

OHIO DEP
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OHIO ENVIRONMENTAL PROTECTION AGENCY

OHIO E.P.A.

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**OHIO HAZARDOUS WASTE FACILITY
INSTALLATION AND OPERATION PERMIT RENEWAL**

ENTERED DIRECTOR'S JOURNAL

Permittee: Solvay Advanced Polymers, L.L.C.

Mailing Address: Solvay Advanced Polymers, L.L.C.
P.O. Box 446
Marietta, Ohio 45750

Owner: Solvay Advanced Polymers, L.L.C.
4500 McGinnis Ferry Rd.
Alpharetta, GA 30202-3914

Operator: Solvay Advanced Polymers, L.L.C.
P.O. Box 446
Marietta, Ohio 45750

Location: Solvay Advanced Polymers, L.L.C.
17005 State Route 7
Marietta, Ohio 45750

US EPA ID No.: OHD 981 529 688

Issue Date: **November 1, 2011**

Effective Date: **November 1, 2011**

Expiration Date: **November 1, 2021**

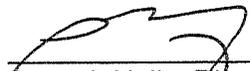
AUTHORIZED ACTIVITIES

In reference to the application of Solvay Advanced Polymers, 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:

- Container storage
- Treatment (surface impoundment)
- Corrective Action
- Post Closure Care

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

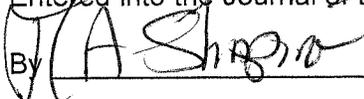


 Scott J. Nally, Director
 Ohio Environmental Protection Agency


 _____ Date: 11/1/2011

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 1st day of November, 2011.

By  _____ of the Ohio Environmental Protection Agency.

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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 Permittee is authorized to store hazardous waste in containers and to treat hazardous waste in a surface impoundment (emergency basin) 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 renewal of the Former Equalization Basin (FEQB) is for the purpose of accomplishing post closure activities. This unit is currently inactive and in post closure care. This unit shall not be reactivated for management of hazardous waste. The approved Part B permit application submitted to Ohio EPA on February 8, 2011, and any subsequent amendment thereto, resulting from permit modifications approved between February 8, 2011 and issuance of the final renewal permit 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

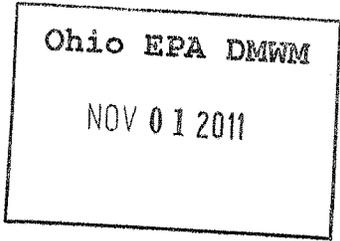
The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

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

The Permittee shall 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 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 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 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)

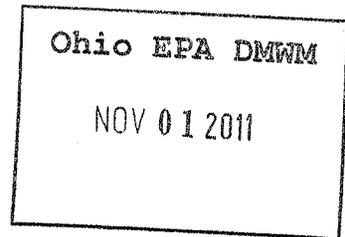
The Permittee must at all times properly operate and maintain the facility (and related appurtenances) to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes effective management practices, adequate funding, adequate operator staffing and training,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

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), 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.

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- (b) Records of monitoring information shall 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 shall be properly signed and certified in accordance with OAC Rule 3745-50-58(K).

A.14. Retention of Records
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, 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

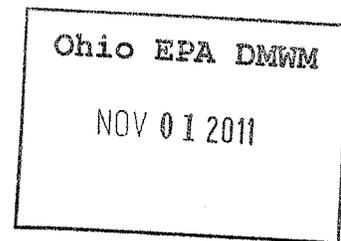
OAC Rule 3745-50-58(L)(2)

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) This 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;

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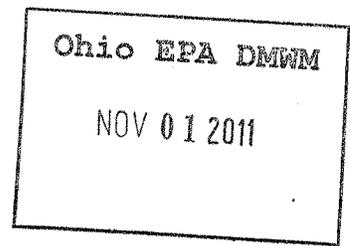
- (vi) an assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and
- (vii) estimated quantity and disposition of recovered material that resulted from the incident.

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. Certification of Construction or Modification
OAC Rule 3745-50-58(L)(2)

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 shall submit to the Ohio EPA, within sixty (60) days after permit journalization, the following information to be incorporated in the Part B permit application:
 - (i) An update of the closure/post-closure cost estimates in accordance with OAC Rules 3745-55-42 and 3745-55-44 for all hazardous waste management units. Also, submit copies of the updated estimates to Ohio EPA, DMWM, Compliance Monitoring and Enforcement Section, and the Southeast District Office.

