the containment system, or the function of the facility's monitoring systems. The inspections shall specifically include evaluation of the following items:

a. Integrity of the final cover (erosion, ponding, subsidence, cracking, etc.);

b. Growth and stabilization of vegetative cover;

c. Run-on and run-off control system;

d. Groundwater monitoring wells; and,

e. Survey benchmarks.

iii. Institutional controls for land use and groundwater use restrictions; inspections of areas quarterly and after storms as described in Appendix D;

iv. The Permittee shall maintain the slurry wall as described in the Final Remedial Design Report of OU-4.

v. The Permittee shall include information regarding the effectiveness of the slurry wall in the written report described in section VI.C.2.b.v of this permit.

VI.D. CORRECTIVE MEASURES IMPLEMENTATION (CMI) REPORTS

1. CMI Progress Reports

If the time required to complete implementation of a specific set of corrective measures, as described in the Department-approved CMI Plan, is greater than 180 calendar days, the Permittee shall provide ADEM with progress reports according to the approved schedule in the CMI Plan. If no schedule has been approved as part of the associated plan, progress reports shall be submitted at least quarterly. The progress reports shall, at a minimum, contain the following information:

a. A description of the portion of CMI completed;

b. Summaries of and deviations from the approved CMI during the reporting period;

c. Summaries of current and potential problems, including recommended solutions and alternatives as well as corrective actions undertaken;

d. Any monitoring data (soil, air, dust, water) collected for any reason during the construction period for the purposes of monitoring potential for human and ecological exposure; and,

e. Projected work for the next period and impacts to the approved schedule.

2. Final CMI Reports

Upon completion of construction of corrective measures systems, implementation of land use controls, interim removal actions, or other short-term activities required by this permit and/or the approved CMI Plan, the Permittee shall submit to the Department a Final CMI Report containing, at a minimum, the following:

a. A description of activities completed;

b. For cap and cover remedies, as-built construction drawings presenting the final in-place three-dimensional location of contaminated material. A plan

view of the remediated areas shall be presented in addition to a cross section of the in-place capped areas;

c. Hazardous waste manifests indicating the handling of any excavated material that has been shipped off-site to a Department-approved, certified landfill;

d. For remedies involving land use controls, a copy of the survey plat and environmental covenant required by Condition VI.B. of this permit;

e. Monitoring data (soil, air, dust, water) collected for any reason during the construction period for the purposes of monitoring potential for human and ecological exposure; and

f. Certification, prepared in accordance with ADEM Admin. Code Rule 335-14-8-02 (2)(d) by the Permittee and an independent professional engineer registered in the State of Alabama, that the corrective measures implementation phase (*i.e.*, construction) required by this permit is complete and that the approved system and/or facilities are ready for operation in accordance with the intended design (*i.e.*, CMI Plan).

3. Corrective Measures (CM) Effectiveness Reports

a. For corrective measures that have been fully implemented and where the corrective measures system must operate for a period of time to achieve cleanup goals or levels, the Permittee shall submit CM Effectiveness Reports annually, unless otherwise approved by the Department, beginning 180 calendar days following the Department's approval of the Final CMI Report for the initial Corrective Measures system subject to this permit condition. The overall CM Effectiveness Reports shall include, at a minimum, the following information for each SWMU and/or AOC included in the report:

i. A detailed narrative presenting an evaluation of the effectiveness of the selected remedy;

ii. Summaries of compliance with and progress toward achieving cleanup goals;

iii. Any significant revisions, adjustments, or proposed modifications to the selected remedy;

iv. Tabulated environmental sampling and monitoring data including, but not limited to, groundwater quality, elevation data, and a graphical representation of all constituents detected during each sampling event from recovery wells, monitoring wells, drinking water wells, and other locations;

v. Chain of custody, field reports, and laboratory data sheets to include the date of collection, the date the sample was extracted, and the date of sample analysis for samples collected during the reporting period;

vi. Any monitoring data (soil, air, dust, water) collected for any reason during the post-construction period for the purposes of monitoring potential for human and ecological exposure;

vii. Isoconcentration maps depicting the distribution of parameters for each sampling event;

viii. Time versus concentration plots for each monitoring parameter for each recovery well and a representative number of effectiveness wells;

ix. Tabulated volumetric data on groundwater pumped and pumping rates (monthly and cumulative) for each recovery well;

x. Records of any groundwater recovery system operation time, including shutdown periods, not including any minor (less than 24 hours) shutdowns for repairs, maintenance, etc.;

xi. Potentiometric surface maps;

xii. Description of land use during the reporting period at the designated area requiring corrective measures; and,

xiii. Findings of the Permittee's investigation into the continued effectiveness of land use controls per Condition V.B.

