

OHIO E.P.A.

OHIO ENVIRONMENTAL PROTECTION AGENCY

OCT 19 2005

OHIO HAZARDOUS WASTE FACILITY

INSTALLATION AND OPERATION PERMIT RENEWAL

Permittee: Delphi Automotive Systems, L.L.C

Mailing Address: Delphi Automotive Systems, L.L.C
P.O. Box 431
Warren, Ohio 44486

Owner: Delphi Automotive Systems, L.L.C
5725 Delphi Drive
Troy, MI 48098-2815

Operator: Delphi Automotive Systems, L.L.C
P.O. Box 431
Warren, Ohio 44486

Location: Delphi Automotive Systems, L.L.C
1205 North River Road at Larchmont
Warren, Ohio 44486

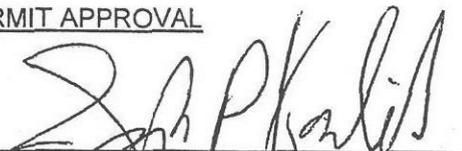
Ohio Permit No.	02-78-0124
US EPA ID	OHD 000 817 346
Issue Date	October 19, 2005
Effective Date	October 19, 2005
Expiration Date	October 19, 2015

AUTHORIZED ACTIVITIES

In reference to the application of Delphi Automotive Systems, L.L.C 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:

This renewal of this permit is for post-closure only, no permitted hazardous waste management activities occur at the facility.

PERMIT APPROVAL



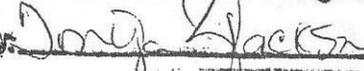
Joseph P. Koncelik, Director
Ohio Environmental Protection Agency

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 19th day of October, 2005.

By  of the Ohio Environmental Protection Agency.

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

By:  date 10-19-05

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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 permit renewal for the surface impoundments is for the purpose of accomplishing post closure activities. These units were certified closed on January 2, 1991 and are currently undergoing post-closure. These units shall not be reactivated for management of hazardous waste. The approved Part B permit application as submitted to Ohio EPA on March 4, 2004, and any subsequent amendment there to, and last updated on January 7, 2005, 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, revoked, suspended, or renewed as specified by Ohio law. The filing of a request for a permit modification, revision, revocation, suspension, or renewal or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay the applicability or enforceability of 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 (10) years after the date of journalization of this permit.

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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 the rules adopted thereunder and is grounds for enforcement action, suspension, revocation, modification, revision, 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); 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 application for a hazardous waste facility installation and operation permit renewal and any necessary accompanying general plans, detailed plans, specifications, and such information as the Director may require, to the Director no later than one hundred eighty (180) days before 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 condition of the expired permit until a renewal permit is issued or denied if:
 - (i) the Permittee has submitted a timely and complete 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.

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- (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 reissuance at least one hundred eighty (180) days before the expiration date of this permit pursuant to OAC 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

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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 Rule 3745-50-58(i), 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 condition 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 must 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.

A.12. Monitoring and Records

OAC Rules 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

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be those specified in Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods, EPA Publication SW-846, Third Edition (November 1986), as amended by Updates I (dated July 1992), II (dated September 1994), IIA (dated August 1993), IIB (dated January 1995), III (dated December 1996) and IIIA (dated April 1998), 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 Rule 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.

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- (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 and must retain a complete copy of the application for a period of at least five (5) years from the effective date of the permit.
- (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) The director may require the permittee to establish and maintain an information repository at any time, based on the factors set forth in OAC rule 3745-50-39(C)(2). The information repository will be governed by the provisions in OAC rules 3745-50-39(C)(3) to (C)(6).
- (f) 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, 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

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- (a) This permit is not transferable to any person except after notice of the director.
- (b) 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).
- (c) 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 Rule 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 Emergency and Remedial Response 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):

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- (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 Emergency and Remedial Response and the Division of Hazardous Waste Management, Northeast District Office within five (5) days of the time the Permittee becomes aware of the circumstances reported in Condition A.20.
- (b) The written report must address the items in 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 Rule 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 Condition A.20. These reports must be submitted within a month of

the time at which the Permittee is aware of such noncompliance. Such reports must contain all information set forth within Condition A.20 of this permit.

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. Reserved

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

- (a) Unless specified otherwise, Permittee must submit the documents listed below to:

Ohio EPA, DHWM
Attn: Regulatory and Information Services Section
P.O. Box 1049
Columbus, Ohio 43216-1049

- (b) Reserved.

- (c) On December 19, 2005, the facility submitted a class 2 (C2) permit modification (Tracking Number: OHD000817346-051219-2-1). Unless otherwise stated, the Permittee must submit to the Ohio EPA within forty-five (45) days after the C2 modification approval, the following information and revised language to be incorporated in the permit application. The information will be submitted as Class 1A modification in accordance with OAC Rule 3745-50-51.