- (ii) An updated mechanism(s) which demonstrates compliance with the financial assurance requirement of OAC Rule 3745-55-43 and the liability requirements of OAC Rule 3745-55-47. These updated mechanisms must include the specific wording as required by OAC Rule 3745-55-51 and must include current cost estimates where appropriate.
- (b) The Permittee must submit for approval within one hundred eighty (180) days after the effective date of the Equalization Basin Closure Plan Addendum Class 2 modification, the following information to be incorporated into the Part B permit application's post closure plan governing the FEQB in accordance with OAC Rule 3745-55-18(D):
- (i) An updated plan for evaluation of vapor intrusion (VI) from lateral migration of soil vapors from the FEQB into buildings 61 and 64 after the asphalt cap has been installed including:
1. A sampling and analysis plan (SAP) based on contemporary industry standards and best available technology, for the collection and analysis of a sufficient number of soil gas samples for volatile organic chemicals (including acetone, benzene, chlorobenzene, 1,2-dichlorobenzene, 1,4-dichlorobenzene, methylene chloride) located five to ten feet from the edge of the asphalt cap, capable of evaluating the VI pathways and risk to buildings 61 and 64.
 2. Provisions for determining human health risk values for the VOCs, and notification of Ohio EPA of soil gas monitoring results that exceed these risk values.
 3. Development of a contingency plan for subsequent sampling and analyses and remedial action as needed.
 4. List of criteria for termination of soil gas sampling and analysis.

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

Ohio EPA, Director
c/o DMWM, Remediation and Authorizations Section
P.O. Box 1049
Columbus, Ohio 43216-1049

and

Ohio EPA, Southeast District Office
Division of Materials and Waste Management
2195 Front Street
Logan, Ohio 43138
(740) 385-8501

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 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, required by 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 and post-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 Module A, Permit Conditions A.12 and A.14.
- (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.1. Design, Maintenance and Operation of Facility
OAC Rule 3745-54-31

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.2. Required Notices - Hazardous Waste from Off-Site Sources
OAC Rule 3745-54-12

(a) Except as specifically provided in this condition, The Permittee shall not receive hazardous waste from an off-site source. Permittee may accept, via pipeline, recovery well wastewater from the Union Carbide Corporation remediation project, which wastewater may be hazardous for chlorobenzene (D021).

(b) Exemption from ORC §§ 3734.40 to 3734.47 Requirements for Union Carbide Corporation Recovery Well Wastewater

Pursuant to the authority set forth in ORC §§ 3734.02(G), for the Union Carbide Corporation recovery well wastewater identified in Condition B.2(a) of this permit, the Permittee is hereby exempted from any and all requirements set forth in ORC §§ 3734.40 to 3734.47. The signature of the director to this permit serves to provide that, regarding this exemption, the director has found and determined that this exemption is unlikely to adversely affect the public health or safety or the environment. Such exemption is consistent with and equivalent to any regulations adopted by the Administrator, U.S. EPA, under the "Resource Conservation and Recovery Act of 1976," 90 Stat 2806,42 U.S.C.A. 6921, as amended.

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 non-hazardous wastes if applicable under OAC Rule 3745-54-13(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

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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 Appendix C-2 of the permit application and the terms and conditions of this permit.
- (c) The Permittee must annually review each waste stream and determine if there is reason to believe that the process or operations generating the hazardous wastes, or non-hazardous waste has changed. If the Permittee determines the process or operation generating a waste has changed, the Permittee must verify the analysis of the waste stream 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 Rules 3745-54-14(B)(2) and (C) and Appendix G-1 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 Appendix G-2 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.

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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 shall contain at least the elements set forth in Appendix H-1 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 Waste
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 7.6 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, safety hand tools during all operations involving the handling of all ignitable or reactive wastes. Safety hand tools are made of alloys that may emit sparks that have a low heat content, and will not cause ignition of most ignitable wastes in the unlikely event that sparks are produced during use.
- (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.
- (e) Where applicable, all wiring and electrical equipment at the facility must meet the National Fire Protection Association's standards for hazardous locations (See National Fire Protection Association, "National Electric Code" National Fire Codes, 1985 Edition, Vol. 3, Chapter 5, Special Occupancies, Articles 500-503, pp.176 through 189).

