

OHIO ENVIRONMENTAL PROTECTION AGENCY

DEC 16 2011

OHIO HAZARDOUS WASTE FACILITY
INSTALLATION AND OPERATION PERMIT RENEWAL

ENTERED DIRECTOR'S JOURNAL

Permittee: Haverhill Chemicals LLC

Mailing Address: Haverhill Chemicals LLC
P. O. Box 180
Haverhill, Ohio 45636

Owner: Haverhill Chemicals LLC
16800 Imperial Valley Dr., Suite 499
Houston, Texas 77060

Operator: Haverhill Chemicals LLC
16800 Imperial Valley Dr., Suite 499
Houston, Texas 77060

Location: Haverhill Chemicals LLC
1019 Haverhill-Ohio Furnace Road
Haverhill, Ohio 45636

US EPA ID:	OHD 005 108 477
Issue Date:	December 16, 2011
Effective Date:	December 16, 2011
Expiration Date:	December 16, 2021

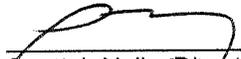
AUTHORIZED ACTIVITIES

In reference to the application of **Haverhill Chemicals LLC** for an Ohio Hazardous Waste Facility Installation and Operation Renewal Permit under Ohio Revised Code (ORC) Chapter 3734 and the record in this matter, you are authorized to conduct at the above-named facility the following hazardous waste management activities:

- Tank Storage of Hazardous Waste
- Treatment of Hazardous Waste in Boilers
- Corrective Action

I certify this to be a true and accurate copy of the official documents as filed in the records of the Ohio Environmental Protection Agency.

PERMIT APPROVAL



 Scott J. Nally, Director
 Ohio Environmental Protection Agency

By Donna Lassiter Date: 12-16-11

This permit approval is based upon the record in this matter which is maintained at the offices of the Ohio Environmental Protection Agency. The Director has considered the application, accompanying information, inspection reports of the facility, a report regarding the facility's compliance or noncompliance with the terms and conditions of its permit and rules adopted by the Director under this chapter, and such other information as is relevant to the operation of the facility. The Director has determined that the facility under the existing permit has a history of compliance with ORC Chapter 3734, rules adopted under it, the existing permit, or orders entered to enforce such requirements that demonstrate sufficient reliability, expertise, and competency to operate the facility henceforth under this chapter, rules adopted under it, and the renewal permit.

Entered into the Journal of the Director this 16 day of December, 2011.

By Donna Lassiter of the Ohio Environmental Protection Agency

MODULE A - GENERAL PERMIT CONDITIONS

A. GENERAL PERMIT CONDITIONS

A.1 Effect of Permit

ORC Sections 3734.02 (E) and (F) and 3734.05
OAC Rule 3745-50-58(G)

- (a) The Permittee is authorized to store hazardous waste in tanks and to treat hazardous waste in boilers in accordance with the terms and conditions of this permit, ORC Chapter 3734, all applicable Ohio hazardous waste rules, all applicable regulations promulgated under the Resource Conservation and Recovery Act (RCRA), as amended, and the approved hazardous waste facility installation and operation permit renewal application, as such application has been revised and supplemented and as such application may be modified pursuant to the hazardous waste rules. The approved Part B permit application, as submitted to Ohio EPA on May 3, 2011 and any subsequent amendment thereto and last updated on August 8, 2011, is hereby incorporated into this permit. In the instance of inconsistent language or discrepancies between the above, the language of the more stringent provision shall govern.
- (b) Any management of hazardous waste not authorized by this permit is prohibited, unless otherwise expressly authorized or specifically exempted by law. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, or invasion of other private rights. Compliance with the terms and conditions of this permit does not obviate Permittee's obligation to comply with other applicable provisions of law governing protection of public health or the environment including but not limited to the Community Right to Know law under ORC Chapter 3750.

A.2 Permit Actions

OAC Rule 3745-50-58(F)

This permit may be modified or revoked as specified by Ohio law. The filing of a request by the Permittee for a permit modification, or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay any permit term or condition.

A.3 Permit Effective/Expiration Date
OAC Rule 3745-50-54

The effective date of this permit is the date the permit is entered into the Director's Journal. The permit expiration date is ten years after the date of journalization of this permit.

A.4 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.

A.5 Duty to Comply
OAC Rule 3745-50-58(A)

The Permittee must comply with all applicable provisions of ORC Chapter 3734, all applicable Ohio hazardous waste rules, and all terms and conditions of this permit, except to the extent and for the duration such noncompliance is authorized by the laws of the State of Ohio. Any permit noncompliance, other than noncompliance authorized by the laws of the State of Ohio, constitutes a violation of ORC Chapter 3734 and is grounds for enforcement action, revocation, modification, denial of a permit renewal application, or other appropriate action.

A.6 Duty to Reapply and Permit Expiration
OAC Rules 3745-50-40(D), 3745-50-58(B), and 3745-50-56 and ORC Section 3734.05(H)

- (a) If the Permittee wishes to continue an activity allowed by this permit after the expiration date of this permit, the Permittee must submit a completed permit application for a hazardous waste facility installation and operation permit renewal and any necessary accompanying general plans, detailed plans, and specifications, and such information as the Director may require, to the Director no later than one hundred eighty (180) days prior to the expiration date of this permit, unless a later submittal date has been authorized by the Director upon a showing of good cause.
- (b) The Permittee may continue to operate in accordance with the terms and conditions of the expired permit until a renewal permit is issued or denied if:

- (i) the Permittee has submitted a timely and complete permit application for a renewal permit under OAC Rule 3745-50-40; and
 - (ii) through no fault of the Permittee, a new permit has not been issued pursuant to OAC Rule 3745-50-40 on or before the expiration date of this permit.
- (c) The Corrective Action obligations contained in this permit will continue regardless of whether the facility continues to operate or ceases operation and closes. The Permittee is obligated to complete facility-wide Corrective Action under the conditions of this permit regardless of the operational status of the facility. The Permittee must submit an application for permit renewal at least 180 days before the expiration date of this permit pursuant to OAC Rule 3745-50-40(D) unless a) the permit has been modified to terminate the Corrective Action schedule of compliance and the Permittee has been released from the requirements for financial assurance for Corrective Action; or b) a later submittal date has been authorized by the Director.

A.7 Need to Halt or Reduce Activity Not a Defense
OAC Rule 3745-50-58(C)

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

A.8 Duty to Mitigate
OAC Rule 3745-50-58(D)

The Permittee must take all reasonable steps to minimize releases to the environment and must carry out such measures as are reasonable to prevent significant adverse impact on human health or the environment resulting from noncompliance with this permit.

A.9 Proper Operation and Maintenance
OAC Rule 3745-50-58(E)

The Permittee must at all times properly operate and maintain the facility (and related appurtenances) to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes effective management practices, adequate funding, adequate operator staffing and training, and where appropriate, adequate laboratory and process controls, including appropriate quality

assurance/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the terms and conditions of this permit.

A.10 Duty to Provide Information
OAC Rule 3745-50-58(H)

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

A.11 Inspection and Entry
OAC Rules 3745-50-58(I) and 3745-50-30 and ORC Section 3734.07

- (a) The Permittee must allow the Director, or an authorized representative, upon stating the purpose and necessity of the inspection and upon proper identification, to:
- (i) 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 terms and conditions of this permit;
 - (ii) have access to and copy, at reasonable times, any records required to be kept under the terms and conditions of this permit;
 - (iii) inspect and photograph at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the terms and conditions of this permit; and
 - (iv) sample, document, or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by ORC Chapter 3734 and the rules adopted thereunder, any substances or parameter at any location.
- (b) Any record, report, or other information obtained under the hazardous waste rules or Chapter 3734 of the Revised Code shall not be available to the public upon the Permittee's satisfactory showing to Ohio EPA that all or part of the information would divulge methods or processes entitled to protection as trade secrets pursuant to Ohio Trade Secret Law and OAC Rule 3745-50-30.