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- (i) Page I2-9 makes reference to a ground water monitoring program in accordance with OAC Rules 3745-54-90 through 3745-55-01. OAC Rule 3745-55-01 no longer exists. The application must be changed with the correct rule citation, OAC Rules 3745-54-90 through 3745-54-100.
- (ii) The contaminated plume has been moving towards Building 15, west of the surface impoundments. The permittee should provide evidence that the vapor intrusion pathway does not pose an unacceptable risk to Building 15 occupants.
- (iii) The permit application should include a discussion of actions to be taken if any exceedance of the GWPS is identified. This includes all the wells in the sentry well system and all hazardous constituents listed in Permit Condition J.2.(a). The discussion should contain, but not be limited to, resampling of the suspected well(s) as soon as technically feasible, and submission of a report to Ohio EPA detailing ground water corrective actions, following OAC Rules 3745-54-100, to be taken if the exceedance is confirmed. Incorporated into the determination of the corrective actions will be a multiple chemical, multiple pathway analysis including vapor intrusion.
- (iv) On page I2-12, an Alternate Concentration Limit (ACL) for chloromethane was calculated by the facility. After receiving a copy of the calculations, Ohio EPA agrees with the value, but the calculations to achieve the value must be included in the permit application.
- (v) The pages in section I2 of the permit application which reference sampling frequency will be revised to indicate semi-annual sampling for MW- 7 and 20; annual sampling for MW-1, 2, 11, 12, and 15; and sampling of MW-14 if needed as determined by the Permittee.
- (vi) The facility has been required to enter into an environmental covenant as part of the approval of the sentry well system. The permit application mentions it on page I2-12. This language should be revised to add the requirement of the facility to initiate communications with the Ohio EPA about the environmental covenant within 30 days of the approval of this modification.
- (vii) This information must be submitted within thirty (30) days after the C2 modification approval: Section I2 of the permit application containing the financial assurance mechanism for post-closure must be updated

to include a copy of the current post-closure cost estimate and financial assurance mechanism, as set forth in OAC Rules 3745-55-44 and 3745-55-45, 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 post-closure cost estimate.

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 post-closure is completed and certified by an independent, registered professional engineer, pursuant to OAC Rule 3745-55-20, and until the Director releases the Permittee from financial assurance requirements pursuant to OAC Rule 3745-55-47, the following documents (including amendments, revisions and modifications):
- (i) post-closure plan, as required by OAC Rule 3745-55-18(A) and the terms and conditions of this permit.
 - (ii) annually adjusted cost estimate for facility post-closure, as required by OAC Rule 3745-55-44 and the terms and conditions of this permit.
 - (iii) all other documents required by Module A, Permit Condition A.12.
- (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 Reserved

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MODULE B - GENERAL FACILITY CONDITIONS

B. General Facility Conditions

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

The Permittee shall 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 constituents to air, soil, and ground or surface waters which could threaten human health or the environment.

B.2. Reserved

B.3. Reserved

B.4. Security
OAC Rule 3745-54-14

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

B.5. Reserved

B.6. Reserved

B.7. Reserved

B.8. Reserved

B.9. Reserved

B.10. Reserved

B.11. Reserved

B.12. Reserved

B.13. Reserved

B.14. Reserved

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B.15. Reserved

B.16. Reserved

B.17. Reserved

B.18. Reserved

B.19. Reserved

B.20. Reserved

B.21. 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.22. Reserved

B.23. Reserved

B.24. Reserved

B.25. Reserved

B.26. Reserved

B.27. Reserved

B.28. Reserved

B.29. Reserved

B.30. Reserved

B.31. Reserved

B.32. Reserved

B.33. Reserved

B.34. Reserved

B.35. General Post-Closure Requirements

OAC Rules 3745-55-17, 3745-55-18, 3745-55-19 and 3745-55-20

(a) Post-Closure Care Period

The Permittee must begin post-closure care for each surface impoundment after completion of closure of the unit and continue for thirty (30) years after that date. Post-closure care must be in accordance with OAC Rule 3745-55-17 and the post-closure plan.

(b) Post-Closure Security

The Permittee must maintain security at the facility during the post-closure care period, in accordance with the post-closure plan and OAC Rule 3745-55-17(B).

(c) Amendment to Post-Closure Plan

The Permittee must amend the post-closure plan, when necessary, in accordance with OAC Rule 3745-55-18(D).

(d) Reserved

(e) Certification of Completion of Post-Closure Care

No later than sixty (60) days after completion of the established post-closure care period for each hazardous waste disposal unit, the Permittee must certify that the post-closure care period was performed in accordance with the specifications in the post-closure plan and the terms and conditions of this permit, as required by OAC Rule 3745-55-20. The Permittee must furnish to the Director, upon request, documentation supporting the certification.