b. If, at any time, the Permittee determines that any remedy selection specified in Condition VI.B or VI.C. of this permit no longer satisfies the applicable requirements of ADEM Admin. Code R. 335-14-5-.06(12) or this permit for releases of hazardous waste or hazardous constituents originating from SWMUs or AOCs, the Permittee must, within 90 calendar days, submit an application for a permit modification, pursuant to Permit Condition I.I, to make any appropriate changes to the CMI Plan.

c. The application for changes in the CMI Plan, including changes in inspection and monitoring provisions of the CMI Plan, shall be submitted as an application for a permit modification pursuant to the requirements of ADEM Admin. Code R. 335-14-8-.04.

4. Final Report of Corrective Measures

Within 90 calendar days following attainment of cleanup levels or goals as outlined in this Permit and the approved CMI Plan, the Permittee shall submit to the Department a Final Report of Corrective Measures (FRCM). The FRCM shall contain a certification by the Permittee and an Alabama-registered independent professional engineer that all remedial measures required by this permit and the approved CMI Plan have been completed. The FRCM shall outline any procedures and schedules for dismantling of corrective measures systems, groundwater monitoring or recovery systems, removal of land use controls, and any other remedial systems or controls required by this permit or the approved CMI Plan.

Table VI.1.

The following Solid Waste Management Unit(s) (SWMUs) and/or Area(s) of Concern (AOCs) numbers and descriptions correspond with those noted in the RCRA Facility Assessment (RFA) Report. Where discrepancies exist, the permit will take precedence.

List of SWMUs and AOCs requiring Corrective Measures.

SWMU/AOC NUMBER	SWMU/AOC NAME	UNIT COMMENT	POTENTIALLY AFFECTED MEDIA
23	Original Effluent impoundment	Remediated pursuant to CERCLA	Soil, Groundwater
24	Waste Disposal Pit	Remediated pursuant to CERCLA	Soil, Groundwater
25	Tar Disposal Area	Remediated pursuant to CERCLA	Soil, Groundwater
26	Waste Disposal Pits	Remediated pursuant to CERCLA	Soil, Groundwater
27	Open Burn Area	Remediated pursuant to CERCLA	Soil, Groundwater
28	Temporary Trash Staging Areas	Remediated pursuant to CERCLA	Soil, Groundwater
29	Disposal Site South of the Class C Landfill	Remediated pursuant to CERCLA	Soil, Groundwater
30	Bluffline Area	Remediated pursuant to CERCLA	Soil, Groundwater
31	BHC Burial Area	Remediated pursuant to CERCLA	Soil, Groundwater
33	Trash Staging Area	Remediated pursuant to CERCLA	Soil, Groundwater
35D, N, S, U	Wastewater Sumps	Remediation Plan for Former Production Areas 7 and 8	Soil, Groundwater
35E*	BS-8,, Main Wastewater Sump	Remediation Plan for Former Production Areas 7 and 8	Soil, Groundwater
38F, G, H, I	≤90 Day Hazardous Waste Storage Containers and Areas	Remediation Plan for Former Production Areas 7 and 8	Soil, Groundwater
39EE	Satellite Accumulation Area	Remediation Plan for Former Production Areas 7 and 8	Soil, Groundwater
40E*	Area 8 Waste Loading Pad	Remediation Plan for Former Production Areas 7 and 8	Soil, Groundwater
40I, J	Waste Loading Areas	Remediation Plan for Former Production Areas 7 and 8	Soil, Groundwater
41G, H, J	Wastewater Trenches and Sumps	Remediation Plan for Former Production Areas 7 and 8	Soil, Groundwater

41I, K-M*	Wastewater Trenches and Sumps	Remediation Plan for Former Production Areas 7 and 8	Soil, Groundwater
42A-E	Wastewater Treatment System	Remediation Plan for Former Production Areas 7 and 8	Soil, Groundwater
AOC A	Dilute Ditch	Remediated pursuant to CERCLA	Sediment, surface water
AOC C	Floodplain	Remediated pursuant to CERCLA	Sediment, Surface water

* SWMUs were removed during site demolition activities conducted during the spring and summer of 2016.