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A.12 Monitoring and Records
OAC Rule 3745-50-58(J)

- (a) Any sample and measurement taken for the purpose of monitoring must be representative of the monitored activity. Further, a sample must be a representative sample as such term is defined and used in the Ohio hazardous waste rules. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I of OAC Rule 3745-51-20, Laboratory Methods. Laboratory methods must be those specified in Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods, EPA Publication SW-846, Third Edition (November 1986), and additional supplements or editions thereof; Standard Methods for the Examination of Water and Wastewater: Twentieth Edition, 1999; or an equivalent method as specified in the approved waste analysis plan, or as this term is defined and used in the Ohio hazardous waste rules.
- (b) Records of monitoring information must specify the:
- (i) date(s), exact place(s), and time(s) of sampling or measurements;
 - (ii) individual(s) who performed the sampling or measurements;
 - (iii) date(s) analyses were performed;
 - (iv) individual(s) who performed the analyses;
 - (v) analytical technique(s) or method(s) used; and
 - (vi) results of such analyses.

A.13 Signatory Requirement and Certification of Records
OAC Rules 3745-50-58(K) and 3745-50-42

All applications, reports, or information must be properly signed and certified in accordance with OAC Rule 3745-50-58(K).

A.14 Retention of Records and Information Repository
OAC Rules 3745-50-40(G), 3745-50-58(J), 3745-50-58(M), and 3745-50-58(N)

- (a) The Permittee must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this permit, the certification required by OAC Rule 3745-54-

73(B)(9), 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 sample, measurement, report, certification, or application.

- (b) The record retention period may be extended by request of the Director at any time and is automatically extended during the course of any unresolved enforcement action regarding the facility.
- (c) The Permittee must maintain, in accordance with the Ohio hazardous waste rules, records of all data used to complete the permit application and any amendments, supplements, or modifications of such application. The Permittee must retain a complete copy of the current application for the effective life of the permit as indicated in Permit Condition A.3.
- (d) The Permittee must maintain records from all ground water monitoring wells and associated ground water surface elevations for the active life of the facility and for disposal facilities for the post-closure care period as well.
- (e) Corrective Action records must be maintained at least three (3) years after all Corrective Action activities have been completed.

A.15 Planned Changes

OAC Rules 3745-50-51 and 3745-50-58(L)(1)

The Permittee must give notice to the Director as soon as possible of any planned physical alterations or additions to the facility. All such changes must be made in accordance with OAC Rule 3745-50-51.

A.16 Waste Shipments

OAC Rule 3745-53-11 and ORC Section 3734.15(C)

The Permittee must only use properly registered transporters of hazardous waste to remove hazardous waste from the facility, in accordance with all applicable laws and rules.

A.17 Anticipated Noncompliance

OAC Rule 3745-50-58(L)(2)

The Permittee must give advance notice to the Director of any planned changes in the permitted facility or operations which may result in noncompliance with the terms and conditions of this permit. Such notification does not waive the Permittee's duty to comply with this permit pursuant to Permit Condition A.5.

A.18 Transfer of Permits

OAC Rules 3745-50-52, 3745-50-58(L)(3), and 3745-54-12

- (a) The permit may be transferred to a new owner or operator only if such transfer is conducted in accordance with ORC Chapter 3734 and the rules adopted thereunder. This permit may be transferred by the Permittee to a new owner or operator only if the permit has been modified under OAC Rule 3745-50-51. Before transferring ownership or operation of the facility, the Permittee must notify the new owner or operator in writing of the requirements of ORC Chapter 3734 and the rules adopted thereunder (including all applicable Corrective Action requirements).
- (b) The Permittee's failure to notify the new owner or operator of the requirements of the applicable Ohio law or hazardous waste rules does not relieve the new owner or operator of its obligation to comply with all applicable requirements.

A.19 Compliance Reports

OAC Rules 3745-50-58(L)(5) and 3745-50-50

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule (developed in accordance with OAC Rule 3745-50-50) of this permit must be submitted to the Director no later than fourteen (14) days following each scheduled date.

A.20 Immediate Reporting of Noncompliance

OAC Rule 3745-50-58(L)(6)

- (a) The Permittee must report orally to Ohio EPA's Division of Environmental Response and Revitalization within twenty-four (24) hours from the time the Permittee becomes aware of any noncompliance with this permit, ORC Chapter 3734, or the rules adopted thereunder, which may endanger human health or the environment, including:
 - (i) information concerning the release of any hazardous waste that may cause an endangerment to public drinking water supplies; and
 - (ii) any information of a release or discharge of hazardous waste or a fire or explosion from the hazardous waste facility, which could threaten the environment or human health outside the facility.
- (b) The report must consist of the following information (if such information is available at the time of the oral report):

- (i) name, address, and telephone number of the owner or operator;
- (ii) name, address, and telephone 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 incident.

A.21 Follow-Up Written Report of Noncompliance
OAC Rule 3745-50-58(L)(6)(c)

- (a) A written report must also be provided to Ohio EPA's Division of Environmental Response and Revitalization and the Division of Materials and Waste Management, Southeast District Office within five (5) days of the time the Permittee becomes aware of the circumstances reported in Permit Condition A.20.
- (b) The written report must address the items in Permit Condition A.20 and must contain a description of such noncompliance and its cause; the period(s) 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 minimize the impact on human health and the environment and to reduce, eliminate, and prevent recurrence of the noncompliance.
- (c) The Permittee need not comply with the five (5) day written report requirement if the Director, upon good cause shown by the Permittee, waives that requirement and the Permittee submits a written report within fifteen (15) days of the time the Permittee becomes aware of the circumstances.

A.22 Other Noncompliance
OAC Rules 3745-50-58(L)(10) and 3745-50-58(L)(4)

The Permittee must report to the Director all other instances of noncompliance not provided for in Permit Conditions A.19 and A.20. These reports must be submitted

within thirty (30) days of the time at which the Permittee is aware of such noncompliance. Such reports must contain all information set forth within Permit Condition A.20.

A.23 Reserved.

A.24 Other Information
OAC Rule 3745-50-58(L)(11)

If at any time the Permittee becomes aware that it failed to submit any relevant facts, or submitted incorrect information, to the Director, the Permittee must promptly submit such facts, information, or corrected information to the Director.

A.25 Confidential Information
OAC Rule 3745-50-30

In accordance with ORC Chapter 3734 and the rules adopted thereunder, the Permittee may request confidentiality for any information required to be submitted by the terms and conditions of this permit, or any information obtained by the Director, or an authorized representative, pursuant to the authority provided under Permit Condition A.11.

A.26 Ohio Annual Permit, Disposal, and Treatment Fees
OAC Rules 3745-50-33 through 3745-50-36

The annual permit fee, calculated pursuant to OAC Rule 3745-50-36 and payable to the Treasurer of the State, must be submitted to the Director on or before the anniversary of the date of issuance during the term of the permit. For the purpose of the payment of the Ohio Annual Permit Fee, the date of issuance is the date the permit was entered into the Journal of the Director of Ohio EPA.

A.27 Compliance Schedule - Documents
OAC Rules 3745-50-50 and 3745-50-51

(a) The Permittee must submit to the Ohio EPA within sixty (60) days after permit journalization, in accordance with Ohio's hazardous waste rules, the following information to be incorporated in the permit application:

(i) Updated Closure Cost Estimate
OAC Rule 3745-55-42

Section I of the permit application, containing the financial assurance mechanism for closure, must be updated to include a copy of the current closure cost estimate as set forth in OAC Rule 3745-55-42. Since the Permittee has been adjusting the closure cost estimate for inflation in accordance with OAC Rule 3745-55-42(B) for the duration of the previous 10 year permit period, the Permittee must provide a detailed written estimate, in current dollars, of the cost of closing the facility in accordance with OAC Rule 3745-55-42(A).