B.36 Cost Estimate for Facility Post-Closure

OAC Rule 3745-55-44

(a) The Permittee's most recent post-closure cost estimate, prepared in accordance with OAC Rule 3745-55-44 is specified in Section 12 of the permit application

(b) The Permittee must adjust the post-closure cost estimate for inflation within thirty (30) days after the close of the Permittee's fiscal year and before

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submission of updated information to the Director, as specified in OAC Rule OAC Rule 3745-55-44(B)

- (c) The Permittee must revise the post-closure cost estimate whenever there is a change in the facility's post-closure plan that increases the cost of post-closure care, as required by OAC Rule 3745-55-44(c)
- (d) The Permittee must submit to the Ohio EPA and keep at the facility the latest post-closure cost estimate as required by OAC Rule and 3745-55-44(D) and (E).

B.37 Financial Assurance for Facility Post-Closure

The Permittee must maintain continuous compliance with the OAC Rule 3745-55-45, 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.

(Liability coverage not required)

B.38 Reserved

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.

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MODULE D - RESERVED

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MODULE E - CORRECTIVE ACTION REQUIREMENTS

E. Corrective Action Requirements

The Permittee has closed the following waste management units in compliance with approved closure plans: an obsolete drum storage pad, enamel storage building trench and sumps, four surface impoundments which are in post-closure care and the enclosed drum storage area with four underground sumps as part of the secondary containment system.

During a 1987 RCRA Facility Investigation, 47 areas of the facility were identified as Waste Management Units (WMUs), and in 1995 due to an upgrade to the water treatment system 8 additional WMUs were identified. After a subsequent inspection by Ohio EPA on April 26, 2005, it was determined that no further action is required for any of the already identified units. See Permit Condition E.3 and Attachment 1 for more information on the WMUs.

E.1 Corrective Action at the Facility OAC Rules 3745-50-10 & 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), constructions 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 waste or hazardous waste. Such units include any area at a facility at which 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

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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

On September 11, 1992 the Permittee and the Ohio EPA received a copy of a RCRA Facility Assessment (RFA) from U.S. EPA identifying all known waste management units. There were 47 units identified; 33 representing a low potential for release, the other units were addressed with permitting and closure. On April 26, 2005 Ohio EPA inspected the facility to help determine if a RFI was needed for the units. At the time of the inspection the only unit that was of concern was Unit 40, the Waste Compound Storage Tank. It was fully investigated by the facility and it has been shown that there has been no release to the environment from Unit 40. Table 1 found in the Attachment 1 to this permit identifies the WMUs and indicates why no further action is required on each unit.

A release has been identified at Units 42-45, the Lined Surface Impoundments. The volume capacity of the four surface impoundments was approximately 80,000 gallons. Hazardous waste stored and treated at the facility in the four surface impoundments prior to 1986 include wastes generated by the treatment of electroplating wastewaters and storage of wastewater treatment sludge designated by EPA waste code F006. All contaminated sludges, waste residues, piping, and liners associated with the surface impoundments were removed in 1986. Under the provisions of the closure plan for the surface impoundments approved on December 15, 1989, the surface impoundments have been filled in and capped with natural soils and certified closed on January 2, 1991. The units are currently undergoing post-closure as required by Ohio law to evaluate the effectiveness of the clean up of these units.

E.4 No Corrective Action Required at this Time
OAC Rule 3745-54-101

No Corrective Action investigation or implementation is required at this time. The Permittee is conducting post-closure care of the Lined Surface Impoundments, as described in Permit condition E.3, which addresses any releases.

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

Should Ohio EPA determine that a release to the environment may have occurred, the Permittee shall conduct an RFI to thoroughly evaluate the nature and extent of the release of hazardous waste(s) and hazardous constituent(s) from applicable identified WMUs as referenced above, and in 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

In case of a newly discovered waste management unit, the Permittee shall submit a written RFI Workplan to Ohio EPA on a time frame established by Ohio EPA.

- (i) Within forty-five (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 incorporates 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 sixty (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.

- (i) Within forty-five (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 incorporates Ohio EPA's comments.

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- (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)

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 a 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,

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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 ninety (90) days from the notification by Ohio EPA of the requirement to conduct a CMS.

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

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(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 sixty (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 forty-five (45) days of receipt of any Ohio EPA comments, the Permittee must submit either an amended or new CMS Final Report that incorporates 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 (2) 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.

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(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 forty-five (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 thirty (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 thirty (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.

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

If Ohio EPA determines that a 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.

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

E.12 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.

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MODULE F - POST-CLOSURE CARE

F. POST-CLOSURE CARE

The Permittee has closed four hazardous waste surface impoundments which were used for wastewater solids settling prior to installation of additional process wastewater treatment facilities in 1986. The volume capacity of the four surface impoundments was approximately 80,000 gallons. Hazardous waste stored and treated at the facility in the four surface impoundments prior to 1986 include wastes generated by the treatment of electroplating waste waters and storage of wastewater treatment sludge designated by EPA Waste Code F006. All contaminated sludges, waste residues, piping, and liners associated with the surface impoundments were removed in 1986. Under the provisions of the closure plan for the surface impoundments, approved on December 15, 1989, the surface impoundments were certified closed on January 2, 1991 and are currently undergoing post closure.