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 Section 2.4.2 of the permit application and attached plans and specifications.

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- (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 approved contingency plan contained in Appendix G-3 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 Condition B.9 as necessary to assure its proper operation in time of emergency, as specified in OAC Rule 3745-54-33, Section 7.4 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 7.4 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:

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- (i) make arrangements to 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 Appendix G-3 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 department and fire department may respond to an emergency.
- (v) 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:

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- (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 fire or explosion that has an increased potential to threaten human health or the environment due to its proximity to a hazardous waste management unit; or
- (e) 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
- (f) Any hazardous waste release that produces or has a 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 Appendix G-3 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 or 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

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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

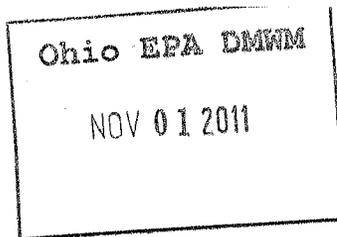
The Permittee must review the approved contingency plan at least annually and upon the occurrence of any event listed in OAC Rule 3745-54-54. If necessary or appropriate, the Permittee must amend the contingency plan as required by OAC Rule 3745-54-54 in accordance with OAC Rule 3745-50-51.

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 approved 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 Rules 3745-54-56

The Permittee must comply with the requirements regarding emergency procedures set forth in OAC Rule 3745-54-56, Appendix G-3 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)

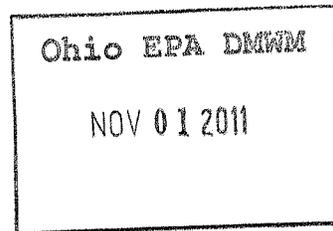
The Permittee must note in the operating record the time, date, and details of any incident that requires the implementation of the contingency plan. Within fifteen (15) days after any such incident, the Permittee must submit to the Director a written report of the incident containing the elements set 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 the management of waste at the facility, the Permittee must comply with the provisions of 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 approved closure plans, Appendix I, in such a manner as to achieve compliance with OAC Rule 3745-55-11. Compliance with OAC Rule 3745-55-11 will be facilitated by referring to Ohio EPA's most recent Closure Plan Review Guidance for RCRA facilities.

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

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

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

Should a change in the facility closure plans become necessary, the Permittee must amend the approved closure plans 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 approved closure plans at the facility which contain 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 sixty (60) days prior to the date on which he expects to begin closure of any of the following: Emergency Basin (EB), container storage area, or final closure of the 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).

The Permittee shall complete all closure activities within one hundred eighty (180) days, 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 (or revision) 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

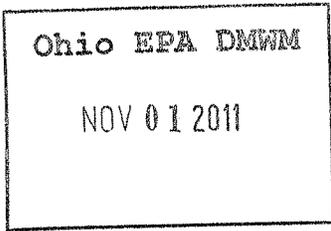
- (a) The Permittee must decontaminate or dispose of all contaminated facility equipment, structures, and soils, as required by OAC Rule 3745-55-14, the closure plans, and the terms and conditions of this permit.
- (b) The Permittee must notify the Ohio EPA Southeast District Office within five (5) working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

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

The Permittee and a qualified professional engineer must certify that each hazardous waste management unit or the facility has been closed in accordance with the specifications in the approved closure plans 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. Survey Plat
OAC Rule 3745-55-16

The Permittee must submit a survey plat to the Director and the local zoning authority no later than the submission of certification of closure of each hazardous waste disposal unit, in accordance with OAC Rule 3745-55-16.



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

Post-closure care of the FEQB shall continue for 30 years after completion of closure of the unit. Post-closure care shall be in accordance with OAC Rule 3745-55-17 and the Post-Closure Plan contained in appendix I-3 of the Part B application.

(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) Post-Closure Notices

(i) No later than sixty (60) days after certification of closure of each hazardous waste disposal unit, the Permittee must submit to the Director and the local zoning authority records of the type, location, and quantity of hazardous waste disposed of within each cell or disposal unit, in accordance with OAC Rule 3745-55-19(A).

(ii) Within sixty (60) days of certification of closure of the first hazardous waste disposal unit and within sixty (60) days of certification of closure of the last hazardous waste disposal unit, the Permittee must do the following:

(1) Record a notation on the deed to the facility property, or on some other instrument which is normally examined during title search, which contains the information required by OAC Rule 3745-55-19(B)(1).