(ii) Updated Financial Assurance Mechanism for Closure
OAC Rule 3745-55-43

Section I of the permit application, containing the financial assurance mechanism for closure, must be updated to include a copy of the current financial assurance mechanism, as set forth in OAC Rule 3745-55-43, and as specified by the wording requirements of OAC Rule 3745-55-51. The value of the financial assurance mechanism must reflect at least the current amount of the closure cost estimate.

During the life of the permit the Permittee may change the financial assurance mechanism as stated in OAC Rule 3745-55-43. The Permittee must submit the financial assurance mechanism documentation to the Director of Ohio EPA in accordance with the parameters set forth in OAC Rule 3745-55-43.

(iii) Updated Liability Requirements
OAC Rule 3745-55-47

Section I of the permit application, containing the mechanism used to demonstrate third party liability coverage, must be updated to include a copy of the current liability mechanism as set forth in OAC Rule 3745-55-47, and as specified by the wording requirements of OAC Rule 3745-55-51.

During the life of the permit the Permittee may change the mechanism used to demonstrate liability coverage as stated in OAC Rule 3745-55-47. The Permittee must submit the liability mechanism documentation to the Director of Ohio EPA in accordance with the parameters set forth in OAC Rule 3745-55-47.

- (b) Unless specified otherwise, the Permittee shall submit the documents listed to:

Ohio Environmental Protection Agency
Division of Materials and Waste Management
Attn: Engineering, Remediation, and Authorizations Section
P.O. Box 1049
Columbus, Ohio 43216-1049

Ohio Environmental Protection Agency
Division of Materials and Waste Management
Attn: Environmental Supervisor, DMWM
2195 Front Street
Logan, Ohio 43138

A.28 Information to be Maintained at the Facility
OAC Rule 3745-54-74

- (a) Unless otherwise specified by the hazardous waste rules, the Permittee must maintain at the facility, until closure is completed and certified by a qualified, registered professional engineer, pursuant to OAC Rule 3745-55-15, and until the Director releases the Permittee from financial assurance requirements pursuant to OAC Rule 3745-55-43, the following documents (including amendments, revisions, and modifications):
- (i) waste analysis plan, developed and maintained in accordance with OAC Rule 3745-54-13 and the terms and conditions of this permit;
 - (ii) contingency plan, developed and maintained in accordance with OAC Rule 3745-54-53 and the terms and conditions of this permit;
 - (iii) closure plan, developed and maintained in accordance with OAC Rule 3745-55-12 and the terms and conditions of this permit;
 - (iv) cost estimate for facility closure, developed and maintained in accordance with OAC Rule 3745-55-42 and the terms and conditions of this permit;
 - (v) personnel training plan and the training records, developed and maintained in accordance with OAC Rule 3745-54-16 and the terms and conditions of this permit;

- (vi) operating record, in accordance with OAC Rule 3745-54-73 and the terms and conditions of this permit;
 - (vii) inspection schedules, developed in accordance with OAC Rules 3745-54-15, 3745-55-74, and 3745-55-95 and the terms and conditions of this permit;
 - (viii) post-closure plan, as required by OAC Rule 3745-55-18(A) and the terms and conditions of this permit;
 - (ix) annually-adjusted cost estimate for facility closure, as required by OAC Rules 3745-55-42 and 3745-55-44 and the terms and conditions of this permit; and
 - (x) all other documents required by this permit.
- (b) The Permittee must maintain copies of all inspection logs at the facility for a period not less than three (3) years from the date of inspection.

A.29 Waste Minimization Report
OAC Rules 3745-54-73 and 3745-54-75

- (a) The Permittee must submit a Waste Minimization Report describing the waste minimization program required by OAC Rules 3745-54-75(H), (I), and (J); 3745-54-73(B)(9); and 3745-52-20(A) at least once every five years. The provisions of OAC Rules 3745-54-75(H), (I) and (J) and 3745-54-73(B)(9) must be satisfied annually.
- (b) The Permittee must submit the Waste Minimization Report to Ohio EPA's Office of Compliance Assistance and Pollution Prevention within one hundred eighty (180) days of the effective date of this permit, and must submit updates to this report once every five years thereafter.

MODULE B - GENERAL FACILITY CONDITIONS

B. GENERAL FACILITY CONDITIONS

B.1 Design and Operation of Facility OAC Rule 3745-54-31

- (a) The Permittee must design, construct, maintain, and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, ground water, or surface waters which could threaten human health or the environment.
- (b) The Permittee must not accept hazardous waste from any off-site sources during the life of the permit, until such time as this permit condition is modified or renewed. This is a facility-wide limitation and includes all units.

B.2 Required Notices OAC Rule 3745-54-12

The Permittee may not receive hazardous waste from off-site.

B.3 General Waste Analysis Plan OAC Rule 3745-54-13

- (a) Before an owner or operator treats, stores, or disposes of any hazardous wastes, or nonhazardous wastes if applicable under OAC Rule 3745-55-13(D), he must obtain a detailed chemical and physical analysis of a representative sample of the wastes. At a minimum, this analysis must contain all the information which must be known to treat, store, or dispose of the waste in accordance with the requirements of Chapters 3745-54 to 3745-57, 3745-205, and 3745-270 of the Administrative Code.
- (b) The Permittee must follow the procedures described in the waste analysis plan found in Section C of the permit application and the terms and conditions of this permit.
- (c) The Permittee must verify the analysis of each waste stream annually or when the permittee has reason to believe that the process or operation that generates the waste has changed, as part of its quality assurance program, in accordance with Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA Publication SW-846, or equivalent methods approved by the Director. At a minimum, the Permittee must

maintain proper functional instruments, use approved sampling and analytical methods, verify the validity of sampling and analytical procedures, and perform correct calculations. If the Permittee uses a contract laboratory to perform analyses, then the Permittee must inform the laboratory in writing that it must operate under the waste analysis conditions set forth in this permit.

B.4 Security
OAC Rule 3745-54-14

The Permittee must comply with the security provisions of OAC Rule 3745-54-14(B)(1), (B)(2), and (C) and Section F of the permit application.

B.5 General Inspection Requirements
OAC Rules 3745-54-15 and 3745-54-73

The Permittee must inspect the facility in accordance with OAC Rule 3745-54-15 and the inspection schedule set forth in Section F of the permit application. The Permittee must remedy any deterioration or malfunction discovered by an inspection, as required by OAC Rule 3745-54-15(C). Records of inspection must be kept for a minimum of three years from the date of inspection. These records must be a part of the facility's operating record as required by OAC Rule 3745-54-73.

B.6 Personnel Training
OAC Rule 3745-54-16

The Permittee must conduct personnel training, as required by OAC Rule 3745-54-16. This training program must contain at least the elements set forth in Section H of the permit application. The Permittee must maintain training documents and records as required by OAC Rule 3745-54-16(D) and (E).

B.7 General Requirements for Ignitable, Reactive, or Incompatible Wastes
OAC Rule 3745-54-17

- (a) The Permittee must comply with the requirements of OAC Rule 3745-54-17 and must follow the procedures for handling ignitable, reactive, and incompatible wastes set forth in Section F of the permit application.
- (b) The Permittee must provide electrical grounding for all containers, tanks, and transport vehicles during all operations involving the handling of ignitable or reactive wastes.

- (c) The Permittee must provide, and require the use of, spark proof tools during all operations involving the handling of all ignitable or reactive wastes.
- (d) The Permittee must prohibit smoking and open flames in each area where ignitable, reactive, or incompatible hazardous wastes are managed and must post appropriate signs.