PART VII

MANAGEMENT IN TANKS

VII.A. PERMITTED OPERATIONS

The Permittee may operate the units and processes described in Table VII.1. of this permit, subject to the terms of this permit. Operation of any process or unit not listed in Table VII.1. of this permit, operation of any process in a unit or area other than that for which the process is listed, or exceedance of any capacity listed therein, for the treatment, storage, or disposal of hazardous waste is prohibited.

VII.B. WASTE IDENTIFICATION

1. The Permittee may store the hazardous wastes listed in Section 2.0 of Appendix N of the permit application in tanks at the facility, subject to the terms of this permit. The storage of any hazardous waste not listed in Section 2.0 of Appendix N of the permit application is prohibited.

2. The Permittee shall not store or treat mixed waste in tanks at the facility.

VII.C. STORAGE IN TANKS

1. The tank storage capacity is distributed among the Tanks UT-V-813 and UT-V-814 as shown in Table VII.1. of this permit, and as described in Appendix N of the permit application. The maximum quantity of hazardous waste stored in each unit or containment area shall not exceed the capacity listed in Table VII.1. of this permit.

2. The Permittee shall maintain and operate the tank storage areas in accordance with the procedures specified in Appendix N of the permit application and in ADEM Admin. Code Rule 335-14-5-.10.

3. The maximum combined quantity of hazardous and non-hazardous wastes stored in a given area shall not exceed ten times the capacity of the containment system for that area. The maximum combined quantity of hazardous and non-hazardous wastes stored in an individual tank in a given area shall not exceed the capacity of the containment system for that area.

VII.D. TREATMENT IN TANKS (RESERVED)

VII.E. INSTALLATION REQUIREMENTS

The tank system must be installed in accordance with Appendix N of the permit application and ADEM Admin. Code Rule 335-14-5-.10(3).

VII.F. GENERAL OPERATING REQUIREMENTS

The Permittee shall comply with the tank-operating requirements of ADEM Admin. Code Rules 335-14-5-.02(6), 335-14-5-.10(2), 335-14-5-.10(5)(a), 335-14-5-.10(5)(b), 335-14-5-.10(5)(c), and 335-14-5-.10(6)(b).

VII.G. SECONDARY CONTAINMENT REQUIREMENTS

The Permittee shall maintain the secondary containment systems for all storage and/or treatment tanks and for all ancillary equipment as specified in Section 4.1 of Appendix D and Section 3.1.4 of Appendix I of the permit application and in accordance with the requirements of ADEM Admin. Code Rule 335-14-5-.10(4).

VII.H. INSPECTIONS

1. The Permittee shall inspect each tank system (to include the ancillary equipment and secondary containment) and the area surrounding each tank as specified in Section 4.0 of Appendix N of the permit application and in accordance with the requirements of ADEM Admin. Code Rule 335-14-5-.10(6).

2. The Permittee must document daily in the operating record of the facility the results of inspection required by Condition VII.H.1 of this permit.

VII.I. RESPONSE TO LEAKS OR SPILLS

The Permittee shall comply with the requirements of ADEM Admin. Code Rule 335-14-5-.10(7).

VII.J. SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTES

The Permittee shall comply with the requirements specified in Section 7.1 of Appendix B of the permit application and in accordance with the requirements of ADEM Admin. Code Rule 335-14-5-.10(9).

VII.K. SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTES

The Permittee shall comply with the requirements specified in Section 7.2 of Appendix B of the permit application and in accordance with the requirements of ADEM Admin. Code Rule 335-14-5-.10(10).