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- (2) Submit to the Director a certification that the Permittee has recorded the notation and submit a copy of the document in which the Permittee placed the notation.
- (3) The Permittee must request and obtain a permit modification prior to post-closure removal of hazardous wastes, hazardous waste residues, liners, or contaminated soils, in accordance with OAC Rule 3745-55-19(C).

(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, 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 Closure and Post-Closure
OAC Rules 3745-55-42 and 3745-55-44

- (a) The Permittee's most recent closure and post-closure cost estimate, prepared in accordance with OAC Rules 3745-55-42 and 3745-55-44 are specified in Appendix I of the permit application.
- (b) The Permittee must adjust the closure cost estimate and post-closure cost estimate for inflation sixty (60) days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with OAC Rules 3745-55-43 and 3745-55-45.
- (c) The Permittee must revise the closure cost estimate and post-closure cost estimate whenever there is a change in the facility's closure plans and Post-Closure Plan that increases the cost of closure, as required by OAC Rules 3745-55-42(C) and 3745-55-44(C)
- (d) The Permittee must submit to Ohio EPA and keep at the facility the latest closure cost estimate and post-closure cost estimate as required by OAC Rules 3745-55-42(D) and 3745-55-44(D) and (E).

B.37. Financial Assurance for Facility Closure and Post-Closure

The Permittee must maintain continuous compliance with OAC Rule 3745-55-43, OAC Rule 3745-55-45, and OAC Rule 3745-55-46 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 requirement 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 required by the applicable rules, exclusive of the legal defense costs.

The Permittee also must demonstrate compliance with OAC Rule 3745-55-47(B) by maintaining liability coverage for non-sudden accidental occurrences in the amount of at least \$3 million per occurrence, with an annual aggregate of at least \$6 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.

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MODULE C - CONTAINER STORAGE

C. CONTAINER STORAGE AND MANAGEMENT

All hazardous wastes stored in containers are to be stored in the container storage area which is located within the confines of the 100-year flood protection dike at the wastewater treatment plant. The container storage area is permitted for greater than 90 day storage. It measures 80 feet by 30 feet with a design capacity of 32,500 gallons. Hazardous wastes are stored in tank trailers, dump trailers, roll off boxes, Department of Transportation (DOT) specification steel and overpack drums, or 5 gallon containers. Drums and 5 gallon containers are typically stored on wooden pallets, stacked no higher than two pallets high. The types of hazardous wastes that are permitted to be stored in this unit are as follows: D001, D007, D010, D021, D027, F002, and F003. The container storage pad is constructed of eight-inch-thick, steel-reinforced (no.4 rebar) on 12-inch centers, concrete. The concrete is on top of a base of six inches of clay 90% compacted for 3000 lbs/sq ft. Two variable height sidewalls and a rear wall provide secondary containment. The concrete slab is sloped toward a drainage trench within the container storage area. A sump pump is located in the trench to collect drainage from the container storage area. The minimum slope of the concrete slab is three percent. The secondary containment has a volume capacity of approximately 18,962 gallons.

C.1. Process Capacity/Annual Quantity Limitation OAC Rule 3745-50-43(A)(7)

- (a) The Permittee is authorized to store 32,500 gallons of containerized waste at any given time in the permitted container area, located at the wastewater treatment plant. The Permittee must store hazardous waste in the types of containers (size and type) described in Section 4 of the application.
- (b) For the purpose of compliance with the capacity limitation of this permit, each container will be considered to be storing an amount of waste equal to its capacity, regardless of the actual quantity stored in the container.
- (c) The provision of Condition C.1(a) shall not apply to the Permittee's activities as a generator accumulating hazardous waste on-site in compliance with OAC Rule 3745-52-34 and 40 CFR Part 265, subparts AA, BB, and CC.

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However, when accumulating waste within the permitted container storage area, in accordance with OAC Rule 3745-52-34 and 40 CFR Part 265, subparts AA, BB, and CC, the Permittee shall not, for the total amount of waste stored and accumulated, exceed the maximum container storage inventory established under this Condition.