B.8 Location Standards
OAC Rule 3745-54-18

- (a) The Permittee must operate, and maintain the facility to prevent washout of any hazardous waste by a 100-year flood, as required by OAC Rule 3745-54-18(B)(1) and as specified in the permit application.
- (b) In the event of a 100-year flood, the Permittee must remove all hazardous waste, before flood waters can reach the facility, to a location where the wastes will not be vulnerable to the flood waters, as required by OAC Rule 3745-54-18(B)(1) and in accordance with the 100-year flood response procedures specified in the permit application.

B.9 Required Equipment
OAC Rule 3745-54-32

At a minimum, the Permittee must maintain at the facility all the equipment required by OAC Rule 3745-54-32 and the equipment set forth in the contingency plan contained in Section G of the permit application.

B.10 Testing and Maintenance of Equipment
OAC Rule 3745-54-33

The Permittee must inspect, test, and maintain the equipment required by Permit Condition B.9 as necessary to assure its proper operation in time of emergency, as specified in OAC Rule 3745-54-33, Section F of the permit application, and the terms and conditions of this permit.

B.11 Access to Communications or Alarm System
OAC Rule 3745-54-34

The Permittee must maintain access to the communications and alarm systems, as required by OAC Rule 3745-54-34, Section F of the permit application, and the terms and conditions of this permit.

B.12 Required Aisle Space
OAC Rule 3745-54-35

At a minimum, the Permittee must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, as required by OAC Rule 3745-54-35.

B.13 Arrangements with Local Authorities
OAC Rule 3745-54-37

- (a) The Permittee must comply with the requirements of OAC Rule 3745-54-37 (A) by making a diligent effort to:
- (i) make arrangements and familiarize all emergency response agencies which are likely to respond in an emergency with the location and layout of the facility, properties of hazardous waste managed at the facility and associated hazards, places where facility personnel will normally be working, entrances to and roads inside the facility, and possible evacuation routes as depicted and explained in Section F of the permit application;
 - (ii) make arrangements with Ohio EPA emergency response teams, emergency response contractors, and equipment suppliers;
 - (iii) make arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and types of injuries or illnesses which could result from fires, explosions, or releases at the facility; and
 - (iv) make agreements designating primary emergency authority to a specific police department and a specific fire department and make agreements with any others to provide support to the primary emergency authority, where more than one police and fire department may respond to an emergency.
- (b) Where authorities decline to enter into such agreements or arrangements set forth in OAC Rule 3745-54-37(A), the Permittee must document the refusal in the operating record as required by OAC Rule 3745-54-37(B).

B.14 Implementation of Contingency Plan
OAC Rules 3745-54-51 and 3745-54-56

The Permittee must immediately carry out the provisions of the contingency plan and follow the emergency procedures described in OAC Rule 3745-54-56 whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which threatens or could threaten human health or the environment.

In regard to spills and related toxic gas releases, the plan must describe the criteria to be used by the emergency coordinator to determine when the plan will be implemented. At a minimum, the plan must be implemented in the following situations:

- (a) Any fire involving hazardous waste; or
- (b) Any explosion involving hazardous waste; or
- (c) Any uncontrolled hazardous waste reaction that produces or has the potential to produce hazardous conditions, including noxious, poisonous, flammable, and/or explosive gases, fumes, or vapors; harmful dust; or explosive conditions; or
- (d) Any hazardous waste release, outside of a secondary containment system, that causes or has the potential to cause off-site soil and/or surface water contamination; or
- (e) Any hazardous waste release that produces or has the potential to produce hazardous conditions, including noxious, poisonous, flammable, and/or explosive gases, fumes, or vapors; harmful dust; or explosive conditions.

B.15 Content of the Contingency Plan
OAC Rule 3745-54-52

The Permittee must comply with OAC Rule 3745-54-52 and the contingency plan, as set forth in Section G of the permit application.

B.16 Contingency Plan - Released Material and Emergency Response Material and By-products
OAC Rule 3745-54-56(G)

- (a) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or

surface water, or any other material that results from a release, fire, or explosion at the facility.

- (b) All liquid or solid material resulting from fire, explosion, released material, or emergency response material and by-products that the Permittee is required to evaluate to determine whether such material is hazardous waste in accordance with OAC Rule 3745-52-11, must be collected and managed as a hazardous waste unless the Permittee can demonstrate that such waste is not hazardous in accordance with OAC Rule 3745-51-03(C) and (D).

B.17 Amendments to Plan
OAC Rule 3745-54-54

The Permittee must review the contingency plan at least annually and upon the occurrence of any event listed in OAC Rule 3745-54-54. If necessary or appropriate, the Permittee must amend the contingency plan as required by OAC Rule 3745-54-54 in accordance with OAC Rule 3745-50-51.

B.18 Copies of Plan
OAC Rule 3745-54-53

- (a) The Permittee must comply with the requirements set forth in OAC Rule 3745-54-53 regarding contingency plan distribution. The Permittee must maintain at the facility a copy of the contingency plan and all revisions to the plan.
- (b) The Permittee must, in accordance with OAC Rule 3745-54-53, submit a copy of the contingency plan to all local police departments, fire departments, hospitals, and local emergency response teams that may be called upon to provide emergency services. The Permittee must notify such agencies and the local authorities, in writing, within ten (10) days of the effective date of any amendments of, revisions to, or modifications to the contingency plan.
- (c) The Permittee must, in accordance with OAC Rule 3745-54-53, submit a copy of the contingency plan to the Ohio Environmental Protection Agency's Division of Environmental Response and Revitalization.

B.19 Emergency Coordinator
OAC Rule 3745-54-55

The Permittee must comply with the requirements set forth in OAC Rule 3745-54-55 regarding the emergency coordinator.

B.20 Emergency Procedures
OAC Rule 3745-54-56

The Permittee must comply with the requirements regarding emergency procedures set forth in OAC Rule 3745-54-56, Sections F and G of the permit application, and the terms and conditions of this permit.

B.21 Availability, Retention, and Disposition of Records
OAC Rule 3745-54-74

All records shall be furnished by the Permittee upon request to, and made available at all reasonable times for inspection by, Ohio EPA, in accordance with OAC Rule 3745-54-74.

B.22 Operating Record
OAC Rule 3745-54-73

The Permittee must comply with the requirements set forth in OAC Rule 3745-54-73 regarding an operating record, including information to be recorded and the maintenance thereof.

B.23 Contingency Plan Records
OAC Rule 3745-54-56(J)

The Permittee must note in the operating record the time, date, and details of any incident that requires the implementation of the contingency plan. Within fifteen (15) days after any such incident, the Permittee must submit to the Director a written report of the incident containing the elements set forth in OAC Rule 3745-54-56(J).

B.24 Manifest System
OAC Rules 3745-54-70, 3745-54-71, 3745-54-72, and 3745-54-76

In managing waste at the facility, the Permittee must comply with OAC Chapter 3745-52 and OAC Rules 3745-54-71, 3745-54-72, and 3745-54-76 with regard to the manifest system.

B.25 Annual Reports and Additional Reports
OAC Rules 3745-54-75 and 3745-54-77

The Permittee must comply with the annual report requirements set forth in OAC Rule 3745-54-75 and the additional report requirements set forth in OAC Rule 3745-54-77.

B.26 Closure Performance Standard
OAC Rule 3745-55-11

During facility closure, the Permittee must implement the provisions of the closure plan found in Section I of the permit application in such a manner as to achieve compliance with OAC Rule 3745-55-11.

B.27 Closure Plan
OAC Rules 3745-55-10, 3745-55-11, and 3745-55-13

The Permittee must implement those procedures detailed within Section I of the permit application, in accordance with OAC Rules 3745-55-10 through 3745-55-20.

B.28 Amendment of Closure Plan
OAC Rules 3745-55-12 and 3745-50-51

Should a change in the facility closure plan become necessary, the Permittee must amend the closure plan in accordance with OAC Rule 3745-55-12(C).