F.1 Unit Identification

The Permittee must provide post-closure care for the following hazardous waste management units, subject to the terms and conditions of this permit:

Type of Waste Unit	Unit No. or Other Designation	Maximum Waste Inventory	Description of Wastes Contained	Hazardous Waste No	Year Post-closure began
Surface Impoundments	1 through 4	80,000 gallons	Wastewater Treatment Sludges	F006	1991

F.2 Post-closure Procedures and Use of Property OAC Rule 3745-55-17

- (a) The Permittee must conduct post-closure care for each hazardous waste management unit listed in Permit Condition F.1 above, to begin after completion of closure of the unit and continue for thirty (30) years after that date. The 30-year post-closure care period may be shortened upon application and demonstration approved by Ohio EPA that the reduced period is sufficient to protect human health and the environment. The 30-year post-closure care period may be extended if the Director finds that the extended period is necessary to protect human health and the environment.

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- (b) The Permittee must maintain and monitor the ground water monitoring system and comply with all other applicable requirements of OAC Rules 3745-54-90 thru 3745-54-101 during the post-closure period.
 - (c) The Permittee must comply with the requirements for surface impoundments as follows:
 - (i) Maintain the integrity and effectiveness of the final cover, including making repairs to the final cover, as necessary, to correct the effects of settling, subsidence, erosion, and other events; and
 - (ii) Prevent run-on and run-off from otherwise damaging the final cover.
 - (d) Reserved
 - (e) The Permittee must comply with all security requirements, as specified in the permit application.
 - (f) The Permittee must not allow any use of the units designated in Permit Condition F.1 which will disturb 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.
 - (g) The Permittee must implement the post-closure plan. All post-closure care activities must be conducted in accordance with the provisions of the post-closure plan.

F.3 Inspections
OAC Rule 3745-55-18(B)

The Permittee must inspect the components, structures, and equipment at the facility in accordance with the inspection schedule found in the post-closure plan.

F.4 Notices and Certification
OAC Rules 3745-55-19 and 3745-55-20

- (a) No later than sixty (60) days after certification of closure of each hazardous waste disposal unit, the Permittee must submit to the local zoning authority or the authority with jurisdiction over local land use, and to the Director, record of the type, location, and quantity of hazardous wastes disposed within each cell or other disposal unit of the facility. For hazardous waste disposed of before January 12, 1981, the Permittee must identify the type, location, and quantity of the hazardous wastes to the best of his knowledge and in accordance with any records he has kept.

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(b) Reserved

- (c) If the Permittee wishes to remove hazardous wastes and hazardous waste residues, the liner, if any, or contaminated soils, then he must request a modification to this permit in accordance with the applicable requirements in OAC Rules 3745-50-40 to 3745-50-66. The Permittee must demonstrate that the removal of hazardous wastes will satisfy the criteria of OAC Rule 3745-55-17(C).

By removing hazardous waste, the Permittee may become a generator of hazardous waste and must manage it in accordance with all applicable hazardous waste requirements.

If the Permittee is granted a permit modification or otherwise granted approval to conduct such removal activities, the Permittee may request that the Director approve either:

- (i) The removal of the notation on the deed to the facility property or other instrument normally examined during title search or,
 - (ii) The addition of a notation to the deed or instrument indicating the removal of the hazardous waste.
- (d) No later than sixty (60) days after completion of the established post-closure care period for each hazardous waste disposal unit, the Permittee must submit to the Director, by registered mail, a certification that the post-closure care period for the hazardous waste disposal unit was performed in accordance with the specifications in the approved post-closure plan. The certification must be signed by the Permittee and an independent, qualified, registered professional engineer. Documentation supporting the independent, qualified, registered professional engineer's certification must be furnished to the Director upon request until the Director releases the Permittee from the financial assurance requirements for post-closure care under OAC Rule 3745-55-45.

F.5 Financial Assurance
OAC Rule 3745-55-45

- (a) The Permittee must maintain financial assurance during the post-closure period and comply with all applicable requirements of OAC Rules 3745-55-40 thru 3745-55-51.

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(b) Reserved.

(c) Reserved.

F.6 Post-closure Permit Modifications
OAC Rule 3745-55-18(D)

The Permittee must request a permit modification to authorize a change in the approved post-closure plan. This request must be in accordance with applicable requirements of OAC Rules 3745-50-40 to 3745-50-66, and must include a copy of the proposed amended post-closure plan for approval by the Director. The Permittee must request a permit modification whenever changes in operating plans or facility design affect the approved post-closure plan or other events occur during the active life of the facility that affect the approved post-closure plan. The Permittee must submit a written request for a permit modification at least sixty (60) days prior to the proposed change in facility design or operation, or no later than sixty (60) days after an unexpected event has occurred which has affected the post-closure plan.