VII.L. CLOSURE

1. Following the receipt of the final volume of hazardous waste, the Permittee shall close the tank in accordance with the Closure Plan contained in Appendix J and Appendix I of the permit application and in accordance with the requirements of ADEM Admin. Code Rule 335-14-5-.10(8).

2. If at closure not all contaminated soils can be practically removed or decontaminated, the Permittee shall close the tank as a landfill and perform post-closure care as specified in ADEM Admin. Code Rule 335-14-5-.10(8)(b).

TABLE VII.1.

STORAGE IN TANKS

UNIT NAME	TANKS	PERMITTED STORAGE CAPACITY (gallons)	CONTAINMENT CAPACITY (gallons)	DESCRIPTION OF UNIT[1]	LOCATION OF UNIT[1]
Boiler #7 Hazardous Waste Tanks	UT-V-813	31,000	69,902.73	Appendix N	Attachment A of Appendix I
	UT-V-814	31,000			
Total Tank Storage Capacity	-	62,000	69,902.73	-	-

1. Location in permit application containing description (text) or location (figure) of unit.

TABLE VII.2 (Reserved)

PART VIII

MANAGEMENT IN BOILER #7

VIII.A. PERMITTED OPERATIONS

The Permittee may operate the units and processes described in Table VIII.1. of this permit, subject to the terms of this permit. Operation of any process or unit not listed in Table VIII.1. of this permit, operation of any process in a unit or area other than that for which the process is listed, or exceedance of any capacity listed therein, for the treatment, storage, or disposal of hazardous waste is prohibited.

VIII.B. WASTE IDENTIFICATION

1. The Permittee may treat the hazardous wastes listed in Section 2 of Appendix I of the permit application, subject to the terms of this permit. The treatment of any hazardous waste not listed in Section 2 of Appendix I of the permit application is prohibited.

2. The Permittee shall sample the waste streams entering the boiler in accordance the Title V permit operations plan, and the WAP in Appendix B of the permit application to verify that the waste streams meet the physical and chemical properties of feed streams outlined in the permit.

3. The Permittee shall not store or treat mixed waste in the Boiler unit at the facility.

VIII.C. TREATMENT IN BOILER #7

1. The Permittee shall comply with the treatment process and capacity restrictions listed in Table VIII.1. of this permit, and Section 3 of Appendix I of the permit application.

2. The Permittee shall ensure all areas used for the treatment of waste are in good condition and are of sufficient structural integrity and composition to allow for the safe treatment of the waste(s) managed.

3. The Permittee shall not substitute dilution of hazardous wastes for treatment, except as allowed by ADEM Admin. Code R. 335-14-9-.01(3).

4. The Permittee shall ensure that the treatment process utilized complies with any and all regulatory requirements promulgated by ADEM and/or USEPA regarding the release of hazardous constituents to the environment.

5. The Permittee shall conduct the treatment process in accordance with the procedures specified in Sections 2 and 3 of Appendix I of the permit application.

6. The Permittee shall ensure that all chemical reactions have sufficiently occurred to prevent subsequent uncontrolled reactions before the process is stopped.

7. The Permittee shall manage all treatment residues in accordance with all applicable provisions of ADEM Admin. Code R. 335-13 and/or 335-14.

8. The Permittee shall manage the boiler in accordance with the 40 CFR 63 Subpart EEE Hazardous Waste Combustion MACT air emission standards and the Title V Air Permit.

9. The Permittee shall monitor the incoming boiler feed in accordance with Section 4.1 of Appendix I of the permit application to ensure consistency with permitted emission levels, and that boiler design capacities are not exceeded.

10. The Permittee shall conduct startup and shutdown procedures for the boiler in accordance with Section 3.2.1 of Appendix I of the permit application and the Title V permit required operations plan.

11. The Permittee shall enter records of all treatment activities, including hazardous waste numbers and descriptions, quantities, method(s) of treatment, and date(s) of treatment, into the operating record for the boiler.

VIII.D. CONTAINMENT

The Permittee shall maintain the containment systems of the Boiler #7 area in accordance with the requirements of ADEM Admin. Code R. 335-14-5-.09(6)(b), and as specified in Section 3.1.4 of Appendix I of the permit application.