B.29 Content of Closure Plan
OAC Rule 3745-55-12

The Permittee must maintain the closure plan at the facility which contains the elements set forth in OAC Rule 3745-55-12 and all elements required by the terms and conditions of this permit.

B.30 Notification of Closure
OAC Rule 3745-55-12

The Permittee must notify the Director in writing at least 45 days prior to the date on which he expects to begin final closure of a facility, as required by OAC Rule 3745-55-12(D).

B.31 Time Allowed For Closure
OAC Rule 3745-55-13

Within ninety (90) days after receiving the final volume of hazardous waste, the Permittee must remove from the facility, or treat or dispose of on-site, all hazardous waste in accordance with the closure plan. The Director may approve a longer closure period if the Permittee complies with all applicable requirements for requesting a modification to the permit as set forth in OAC Rule 3745-55-13(A). The Permittee must complete all closure activities within one hundred eighty (180) days after receiving the final volume of hazardous waste in accordance with OAC

Rule 3745-55-13. The Director may approve a longer closure period if the Permittee complies with all applicable requirements for requesting a modification to the permit as set forth in OAC Rule 3745-55-13 (B).

B.32 Disposal or Decontamination of Equipment, Structures, and Soils
OAC Rule 3745-55-14

- (a) The Permittee must decontaminate or dispose of all contaminated facility equipment, structures, and soils, as required by OAC Rule 3745-55-14, the closure plan, and the terms and conditions of this permit.
- (b) The Permittee must notify the Ohio EPA Southeast District Office within five (5) working days prior to all rinsewater and soil sampling.

B.33 Certification of Closure
OAC Rule 3745-55-15

The Permittee and a qualified, registered professional engineer must certify that each hazardous waste management unit or the facility has been closed in accordance with the specifications in the closure plan and the terms and conditions of this permit, as required by OAC Rule 3745-55-15. The Permittee must furnish to the Director, upon request, documentation supporting the certification.

B.34 Reserved.

B.35 Reserved.

B.36 Cost Estimate for Facility Closure
OAC Rule 3745-55-42

- (a) The Permittee's most recent closure cost estimate, prepared in accordance with OAC Rule 3745-55-42, is specified in Section I of the permit application.
- (b) The Permittee must adjust the closure cost estimate for inflation at least 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with OAC Rule 3745-55-43 and Permit Condition B.39.
- (c) The Permittee must revise the closure cost estimate whenever there is a change in the facility's closure plan that increases the cost of closure, as required by OAC Rule 3745-55-42(C).

- (d) The Permittee must submit to Ohio EPA and keep at the facility the latest closure cost estimate as required by OAC Rule 3745-55-42(D) and (E).

B.37 Financial Assurance for Facility Closure

The Permittee must maintain continuous compliance with OAC Rule 3745-55-43 and provide documentation of financial assurance, which meets the requirements of OAC Rule 3745-55-51, in at least the amount of the cost estimates required by Permit Condition B.36.

B.38 Liability Requirements

The Permittee must maintain continuous compliance with the requirements of OAC Rule 3745-55-47 and the documentation of liability by providing liability coverage which meets the requirements of OAC Rule 3745-55-51 for sudden accidental occurrences in the amount of at least \$1 million per occurrence, with an annual aggregate of at least \$2 million, exclusive of legal defense costs.

**B.39 Incapacity of Owners or Operators, Guarantors, or Financial Institutions
OAC Rule 3745-55-48**

The Permittee must comply with requirements set forth in OAC Rule 3745-55-48 regarding the incapacity of owners, operators, guarantors, or financial institutions.

**B.40 General Requirements for Land Disposal Restrictions
OAC Chapter 3745-270**

The Permittee must comply with all applicable regulations regarding land disposal prohibitions and restrictions, as required by OAC Chapter 3745-270.

MODULE C - RESERVED

MODULE D - TANK STORAGE AND MANAGEMENT

D. MODULE HIGHLIGHTS

The Permittee has applied for tanks #2104-F, #2105-F, and #2003-F to be permitted as greater than 90-day hazardous waste storage tanks. The tanks have a storage capacity of 200,000 gallons, 250,000 gallons, and 200,000 gallons, respectively. Tanks #2104-F and #2105-F hold the listed hazardous waste K022 (distillation bottoms from the production of phenol and acetone from cumene). Tank #2003-F holds the characteristic wastes D001 (ignitability) and light oils used in the plant. All three tanks have overfill control, secondary containment, and organic vapor emission controls. Tanks #2104-F and #2105-F have scrubbers and tank #2003-F has an internal floating roof. All three tanks are above ground with primarily above ground ancillary equipment and piping leading to two industrial boilers. The stored hazardous wastes are burned for energy recovery in the industrial boilers.

D.1 Tank Storage Quantity Limitation/Waste Identification

- (a) The Permittee may store a total volume of 650,000 gallons of hazardous waste in three tanks, subject to the terms of this permit and as detailed in the table below.

The Permittee shall store in tanks only the hazardous waste codes specified in the permit application and summarized below:

Tank No.	Capacity (Gallons)	Dimensions of Tank	Secondary Containment Volume(Gallons)	Description of Hazardous Waste	Hazardous Waste No.
2104-F	200,000	33' x 31'	Yes- in place	Phenol distillation column bottoms (K022) & BPA purification system column bottoms (nonhazardous)	K022
2105-F	250,000	36' x 30'	Yes- in place	Phenol distillation column bottoms (K022) & BPA purification system column bottoms (nonhazardous)	K022
2003-F	200,000	33' x 28'	Yes- in place	Phenol process spent emission scrubber fluid (D001), AMS distillation column bottoms (D001), & Purification system light hydrocarbons (D001)	D001

D.2 Reserved.

D.3 Reserved

D.4 Containment and Detection of Releases
OAC Rule 3745-55-93

The Permittee must operate the secondary containment system in accordance with the requirements of OAC Rule 3745-55-93(B) through (F) and Section D of the permit application.

D.5 Operating Requirements
OAC Rule 3745-55-94

- (a) The Permittee must not place hazardous wastes or treatment reagents in the tank system if they could cause the tank, its ancillary equipment, or a containment system to rupture, leak, corrode, or otherwise fail.
- (b) The Permittee must prevent spills and overflows from the tank or containment systems using the methods described in the permit application. The Permittee must comply with the requirements of OAC Rule 3745-55-96 if a leak or spill occurs in the tank system.

D.6 Inspection Schedules and Procedures
OAC Rule 3745-55-95

- (a) The Permittee must inspect the tank systems in accordance with the Inspection Schedule found in Section F of the permit application and must complete the items in Permit Conditions D.6(b) and D.6(c) as part of those inspections.
- (b) The Permittee must inspect the overfill controls in accordance with the procedure and schedule in the permit application.
- (c) The Permittee must inspect the following components of the tank system once each operating day:
 - (i) Aboveground portions of the tank system, if any, to detect corrosion or releases of waste;
 - (ii) Data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; and

- (iii) Construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system, to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).
- (d) The Permittee shall document compliance with permit condition D.6 in the operating record of the facility.
- (e) On or before February 26, 2003, the Permittee painted all areas of Tank 2104-F that showed signs of external corrosion. Every five years thereafter, or sooner, this tank shall be painted if the tank begins to show signs of external corrosion in order to provide continued external corrosion protection.
- (f) On or before February 26, 2004, the Permittee painted all areas of Tank 2105-F that showed signs of external corrosion. Every five years thereafter, or sooner, this tank shall be painted if the tank begins to show signs of external corrosion in order to provide continued external corrosion protection.
- (g) Within five years of the date of the previous in service tank inspection (May 4, 2000), and every five years thereafter, the Permittee shall submit an in service tank inspection report for tanks 2104-F and 2003-F and associated ancillary equipment. Within one year of the previous inspection (May 2011), and every year thereafter, Tank 2105-F shall be inspected. These inspections should be performed in accordance with American Petroleum Institute (API) standards 653 and 575, including ultrasonic thickness testing of the tanks.