MODULE G - Reserved

MODULE H - Reserved

MODULE I - Reserved

MODULE J - GROUND WATER MONITORING

J. GROUND WATER MONITORING

This permit covers four wastewater lagoons once used for hazardous process wastes. Electroplating waste waters were treated in the four impoundments having a combined volume capacity of 80,000 gallons. The four lagoons are located in the northeast portion of the facility and are treated as a single waste management unit. The unit has been filled in and capped with natural soils.

Ground water monitoring is being conducted in the uppermost aquifer that consists of unconsolidated, clay-rich ground moraine of the Hiram Clay Till.

J.1. Applicability

OAC Rules 3745-50-44(B), 3745-54-90, and 3745-54-91

- (a) The Permittee must comply with the applicable requirements in OAC Rules 3745-54-90 through 3745-54-100 for purposes of detecting, characterizing, and responding to releases to the uppermost aquifer for the following units:

Type of Waste Unit	Unit No. or Other Designation	Maximum Waste Inventory	Description of Wastes Contained	Hazardous Waste No	Year Post-closure began
Surface Impoundments	1 through 4	80,000 gallons	Wastewater Treatment Sludges	F006	1991

- (b) OAC Rules 3745-54-90 through 3745-54-100 apply during the active life, which includes the closure period, of the above-mentioned regulated units. After closure of each regulated unit, OAC Rules 3745-54-90 through 3745-54-100:

- (i) Do not apply if all waste, waste residues, contaminated containment system components, and contaminated subsoils are removed or decontaminated at closure;
- (ii) Apply during the post-closure care period under OAC Rule 3745-55-17 if the Permittee is conducting a detection monitoring program under OAC Rule 3745-54-98; or
- (iii) Apply during the compliance period under OAC Rule 3745-54-96 if the Permittee is conducting a compliance monitoring program under

OAC Rule 3745-54-99 or a corrective action program under OAC Rule 3745-54-100.

- (c) The Permittee is subject to OAC Rules 3745-54-90 through 3745-54-100 and must conduct a monitoring and response program as follows:

Hazardous constituents under OAC Rule 3745-54-93 from a regulated unit have been detected in the ground water, the Permittee must institute a compliance monitoring program as outlined in Permit Condition J.10.

J.2. Ground Water Protection Standard

OAC Rules 3745-50-44(B), 3745-54-92 through 3745-54-96

The Permittee must ensure that if the hazardous constituents under OAC Rule 3745-54-93 detected in the ground water from a regulated unit listed in this Permit Condition exceed the concentration limits under OAC Rule 3745-54-94 in the uppermost aquifer underlying the waste management area beyond the sentry well system during the compliance period under OAC Rule 3745-54-96, appropriate corrective actions will be evaluated. The ground water protection standard has been established in this Permit due to hazardous constituents being detected in the ground water.

- (a) The Permittee must monitor the ground water to determine whether regulated units are in compliance with the ground water protection standard under OAC Rule 3745-54-92. The hazardous constituents detected in the ground water underlying a regulated unit and reasonably expected to be contained in or derived from the waste contained in the regulated unit to which the ground water protection standard applies and their concentration limits are listed below:

Hazardous Constituents	Concentration Limits
Chloroform Bromodichloromethane Dibromochloromethane	0.08 mg/L Total Trihalomethanes
Trichloroethylene	0.005 mg/L
Fluoride	4.0 mg/L
Chromium	0.1 mg/L
Available Cyanide	0.200 mg/L
Cis-1,2-dichloroethene	0.07 mg/L
Trans-1,2-dichloroethene	0.1 mg/L
Vinyl Chloride	0.002 mg/L
Methylene Chloride	0.005 mg/L
Chloromethane	0.95 mg/L*

* The facility has calculated an alternate concentration limit for this parameter using risk calculations.

In addition to the hazardous constituents listed above, the Permittee must monitor the following parameters:

Ground Water Quality or Field Parameters:

- pH
- Conductivity

(b) Reserved.

(c) Compliance Period
 OAC Rule 3745-54-96

- (i) The compliance period, during which the ground water protection standard of OAC Rule 3745-54-92 applies, is equal to thirty (30) years. The compliance period began in November 1989 and ends when post closure activities are completed according to OAC Rule 3745-54-96(B).
- (ii) If the Permittee is engaged in a corrective action program at the end of the compliance period specified above, the compliance period is

extended until the Permittee can demonstrate that the ground water protection standard of OAC Rule 3745-54-92 has not been exceeded for a period of three consecutive years.

- (iii) The Permittee may discontinue any necessary corrective action activities during the compliance period when the ground water protection standard has not been exceeded at any sentry well listed in Permit Condition J.3(b) for any constituent listed in Permit Condition J.2(a) for four consecutive sampling events covering at least a one-year period. The Permittee must continue a compliance monitoring program under Permit Condition J.10 for the remainder of the compliance period.
- (iv) If the Permittee is performing compliance monitoring and the compliance period ends while a post-closure care period, required under OAC Rule 3745-55-17, is still in effect, the Permittee shall submit an application for a permit modification under OAC Rule 3745-50-51 to extend the compliance period under the present ground water monitoring program for the rest of the post-closure care period.