VIII.E. INSPECTIONS

The Permittee shall inspect the Boiler #7 area as specified in Appendix D of the permit application and as required by the Title V Air Permit.

VIII.F. SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTES

The Permittee shall comply with the requirements specified in Section 7.1 of Appendix B of the permit application and ADEM Admin. Code R. 335-14-5-.09(7) and 335-14-5.02(8).

VIII.G. SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTES

The Permittee shall comply with the requirements specified in Section 7.2 of Appendix B of the permit application and in accordance with the requirements of ADEM Admin. Code Rule 335-14-5-.10(10).

VIII.H. CLOSURE

1. Following the receipt of the final volume of waste, the Permittee shall close the Boiler #7 area in accordance with the requirements of the Closure Plan in Appendix J of the permit application, and ADEM Admin. Code Rules 335-14-5-.07(2) and 335-14-5-.09(9).

2. If at closure not all waste and contaminated structures and soils at a unit can be remove or decontaminated, the Permittee shall close Boiler #7 as a landfill and perform post-closure care as specified in ADEM Admin. Code R. 335-14-5-.09(9)(b) and 335-14-5-.14(11)

TABLE VIII.1

TREATMENT IN BOILER #7

TREATMENT PROCESS (Code[1])	UNIT(S) PERMITTED	PERMITTED TREATMENT CAPACITY (Million BTU Per Hour)	CONTAINMENT CAPACITY (gallons)	DESCRIPTION OF UNIT/PROCESS (Section[2])	LOCATION OF UNIT/PROCESS (Figure[2])
T80	Boiler #7	143.7	101.66	Appendix I	Appendix I

1. Treatment process codes as defined in ADEM Admin. Code R. 335-14-5-Appendix I.
2. Location in permit application containing description (text) or location (figure) of unit.

PART IX

SUMMARY OF DEADLINES

The summary information provided herein is intended only as a guide to the requirements of this permit. It is not intended to be all inclusive, nor is it intended to be used as a substitute for the full text of this permit.

PERMIT CONDITION	ITEM	DUE DATE
I.C.2.b.	Reapply for a renewal	180 calendar days before the expiration of the current permit.
I.C.12.	Give notice to the Department of any planned physical alterations or additions to the permitted facility and any solid waste management units.	As soon as possible
I.C.12.	Report any noncompliance with this permit that may endanger human health or the environment.	Orally within 24 hours from the time the Permittee becomes aware of the circumstances. Written submission shall also be provided within 5 calendar days of the time that the Permittee becomes aware of the circumstances
I.F.	Waste Minimization Certification	Annually
I.G.	Update cost estimates	No later than 30 calendar days after the Department has approved a modification to the Closure Plan, Post-Closure Plan, or Corrective Action Plan, or any other plan required or referenced by this permit, if the change in the plan results in an increase in the amount of the cost estimate and annually as required by ADEM Admin. Code Rules 335-14-5-.08(3)(b), (5)(b), and (10)(b)
I.I.	Submit a written request for a permit modification pursuant to the requirements of ADEM Admin. Code Rule 335-14-8-.04(2).	At least 60 calendar days prior to a proposed change in facility design or operation.
II.C.2	Inspect closed unit(s).	In accordance with the Appendix D inspection schedule.
III.B.1.a.iii.	Notification of damaged groundwater monitoring wells	Immediately in writing. The well must be repaired within 30 calendar days of damage, and repair report must be submitted within 30 calendar days of repair.
III.B.1.a.iv.	Notification of abandoned groundwater monitoring wells	Within 30 calendar days after the well is abandoned. The well shall be abandoned within 90 calendar days after deletion using procedures to be approved by the Department.