D.7 Response to Leaks or Spills
OAC Rule 3745-55-96

- (a) In the event of a leak or a spill from the tank system or from a secondary containment system, or if a system becomes unfit for continued use, the Permittee must remove the system from service immediately and complete the following actions:
 - (i) Immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.
 - (ii) If the release was from the tank system, the Permittee must, within twenty-four hours after detection of the leak, or, if the Permittee demonstrates that it is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further

release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.

If the material released was to a secondary containment system, all released materials must be removed within twenty-four hours or in as timely a manner as possible to prevent harm to human health and the environment.

- (iii) The Permittee must immediately conduct a visual inspection of all releases to the environment and based on that inspection: (1) prevent further migration of the leak or spill to soils or surface water and (2) remove and properly dispose of any visible contamination of the soil or surface water.
- (b) Unless the requirements of Permit Conditions D.7(b)(i) through D.7(b)(vi) are satisfied, the Permittee must close its tank system in accordance with OAC Rule 3745-55-97 and its closure plan if there has been a leak or spill from the tank system or from a secondary containment system, or if a system becomes unfit for continual use.
- (i) For a release caused by a spill that has not damaged the integrity of the system, the Permittee must remove the released waste and make any necessary repairs to fully restore the integrity of the system before returning the tank system to service.
 - (ii) For a release caused by a leak from the primary tank system to the secondary containment system, the Permittee must repair the primary system prior to returning it to service.
 - (iii) For a release to the environment caused by a leak from a component of the tank system that is below ground and does not have secondary containment, the Permittee must provide this component with secondary containment that meets the requirements of OAC Rule 3745-55-93 before the component can be returned to service.
 - (iv) For a release to the environment caused by a leak from the aboveground portion of the tank system that does not have secondary containment, and can be visually inspected, the Permittee must repair the tank system in accordance with Permit Condition D.7(c) before returning it to service.
 - (v) For a release to the environment caused by a leak from the portion of the tank system component that is not readily available for visual

inspection, the Permittee must provide secondary containment for the entire component that meets the requirements of OAC Rule 3745-55-93 before the component can be returned to service.

- (vi) If the Permittee replaces a component of the tank system to eliminate the leak, that component must satisfy the requirements for new tank systems or components in OAC Rules 3745-55-92 and 3745-55-93.
- (c) For all major repairs (e.g., installation of an internal liner, repair of a ruptured tank, or repair or replacement of a secondary containment vault) to eliminate leaks or restore the integrity of the tank system, the Permittee must obtain a certification by an independent, qualified, registered professional engineer in accordance with OAC Rule 3745-50-42(D)(1) that the repaired system is capable of handling hazardous wastes without release for the intended life of the system before returning the system to service. This certification must be submitted to the Director within seven days after returning the tank system to use.

D.8 Recordkeeping and Reporting

OAC Rules 3745-55-96, 3745-55-91(A), and 3745-55-92(G)

- (a) The Permittee must report to the Director, within 24 hours of detection, when a leak or spill occurs from the tank system or secondary containment system to the environment. A leak or spill of one pound or less of hazardous waste, that is immediately contained and cleaned-up, need not be reported. Releases that are contained within a secondary containment system need not be reported.
- (b) Within 30 days of detecting a release to the environment from the tank system or secondary containment system, the Permittee must report the following information to the Director:
 - (i) Likely route of migration of the release;
 - (ii) Characteristics of the surrounding soil (including soil composition, geology, hydrogeology, and climate);
 - (iii) Results of any monitoring or sampling conducted in connection with the release. If the Permittee finds it will be impossible to meet this time period, the Permittee should provide the Director with a schedule of when the results will be available. This schedule must be provided before the required 30-day submittal period expires;

- (iv) Proximity of downgradient drinking water, surface water, and populated areas; and
- (v) Description of response actions taken or planned.
- (c) The Permittee must obtain, and keep on file at the facility, the written statements by those persons required to certify the design and installation of the tank system.
- (d) The Permittee must keep on file at the facility the written assessment of the tank system's integrity.

D.9 Closure and Post-Closure Care
OAC Rule 3745-55-97

- (a) At closure of the tank system(s), the Permittee must follow the procedures in the closure plan in Section I of the permit application.
- (b) If the Permittee demonstrates that not all contaminated soils can be practically removed or decontaminated, in accordance with the closure plan, then the Permittee must close the tank system(s) and perform post-closure care.

D.10 Special Tank Provisions for Ignitable or Reactive Wastes
OAC Rule 3745-55-98

- (a) The Permittee must not place ignitable or reactive waste in the tank system or in the secondary containment system unless the procedures specified in the permit application are followed. The Permittee must document compliance with this condition and place it in the operating record.
- (b) The Permittee must comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon, as required in Tables 2-1 to 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code" (1996 or most recent edition) incorporated by reference in OAC Rule 3745-50-11.

D.11 Reserved.

MODULE E - CORRECTIVE ACTION REQUIREMENTS

The Permittee received Federal interim status from U.S. EPA on December 9, 1981. A Consent Agreement and Final Order (CAFO) was reached between the Permittee and U.S. EPA on December 27, 1988, for the removal and proper treatment of contaminated soils from the Phenol Railroad Loading Area (WMU #53) and the Wastewater Ditches and Settling Ponds (WMU #67). The CAFO was issued as an interim measure to address the immediate threat to human health and the environment at these two WMUs. Based on reports from preliminary review, site, and sampling visits that occurred in April 1987 and October 1987, 69 WMUs and 9 AOCs were identified in an RFA report dated January 9, 1989.

On April 9, 1993, the Permittee received a Federal permit from U.S. EPA. The Permittee requested and received a modification to the permit to close out the CAFO and address the remaining cleanup of WMUs #53 and #67 under the Corrective Action requirements of their Federal Part B permit. The permit was revised to reflect this on November 2, 1994.

The Permittee submitted an RFI Workplan, Assessment of Current Conditions (ACC), and QAPP to U.S. EPA on July 21, 1993. The ACC provided information on a total of 115 WMUs at the facility; 69 WMUs identified by U.S. EPA and 46 additional WMUs identified by the Permittee. After several revisions, U.S. EPA issued conditional approval of the RFI Workplan on July 7, 1995. On April 25, 1996, the Permittee submitted the Draft RFI report to U.S. EPA. The Permittee identified 39 WMUs requiring additional investigation or discussion in the 1996 RFI. The 1996 RFI stated the Corrective Measures Technology for these 39 WMUs was "no action". On March 16, 1998, the Permittee submitted a response to U.S. EPA addressing their comments on the Draft RFI report. U.S. EPA received RFI addenda from the Permittee in June 2001, February 2003, and August 2006.

Transition of corrective action authority from U.S. EPA to Ohio EPA occurred in 2010 during Ohio EPA's review of the final RFI report. Ohio EPA is providing Permittee with comments to finalize the RFI report.

E.1 Corrective Action at the Facility OAC Rules 3745-50-10 and 3745-54-101

In accordance with OAC Rule 3745-50-10, "waste management unit" means any discernible unit at which solid waste, hazardous waste, infectious waste (as those terms are defined in ORC Chapter 3734), construction and demolition debris (as defined in ORC Chapter 3714), industrial waste, or other waste (as those terms are defined in ORC Chapter 6111) has been placed at any time, irrespective of whether the unit was intended for the management of solid waste, hazardous waste, infectious waste, construction and demolition debris, industrial waste, or other

waste. Such units include any area at a facility at which any of the listed wastes have been routinely and systematically released. For the purpose of Corrective Action, facility is defined as all contiguous property under the control of the owner or operator seeking a permit under Subtitle C of RCRA. The terms Interim Measure (IM), RCRA Facility Investigation (RFI), Corrective Measures Study (CMS), and Corrective Measure Implementation (CMI) are defined in U.S. EPA's Corrective Action Plan (CAP) (OSWER Directive 9902.3-2A, May 1994).