J.3. Well Location, Installation, Maintenance, and Removal
OAC Rules 3745-54-95, 3745-54-97(A) to (C), and 3745-54-100(D) & (E)

- (a) The Permittee's ground water monitoring system must consist of a sufficient number of wells, installed and screened at appropriate locations and depths to yield ground water samples from the unconsolidated zone which is considered to be the uppermost aquifer.
 - (i) Reserved.
 - (ii) Reserved.
 - (iii) Reserved.
 - (iv) Reserved.
 - (v) Reserved.

- (b) The Permittee's monitoring system consists of the ground water wells as specified on Figure 1 found in Section I2 of the Permit Application and in conformance with the following list:

Unit Name	Upgradient/ Background Wells	Sentry Wells
Surface Impoundments	MW-14	MW-1,2,11,12,15,20

- (i) The upgradient/background well serves to represent the quality of background water that has not been affected by the regulated unit. MW-14 shall be monitored if needed as determined by the Permittee.
- (ii) The sentry well system monitors the quality of ground water between the unit and the downgradient property boundary, where necessary, to protect human health and the environment. The sentry wells serve to provide information on the parameters in Permit Condition J.2(a) as well as any other constituents resulting from implementation of Permit Condition J.10. When sampling results at a sentry well indicate an exceedance of the ground water protection standard, as defined in OAC Rule 3745-54-99(D), the facility will follow Permit Condition J.10 in implementing corrective action to meet the requirements of OAC Rule 3745-54-100.
- (a) MW-20 will be installed within 45 days after the issuance of the modification referenced in Permit Condition A.27(c), and will be sampled according to the schedule in Permit Condition J.6.
- (iii) MW-7 will be sampled as an observation well. No response action will be required if an exceedance of the ground water protection standard is found at this well. The status of this well can be reassessed if the facility must implement corrective action as in Permit Condition J.3(b)(ii).
- (c) Wells identified in Permit Condition J.3(b) must be cased in a manner that maintains the integrity of the monitoring well bore hole and complies with the detailed plans and specifications presented in Section I2 of the Permit Application. The casing must be screened and packed with gravel or sand, where necessary, to enable collection of ground water samples. The annular space above the sampling depth must be sealed to prevent contamination of samples and the ground water.

Section I2 of the Permit Application contains ground water monitoring well construction diagrams which illustrate compliance with OAC Rule 3745-54-97(A) to (C).

- (d) The Permittee must remove or replace any monitoring well in Permit Condition J.3(b) in accordance with the Appendix to OAC Rule 3745-50-51 permit modification process. Each change must be accompanied by a revised map as specified on Figure 1 found in Section I2 of the Permit Application for Permit Condition J.3(b).
- (e) Whenever any of the wells specified in Permit Condition J.3(b) are replaced, the Permittee must demonstrate to Ohio EPA that the ground water quality at the replacement well meets the criteria in Permit Condition J.3(a) within a one year period of the date of replacement using means appropriate to the reason for replacement.

J.4. Sampling and Analysis Procedures
OAC Rule 3745-54-97 (D)&(E)

- (a) The Permittee must implement a ground water monitoring program per Section I2 of the Permit Application. This program includes consistent sampling and analysis procedures designed to ensure monitoring results that provide a reliable indication of ground water quality below the waste management area and are in compliance with OAC Rule 3745-54-97(D).
- (b) The Permittee's ground water monitoring program per Section I2 of the Permit Application includes sampling and analytical methods that are appropriate for ground water sampling and that accurately measure hazardous constituents in ground water samples in compliance with OAC Rule 3745-54-97(E).
- (c) Field and analytical data must be validated in accordance with the procedures specified in Section I2 of the Permit Application.

J.5. Ground Water Surface Elevation
OAC Rule 3745-54-97(F)

The Permittee must determine the ground water surface elevation at each well identified in the table in Permit Condition J.3(b) and MW-7 each time ground water is sampled using the methods in Section I2 of the Permit Application.

J.6. Sampling Frequency
OAC Rule 3745-54-97(G)

Data on each parameter specified in Permit Conditions J.2(a) will be collected from the sentry wells identified in the table in Permit Condition J.3(b) and MW-7. The sampling procedure is described in Section I2 of the Permit Application. Sampling will be conducted semiannually on MW-7 and 20. Annual sampling will be conducted on MW-1, 2, 11, 12, and 15. MW-14 will be sampled if needed as determined by the Permittee.

- (a) Reserved.
- (b) Reserved.
- (c) Background data may be updated as necessary in accordance with Section I2 of the Permit Application to provide an accurate representation of background ground water quality. New or revised background values must be established in the permit through the permit modification process in OAC Rule 3745-50-51.