PERMIT CONDITION	ITEM	DUE DATE
III.B.1.d.	Install additional groundwater monitoring wells	As necessary to assess changes in the rate and extent of any plume of contamination, or as otherwise deemed necessary. Note: a permit modification request must be submitted within 90 calendar days prior to installation of additional groundwater monitoring well(s).
III.B.2.a.	Determine groundwater surface elevation.	At least semi-annually and each time a well is sampled.
III.B.2.b.	Determine groundwater flow rate and direction.	At least annually.
III.B.6.b.	Submit groundwater monitoring report	Within 60 calendar days of the first sampling event and annually thereafter.
III.B.6.c.	Submit progress reports.	Within 90 calendar days after the effective date of this permit and quarterly thereafter. See permit condition for start/stop/resume provisions.
III.E.2.b.	Continue implementation corrective action plan	Within 120 calendar days after the effective date of this permit.
III.E.3.a.	Sample specified point of compliance wells, and all corrective action, boundary and effectiveness wellsand analyze for the constituents listed in Table III.2. of this permit.	Semi-annually continuing within 120 calendar days of the effective date of this permit.
III.E.3.b.	Sample specified point of compliance wells, and all boundary, corrective action, effectiveness wells and and specified background wells and analyze, for the constituents listed in Table III.3 of this permit	At the beginning of the compliance period and annually thereafter throughout the compliance period.
III.E.3.c.	Sample and analyze for temperature (degrees F or C), specific conductance (Mhos/cm), and pH (standard units), at specified background and point of compliance monitoring well locations.	Each time the well is sampled.
III.E.3.d.	Sample and analyze for the constituents listed in Table III.3, all wells (excluding the specified POC and BG wells) listed in Table III.1 at least once every 5 calendar years	No later than 120 calendar days of the fifth anniversary of the effective date of this permit and continuing through the end of the compliance period.
III.E.4.a.	Submit corrective action effectiveness reports.	Annually within 60 calendar days of each annual anniversary of this permit after corrective action is initiated and until corrective action is completed.
IV.B.1.	Notify the Department, in writing, of the discovery of any additional AOCs	Within 15 calendar days of discovery

PERMIT CONDITION	ITEM	DUE DATE
IV.B.2.	Notify the Department, in writing, of the discovery of any additional SWMUs	Within 15 calendar days of discovery
IV.B.3.	Submit a SWMU Assessment Report (SAR) for each SWMU identified under IV.B.2.	Within 90 calendar days of notification.
IV.C.1.	Notify the Department, in writing, of any newly discovered release(s) of hazardous waste or hazardous constituents from SWMUs or AOCs discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means.	Within 15 calendar days of discovery
IV.D.7.	Submit RFI Progress Reports.	Monthly beginning in the second month following the initiation of the RFI
IV.D.8.	Submit RFI Report	Within 60 calendar days from the completion of investigation activities.
IV.E.2.	Submit CMI Plan	Within 120 calendar days following the Permittee's submittal of the RFI Report indicating that hazardous constituents have come to be located at any area of the Permittee's facility, or beyond the facility, at concentrations exceeding those appropriate for the protection of human health and the environment, or within 120 calendar days following notification from the Department that a CMI Plan is required, whichever occurs earlier.
IV.E.4.	Demonstrate financial assurance for completing the approved remedy.	Within 120 calendar days after this Permit has been approved.
IV.F.1.	Submit IM Work Plan	Within 30 calendar days upon notification by the Department.
IV.F.3.	Submit IM Report	Within 90 calendar days of completion of IM.
V.C.9.a.	Notify the Department, in writing, of the exceedance of the action leakage rate	Within 7 calendar days of the determination
V.C.9.b.	Submit a preliminary written assessment of the exceedance of the action leakage rate	Within 14 calendar days of the determination