The Permittee must institute Corrective Action as necessary to protect human health and the environment for all releases of hazardous wastes or hazardous constituents from any waste management units (WMUs) at the Facility, regardless of the time at which waste was placed in such units.

E.2 Corrective Action Beyond the Facility Boundary
OAC Rule 3745-54-101

The Permittee must implement Corrective Action beyond the Facility property boundary, where necessary to protect human health and the environment, unless the Permittee demonstrates to the satisfaction of Ohio EPA that, despite the Permittee's best efforts, 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 addressed under the RFI, CMS, and CMI phases, as determined to be necessary on a case-by-case basis.

E.3 Identification of WMUs
OAC Rules 3745-50-44(D) and 3745-54-101

The following table summarizes the 39 WMUs that the Permittee identified as requiring additional investigation/discussion in the 1996 RFI. A detailed summary of each WMU is included in the Permittee's April 1996 RFI. The following is a listing of these WMUs.

WMU ID #	Description of WMU
Group 1	Wastewater/Land Treatment Areas, Lagoons and Ponds
9	Alcohol Holding Basin
12	Alcohol Pond
13	West Lagoon
30	100/800 Sumps Drying Area
32	Sludge Lagoons
33	Aeration Lagoon
34	Polystyrene Lagoons
35	Reactor Blowdown Area
55	Land Treatment Area
100	Land Application Biosolids & Sediment Settling Pond Areas
114	BPA Maintenance & Central Stores
Group 2	Basins, Pits, Sewers, Sumps and Tanks
11	Alcohol Sludge Pit
24	Sludge Pit
38	2422-A, 2423-A, 2424-A Holding Basins
54	2429-A Clarifier Blowdown Pits
59	TK-902 Sump
61	TK-903/904 Sump
69	Process Stormwater Sewers
84	Fire Burning Pit
98	Septic Oil Traps
99	Cobalt Catalyst Tank
103	D-143 Bio-waste Oil Collection Tank
115	2102-FA Tank
Group 3	Solid Waste Handling, Loading and Storage Areas
15	Alcohol RR Loading Areas
65	BPA RR Loading Areas
66	BD-908 Drum Storage Area
Group 3 (cont.)	Solid Waste Handling, Loading and Storage Areas
86	Surplus Equipment/Scrap Drum Area
87	Coal Yard/Ash Storage
88	Waste Drum Storage Area
93	Ash Silo/Ash Loading Area
97	BD-17 Waste/Surplus Drum Storage Area
Group 4	RCRA Closure Areas
51	Underground Injection Wells 1 & 2
56	Northwest Lagoon
57	Boilers
62	East Pond
63	West Pond
Group 5	CAFO Areas
53	Phenol RR Loading Area
67	Wastewater Ditches & Settling Ponds
68	Emergency Dikefields

E.4 Reserved.

E.5 RCRA Facility Investigation (RFI)
OAC Rule 3745-54-101

The Permittee must conduct an RFI to thoroughly evaluate the nature and extent of the release of hazardous wastes and hazardous constituents from all applicable WMUs identified in Permit Condition E.3 and Permit Condition E.10. The major tasks and required submittal dates are shown below. The scope of work for each of the tasks is found in U.S. EPA's CAP.

(a) RFI Workplan

The Permittee must submit a written RFI Workplan to Ohio EPA within 90 days after the effective date of this permit or, in case of a newly discovered waste management unit, on a time frame established by Ohio EPA.

- (i) Within 45 days of receipt of any Ohio EPA comments on the RFI Workplan, the Permittee must submit either an amended or new RFI Workplan that addresses Ohio EPA's comments.
- (ii) Ohio EPA will approve or modify and approve, in writing, the amended or new RFI Workplan. The RFI Workplan, as approved or as modified and approved, shall be incorporated into this permit and become an enforceable condition of this permit. Subsequent changes to the approved RFI Workplan must be authorized by Ohio EPA.

(b) RFI Implementation

The Permittee must implement the RFI Workplan according to the terms and schedule in the approved RFI Workplan.

(c) RFI Final Report

Within 60 days after the completion of the RFI, the Permittee must submit an RFI Final Report to Ohio EPA. The RFI Final Report must describe the procedures, methods, and results of the RFI. The Final Report must contain adequate information to support further decisions concerning Corrective Action at the Facility.

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- (i) Within 45 days of receipt of any Ohio EPA comments on the RFI Final Report, the Permittee must submit either an amended or new RFI Final Report that addresses Ohio EPA's comments.
 - (ii) Ohio EPA will approve or modify and approve, in writing, the amended or new RFI Final Report. The RFI Final Report, as approved or as modified and approved, shall be incorporated into this permit and become an enforceable condition of this permit. Subsequent changes to the approved RFI Final Report must be authorized by Ohio EPA.

E.6 Interim Measure (IM)

No interim actions have been identified at this time.

Based on the RFI Final Report or other information documenting a release of hazardous waste or constituents to the environment, Ohio EPA may require (or the Permittee may propose) the development and implementation of an IM (this may include an IM Workplan) at any time during the life of the permit to mitigate or eliminate a threat to human health or the environment. The Permittee must implement the IM upon a time frame established by Ohio EPA.

E.7 Determination of No Further Action

(a) Permit Modification

Based on the results of the completed RFI and other relevant information, the Permittee may submit an application to Ohio EPA for a permit modification under OAC Rule 3745-50-51 to terminate the Corrective Action tasks of the Schedule of Compliance. Other tasks identified in the Schedule of Compliance shall remain in effect. This permit modification application must conclusively demonstrate that there are no releases of hazardous waste or constituents from WMUs at the Facility that pose an unacceptable risk to human health and the environment.

If, based upon review of the Permittee's request for a permit modification, the results of the completed RFI, and other information, Ohio EPA determines that releases or suspected releases which were investigated either are nonexistent or do not pose an unacceptable risk to human health and the environment, Ohio EPA will approve the requested modification. Decisions regarding the completion of RCRA Corrective Action and no further action may be made for the entire Facility, for a portion of the Facility, or for a specific unit or release.

(b) Periodic Monitoring

A determination of no further action shall not preclude Ohio EPA from requiring continued or periodic monitoring of air, soil, ground water, or surface water, if necessary to protect human health and the environment, when site-specific circumstances indicate that a potential or an actual release of hazardous waste or constituents exists.

(c) Further Investigations

A determination of no further action shall not preclude Ohio EPA from requiring further investigations, studies, or remediation at a later date, if new information or subsequent analysis indicates that a release or potential release from a WMU at the Facility may pose an unacceptable risk to human health or the environment. In such a case, Ohio EPA shall initiate a modification to the terms of the permit to rescind the determination made in accordance with Permit Condition E.7(a). Additionally, in the event Ohio EPA determines that there is insufficient information on which to base a determination, the Permittee, upon notification, is required to develop a Work Plan and upon Ohio EPA approval of that Work Plan, perform additional investigations as needed.

E.8 Corrective Measures Study (CMS)

If Ohio EPA determines, based on the results of the RFI and any other relevant information, that corrective measures are necessary, Ohio EPA will notify the Permittee in writing that the Permittee must conduct a CMS either as described below or as described in Ohio EPA's notification to the Permittee. The purpose of the CMS will be to develop and evaluate the corrective action alternative(s) and to outline one or more alternative corrective measure(s) that will satisfy the performance objectives specified in Permit Condition E.9.

(a) CMS Workplan

The Permittee must submit a written CMS Workplan to Ohio EPA within 90 days from the notification by Ohio EPA of the requirement to conduct a CMS.