J.7. Statistical Procedures
OAC Rule 3745-54-97 (H)&(I)

The Permittee must use the following statistical procedures in evaluating ground water monitoring results for each hazardous constituent in Permit Condition J.2(a) in each well in Permit Condition J.3(a) to identify statistically significant evidence of contamination, the exceedance of a concentration limit, and/or the effectiveness of corrective action:

- (a) For those constituents for which background values have not been collected and established at the time of Permit Application, the Permittee must choose and submit to Ohio EPA the appropriate statistical method within thirty (30) days after the receipt of the last background sampling event data through the permit modification process in OAC Rule 3745-50-51.

For those constituents for which background values have been collected, the Permittee must conduct statistical procedures as presented in Section I2 of the Permit Application.

- (b) The Permittee's statistical procedures must be protective of human health and the environment, provide reasonable confidence that the migration of hazardous constituents from a regulated unit into and through the aquifer will be indicated, and will determine whether such leakage of hazardous

constituents into the ground water exceeds specified concentration limits. The statistical procedures must comply with the following performance standards:

- (i) The statistical evaluation of ground water monitoring data must be conducted separately for each hazardous constituent specified in Permit Condition J.2(a) in each well.
- (ii) The statistical method must be appropriate for the distribution of the data used to establish background or concentration limits. If the distribution for the constituents differ, more than one statistical method may be needed.
- (iii) The statistical method must provide a reasonable balance between the probability of falsely identifying a non-contaminating and/or exceeding unit and the probability of failing to identify a contaminating and/or exceeding regulated unit as detailed in OAC Rule 3745-54-97(l)(2).
- (iv) If a control chart approach is used, the specific type of control chart and its associated parameter values must be proposed by the Permittee and approved in the permit.
- (v) If a tolerance or prediction interval procedure is used, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, must be proposed by the Permittee and approved in the permit. These parameters must be determined after considering the number of samples in the background data base, the data distribution, and the range of concentration values for each constituent of concern.
- (vi) The statistical method must account for data below the limit of detection with one or more statistical procedures. Any practical quantitation limit (PQL) approved in the permit that is used in the statistical method must be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the Permittee.
- (vii) If necessary, the statistical method must include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.

J.8. Operating Record and Reporting

OAC Rules 3745-54-73, 3745-54-75, 3745-54-77 and 3745-54-97(J)

(a) Operating Record

The Permittee must enter all of the following information obtained in accordance with Permit Module J. in the operating record:

- (i) Ground water monitoring data collected in accordance with this permit including actual levels of constituents.
- (ii) The laboratory results from each of the wells and their associated qualifiers including the laboratory sheets for the parameters in the table in J.2(a) analyses (must include method codes, method detection limits, and units of measurement);
- (iii) The date each well was sampled (tabulated);
- (iv) The date, time, and identification of all blanks and duplicates;
- (v) Any field log documentation of deviation from the procedures in Section I2 of the Permit Application including documentation of parameter omissions during the sampling event;
- (vi) The date the Permittee received the results from the laboratory;
- (vii) The date the owner or operator completed their review of the analytical laboratory's verification of the accuracy and precision of the analytical data and determined its quality.
- (viii) The results of the data validation review per Permit Condition J.8(a)(vii) including: report completeness, chain of custody, sample receipt form, signed statement of validity, technical holding time review, data qualifiers including their definitions, dilutions, blank data, spikes, spike recovery %, surrogate recovery, and an explanation of any rejected results;
- (ix) Results of all blanks and duplicates (trip, field, equipment, and method);
- (x) Results of the field parameters;
- (xi) The statistical evaluation of the data (must include all computations, results of statistical tests, and date the statistical evaluation was completed);

- (xii) Any change in well status (i.e., going from unaffected to affected status and vice versa);
- (xiii) Ground water surface elevations taken at the time of sampling each well;
- (xiv) Data and results of the annual determination of the ground water flow rate and direction;
- (xv) The results of the last three years of all inspections required under OAC Rule 3745-54-15(D) related to ground water monitoring and equipment as required under OAC Rule 3745-54-73(B)(5).
- (xvi) Reserved.

(b) Annual, Semi-Annual & Other Periodic Required Reporting

(i) Required Annual Reporting

The Permittee must submit an annual report to the Director by March 1st of the following year. The annual reports must reference the titles and dates of any other periodic reports required by the permit or any updates to those reports, but generally do not need to include duplicates of hard copies previously submitted.

The annual reports must include, at a minimum, the analytical results required by Permit Condition J.10, the ground water elevation data required by Permit Condition J.5 and J.8(a)(xii)&(xiii), and the results of any statistical analyses required by Permit Condition J.10. In addition, a copy on disk of all ground water and blank data must be submitted electronically in the format supplied by the Director, a hard copy of well-specific information (location (latitude and longitude), depth, construction, etc.) for any new/replacement wells, and any other information specified in the instructions for the annual report not addressed in this Permit Condition must be submitted in accordance with OAC Rules 3745-54-75 and 97(J).

(ii) Reserved.

(iii) Other Reports
OAC Rule 3745-54-77(C)

The Permittee must comply with any reporting requirements that become necessary under Permit Conditions J.10 in accordance with the schedules covered by that permit condition and as required by OAC Rule 3745-54-77(C).