PERMIT CONDITION	ITEM	DUE DATE
V.C.9.f.	Submit the results of the analyses specified in Parts V.C.9.c., V.C.9.d., and V.C.9.e. of this permit, the results of actions taken, and actions planned	Within 30 calendar days after the notification that the action leakage rate has been exceeded. At least once monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the Permittee must submit to the Department a written report summarizing the results of any remedial actions taken and actions planned.
V.D.5.	Inspect the landvault	Weekly and after storms
V.E.3.	Maintain record of approximate elevation of the loads of hazardous waste placed within each cell	At least once annually
VI.B.5.a.	Submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the Department, a survey plat indicating the location and dimensions of the SWMUs, AOCs, and capped or partially remediated areas with respect to permanently surveyed benchmarks, the locations of sampling points, and the concentrations of hazardous constituents detected	Within 90 calendar days following the effective date of a permit modification addressing remedy selection.
VI.B.6.a.	Record environmental covenant	No later than the submission of the survey plat required in Condition VI.B.5.
VI.B.6.b.	Submit to the Department a certification that the environmental covenant has been performed.	No later than the submission of the survey plat required in Condition VI.B.5.
VI.D.3.	Submit Corrective Measures Effectiveness Reports	Annually beginning 180 calendar days following the Department's approval of the Final CMI Report
VI.D.4.	Submit a Final Report of Corrective Measures (FRCM)	Within 90 calendar days following attainment of cleanup levels or goals
VII.H.2.	Document the results of tank inspections in the operating record of the facility	Daily
VIII.E.	Inspect the Boiler #7 area	As specified in Appendix D of the permit application and as required by the Title V Air Permit

BASF

We create chemistry

Certified Mail: 7015 3430 0001 0203 4926

September 1, 2020

Benjamin King
AL Dept. of Environmental Management
Land Division, Industrial Hazardous Waste Branch
Engineering Services
P.O. Box 301463
Montgomery, AL 36130-1463

RE: RCRA Permit Modification - Waste Constituent Update
EPA I.D. No. ALD001221902
BASF Corporation- McIntosh, Alabama

Mr. King,

BASF Corporation is requesting a permit modification to Appendix I Table 2-1 of the 2017 RCRA permit. This modification will allow flexibility to accept the same material constituents that are currently permitted, but at different concentrations. The current permit allows Tertiary Butyl Alcohol at between 10-20% whereas, there is a potential material which can be burned which has a concentration of between 70-80%. The materials will be burned in Boiler #7. Boiler #7 will continue to meet all applicable requirements of 40 CFR Part 63 Subpart EEE (Hazardous Waste Combustor MACT).

A concurrent request has been submitted to ADEM's Air Division to allow the material to be burned under the current Title V Air permit. Table 2-1 is attached.

If you have any questions, please contact Maurice Ware at (251) 436-2143 (office) or (251) 404-4101 (mobile).

Sincerely,

Robert L Mulholland, Jr.

Robert L Mulholland, Jr.
McIntosh - Interim Site Director

APPENDIX I

HAZARDOUS WASTE BOILER #7

(revised Table 2-1 September 2020)

TABLE 2-1 Waste Stream Constituents

Chemical Name	CASRN	RQ (lbs)
Xylene	1330-20-7	100
Methanol	67-56-1	5000
Cyclohexane	110-82-7	1000
Tertiary Butyl Alcohol	75-65-0	100
n-octane	111-65-9	100
Methanol	67-56-1	5000
Xylene	1330-20-7	100
Iso-octanols		
Irganox products		

ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

(334) 271-7700 1400 Coliseum Blvd. Montgomery, AL 36110
mailing address: Post Office Box 301463, Montgomery, AL 36130-1463

Receipt Confirmation Page

ADEM requires that when you pay online, you MUST print out the confirmation information and submit it as proof of payment with your permit application or any other correspondence requiring proof of payment.

Payment Summary	
Payment Item	Fee
Online Payment - 09/02/2020 12:07:21	$5,400.00
Total Fee through Alabama.gov (more info)	**$5,562.00**

Receipt Confirmation Number: 20200902000017142

General Invoice Information

Choose the type of payment you are making: 5343-LAND- RCRA- LAND PERMITS
Description of Other Fees:
Additional Information/Fee Description: Boiler #7 Waste Stream modification, Appendix I Table 2-1
Number on your ADEM invoice:
Date on your ADEM invoice:

Contact Information

Company/Facility or Individual Name: BASF Corporation
Facility Permit Number (if applicable): ALD001221902
Company or Facility Phone:
Contact Person: Maurice Ware
Contact Phone: 251-436-2143
Contact email address: maurice.ware@basf.com
Name of an ADEM Program Staff Member (if known): Benjamin King

Policy Related Questions: 334-271-7700
Application Support: 866-353-3468 or support@alabamainteractive.org

Version 2.0.0