- (i) Within 45 days of receipt of any Ohio EPA comments, the Permittee must submit either an amended or new CMS Workplan that addresses Ohio EPA's comments.

- (ii) Ohio EPA will approve or modify and approve, in writing, the amended or new CMS Workplan. The CMS Workplan, as approved or as modified and approved, must be incorporated into this permit and become an enforceable condition of this permit. Subsequent changes to the approved CMS Workplan must be authorized by Ohio EPA.

(b) CMS Workplan Implementation

The Permittee must implement the CMS Workplan according to the terms and schedule in the approved CMS Workplan.

(c) CMS Final Report

Within 60 days after the completion of the CMS, the Permittee must submit a CMS Final Report to Ohio EPA. The CMS Final Report must summarize the results of the investigations for each remedy studied and must include an evaluation of each remedial alternative.

- (i) Within 45 days of receipt of any Ohio EPA comments, the Permittee must submit either an amended or new CMS Final Report that addresses Ohio EPA's comments.
- (ii) Ohio EPA will approve or modify and approve, in writing, the amended or new CMS Final Report. The CMS Final Report, as approved or as modified and approved, must be incorporated into this permit and become an enforceable condition of this permit. Subsequent changes to the approved CMS Final Report must be authorized by Ohio EPA.

E.9 Corrective Measures Implementation (CMI)

Based on the results of the CMS, the Permittee must implement one or more of the Corrective Measures authorized by Ohio EPA. Ohio EPA will authorize one or more of the Corrective Measures in the CMS, and will notify the Permittee in writing of the decision. The Corrective Measure selected for implementation must: (1) be protective of human health and the environment; (2) attain media cleanup standards; (3) control the source(s) of releases so as to reduce or eliminate further releases of hazardous waste(s) (including hazardous constituent[s]); and (4) comply with all applicable standards for management of wastes.

If two or more of the Corrective Measures studied meet the threshold criteria set out above, Ohio EPA will authorize the Corrective Measures Implementation by considering remedy selection factors including: (1) long-term reliability and

effectiveness; (2) the degree to which the Corrective Measure will reduce the toxicity, mobility, or volume of contamination; (3) the Corrective Measure's short-term effectiveness; (4) the Corrective Measure's implementability; and (5) the relative cost associated with the alternative.

(a) Permit Modification

Ohio EPA will initiate a permit modification, as provided by OAC Rule 3745-50-51, to require implementation of the corrective measure(s) authorized.

The Permittee must not implement the corrective measure until the permit is modified pursuant to OAC Rule 3745-50-51.

(b) Financial Assurance

OAC Rule 3745-54-101

Within 45 days after receiving approval of the CMI, the Permittee must provide financial assurance in the amount necessary to implement the corrective measure(s) as required by OAC Rule 3745-54-101 (B) and (C).

E.10 Newly Identified WMUs or Releases

OAC Rule 3745-54-101

(a) General Information

The Permittee must submit to Ohio EPA, within 30 days of discovery, the following information regarding any new WMU identified at the Facility by Ohio EPA or the Permittee:

- (i) The location of the unit on the site topographic map;
- (ii) Designation of the type of unit;
- (iii) General dimensions and structural description (supply any available drawings);
- (iv) When the unit was operated; and
- (v) Specification of all waste(s) that have been managed at the unit.

(b) Release Information

The Permittee must submit to Ohio EPA, within 30 days of discovery, all available information pertaining to any release of hazardous waste(s) or hazardous constituent(s) from any new or existing WMU.

E.11 Corrective Action for Newly Identified WMUs and Releases
OAC Rule 3745-54-101

If Ohio EPA determines that an RFI is required for newly identified WMUs, the Permittee must submit a written RFI Workplan to Ohio EPA upon a time frame established in written notification by Ohio EPA in accordance with Permit Condition E.5. This determination will be made based on the information submitted in accordance with Permit Condition E.10.

Further investigations or corrective measures will be established by Ohio EPA.

The Permittee must make such submittal in accordance with time frames established by Ohio EPA.

E.12 Completion of Corrective Action
OAC Rule 3745-54-101

After completing Corrective Action as necessary to protect human health and the environment for all releases of hazardous wastes or hazardous constituents from any WMUs at the Facility, the Permittee shall submit a Corrective Measures Completion of Work (CMCW) Report. The CMCW Report shall document that Corrective Action construction is complete, cleanup objectives and standards have been met, and any releases of hazardous waste or constituents no longer pose an unacceptable risk to human health and the environment. The CMCW Report may be submitted for any part of the Facility for which corrective measures are complete, or for the entire Facility. The CMCW Report must be submitted as a request for permit modification pursuant to OAC Rule 3745-50-51.

E.13 Documents Requiring Professional Engineer Stamp
ORC Section 4733.01

Preparation of the following Corrective Action documents constitutes the "practice of engineering" as defined by ORC Section 4733.01:

Final Interim Measures Report

Corrective Measures Final Design

Corrective Measures Construction Completion Report

Corrective Measures Attainment of Groundwater Performance Standards Report

Corrective Measures Completion of Work Report

As such, the Permittee must ensure that these documents, as submitted to Ohio EPA, are stamped by a Professional Engineer licensed to practice in the State of Ohio.

Ohio EPA DMWM DEC 16 2011

MODULE F – RESERVED

Ohio EPA DMWM DEC 16 2011

MODULE G - RESERVED

MODULE H - RESERVED

MODULE I - BOILERS

The Permittee currently has two hazardous waste burning boilers on-site: Units 2001-UC and 2001-UE. Boiler units UC and UE are used to burn hazardous waste fuels that are generated on-site for energy recovery. Boiler UE burns only light hydrocarbon waste fuels while boiler UC can burn light hydrocarbon and heavy hydrocarbon waste fuels simultaneously. In 2009 the Permittee notified Ohio EPA that boilers UC and UE comply with 40 CFR 63, Subpart EE (the HWC MACT Standards). The only sections of RCRA regulations that will continue to apply to the hazardous waste burning boilers are Contingency Planning, Closure, Post-Closure, Standards for Direct Transfer, and Standards for Regulation of Residues.

I.1. General

The Permittee must meet the applicable requirements of ORC Section 3734.20 and OAC Chapters 3745-54 and 3745-55, including:

- (a) Closure and Post-Closure. (OAC Rules 3745-55-11 through 15)
- (b) Financial Requirements. (OAC Rules 3745-55-41 through 43, 47 through 51)

I.2. Hazardous Waste Fuels

The hazardous waste fuels burned in the boilers must either be heavy hydrocarbons (HHC) or light hydrocarbons (LHC) as defined herein. These two hazardous fuel streams shall be separately handled, stored, and tested prior to firing in the boilers.

(a) Heavy Hydrocarbons (HHC)

The wastes that are pumped to the on-site industrial boilers for heat recovery include:

- (i) Phenol distillation column bottoms (K022); and
- (ii) BPA purification system column bottoms (nonhazardous).

(b) Light Hydrocarbons (LHC)

Tank 2003-F receives several light hydrocarbon process waste streams. They are:

- (i) Phenol process spent emission scrubber fluid (D001);
- (ii) AMS distillation column bottoms (D001); and
- (iii) Purification system light hydrocarbons (D001).

I.3 Boilers (UC and UE)

Boiler System Maintenance Requirements

- (i) Each boiler must be cleaned, as required, by removing, to the extent practicable, all accumulated ash in the boiler. The boiler ash from burning HHC must be handled, transported, and disposed of as hazardous waste.
- (ii) Each boiler must meet the requirements of American Society of Mechanical Engineers' (ASME) Pressure Vessel Code or equivalent standards.
- (iv) Each boiler must be maintained to meet the definition of boiler as specified in OAC Rule 3745-50-10.

I.4. Reserved.

END OF CONDITIONS