J.9. Reserved

J.10. Compliance Monitoring Program
OAC Rule 3745-54-99

- (a) The Permittee required to establish and implement a compliance ground water monitoring program under OAC Rules 3745-54-90 through 54-100 must at a minimum, discharge the following responsibilities:
- (i) The Permittee must monitor the ground water to determine whether regulated units are in compliance with the ground water protection standard under OAC Rule 3745-54-92 as specified in Permit Condition J.2.
 - (ii) The Permittee must install and monitor a ground water monitoring system at the sentry wells as defined in Permit Condition J.3(b). The ground water monitoring system must comply with the requirements in Permit Condition J.3.
 - (iii) The program must include collection, preservation, and analysis of samples pursuant to Permit Conditions J.4, J.5, and J.6. Statistical analysis must be conducted pursuant to Permit Condition J.7.
 - (1) The Permittee must conduct a sampling program semiannually for MW-7 and 20, and annually for MW-1, 2, 11, 12, and 15 for each chemical parameter specified in Permit Condition J.2(a). MW-14 shall be sampled if needed as determined by the Permittee. Sampling will be completed for each well listed above as per Permit Condition J.6.
 - (2) The Permittee must maintain a record of ground water analytical data as measured and in a form necessary for the determination of statistical significance under Permit Condition J.7 and J.8 for the compliance period defined in Permit Condition J.2(c).

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- (iv) The Permittee must determine whether there is statistically significant evidence of increased contamination for any chemical parameter or hazardous constituent specified in Permit Condition J.2(a) based upon the sampling schedule in Permit Condition J.6 during the compliance period.
 - (i) In determining whether statistically significant evidence of increased contamination exists, the Permittee must use the statistical procedures specified in Permit Condition J.7. The methods must compare data collected at the sentry well system specified in Permit Condition J.3(b) to the concentration limits specified in Permit Condition J.2(a).
 - (ii) The Permittee must determine whether there is statistically significant evidence of increased contamination at each sentry monitoring well listed in Permit J.3(b) within 45 days after the completion of sampling.
- (v) The Permittee must determine the ground water flow rate and direction in the uppermost aquifer at least annually using the procedures specified in I2 of the Permit Application.
- (vi) Reserved.
- (b) If the Permittee has determined that any concentration limits identified in Permit Condition J.2(a) are being exceeded in any sentry well or at the downgradient property boundary, the Permittee:
 - (i) May resample the well(s) for the constituent(s) which exceeded the respective concentration limit(s). If the exceedance is not confirmed, the Permittee may continue under the present compliance monitoring program. If the exceedance is confirmed, the Permittee must notify the Director of this finding in writing within seven (7) days of that determination. The notification must indicate which parameter concentration limit(s) have been exceeded by well location.
 - (ii) Must, if the exceedance is confirmed, evaluate appropriate corrective actions. If a corrective action program meeting OAC Rule 3745-54-100 requirements is to be established, the Permittee will submit to the Director an application for a permit modification to establish the corrective action program within 180 days of determining that any concentration limit has been exceeded, or within 90 days if the Permittee has previously submitted an engineering feasibility study

pursuant to Permit Condition J.9(g)(v)(2). The application must at a minimum include the following information:

- (1) A detailed description of the Permittee's proposed corrective actions, including time frames, that will achieve any necessary compliance with the ground water protection standard specified in Permit Condition J.2; and
 - (2) A plan for a ground water monitoring program that will demonstrate the effectiveness of the corrective action. Such a ground water monitoring program may be based on a compliance monitoring program developed to meet the requirements of OAC Rule 3745-54-99.
- (c) If the Permittee determines, pursuant to Permit Condition J.10(b)(1), that any concentration limits specified in Permit Condition J.2(a) are being exceeded at any sentry well or at the downgradient property boundary, the Permittee may submit a demonstration to the Agency that a source other than a regulated unit caused the contamination or that the detection is an artifact caused by an error in sampling, analysis, statistical evaluation or natural variation in the ground water. In making such a demonstration, the Permittee must:
- (i) Notify the Director in writing within seven (7) days of determining an exceedance that the Permittee intends to make such a demonstration;
 - (ii) Within ninety days of determining an exceedance, submit a report to the Director which demonstrates that a source other than a regulated unit caused the standard to be exceeded or that the apparent non-compliance with the standards resulted from error in sampling, analysis, or evaluation;
 - (iii) Within ninety days of determining an exceedance, submit to the Director an application for a permit modification to make any appropriate changes to the monitoring program at the facility; and
 - (iv) Continue to monitor in accordance with the compliance monitoring program under this Permit.
- (d) If the Permittee determines the compliance monitoring program established by this permit no longer satisfies the ground water protection standard in Permit Condition J.2, the Permittee must, within ninety (90) days of the

determination, submit an application for a permit modification per OAC Rule 3745-50-51 to make any appropriate changes to the program.

J.11. Reserved.

End of Permit Conditions

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