C.2 Limitations on Treatment of Hazardous Waste in Containers

Reserved

C.3 Waste Identification

The Permittee must store in containers only the hazardous waste codes specified below:

D001, D007, D010, D021, D027, F002, F003

C.4 Condition of Containers

OAC Rule 3745-55-71

If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the Permittee must transfer the hazardous waste from such container to a container that is in good condition or otherwise manage the waste in compliance with the conditions of this Permit and the hazardous waste facility chapters of the OAC.

C.5 Compatibility of Waste with Containers

OAC Rule 3745-55-72

The Permittee must use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

C.6 Management of Containers

OAC Rule 3745-55-73

- (a) All container storage shall be conducted within the container storage units as described in Condition C.1 of this permit and Section 4 of the permit application.

- (b) The Permittee must keep all containers closed during storage, except when it is necessary to add or remove waste, and must not open, handle, or store containers in a manner which may rupture the container or cause it to leak.
- (c) In the event lab-pack wastes are generated, they must be handled in compliance with applicable storage requirements.
- (d) In the event lab-pack wastes are generated, they must be packaged in drums containing absorbent material that is compatible with the waste.

C.7. Containment Systems
OAC Rule 3745-55-75

- (a) The Permittee must maintain the containment system in accordance with the plans and specifications contained in Section 4 of the permit application.
- (b) The Permittee must maintain the containment system as described in the permit application, designed with sufficient capacity to contain ten percent of the total volume of the containers or the volume of the largest container, whichever is greater. The containment system must be free of cracks and gaps and sufficiently impervious to contain leaks and spills and accumulated precipitation until the collected material is detected and removed.
 - (i) The base of the containment system must be sloped or the containment system must be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids.
 - (ii) Spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area in a timely manner. This time period is not to exceed twenty-four (24) hours from the time spilled and/or leaked waste is discovered to have reached the hazardous waste pad sump.

C.8. Prohibition of Container Storage
ORC 3734.02(F)

The Permittee shall not store any container of hazardous waste received from any off-site source.

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C.9. Inspection Schedules and Procedures
OAC Rules 3745-54-15 and 3745-54-73

As required by OAC Rule 3745-54-15, the Permittee must inspect the container storage area in accordance with the approved inspection schedule contained in Appendix G-2 of the permit application to detect leaking containers and deterioration of containers and the containment system caused by corrosion or other factors. The Permittee must note the results of these inspections in the inspection log along with any remedial action taken. On days when containerized waste are added or removed to and/or from any of the permitted areas for storage, the Permittee must conduct an inspection as described in Appendix G-2 of the permit application, and maintain the inspection results in the facility operating record.

C.10. Recordkeeping
OAC Rule 3745-54-73

The Permittee shall comply with all recordkeeping requirements of OAC Rule 3745-54-73 as part of the facility operating record.

C.11. Special Container Provisions for Ignitable or Reactive Waste
OAC Rules 3745-54-17 and 3745-55-76

- (a) The Permittee must not store ignitable or reactive waste except in accordance with OAC Rules 3745-54-17 and 3745-55-76.
- (b) The Permittee must not locate containers holding ignitable or reactive waste within 15 meters (50 feet) of the facility's property line.
- (c) The Permittee must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste and shall follow the storage procedures specified in Section 7.6 of the permit application.

C.12. Special Container Provisions for Incompatible Waste
OAC Rules 3745-54-77(B) and 3745-55-77

Reserved

C.13. Compliance Schedule
OAC Rule 3745-50-50

Reserved

C.14. Closure and Post-Closure
OAC Rules 3745-55-10 through 3745-55-20, and 3745-55-78

- (a) At closure of the container area, the Permittee shall remove all hazardous waste and hazardous waste residues from the containment system, in accordance with the procedures in the Closure Plan set forth in Appendix I-1 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, Appendix I-1 of the permit application, the Permittee shall close the unit and perform post-closure care following a plan approved by the Director of Ohio EPA.

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MODULE D- CORRECTIVE ACTION REQUIREMENTS

Corrective Action Summary

Solvay Advanced Polymers, L.L.C. (f.k.a. BP Amoco Polymers f.k.a. Amoco Performance Products, Inc.) received a Federal Part B permit from U.S. EPA Region V on December 4, 1988, which included RCRA Corrective Action provisions. Two Corrective Action Management Units (CAMU's) were initially identified by US EPA at the facility: the lime pond area and the wastewater treatment plant (WWTP). In 1993, ownership of the lime pond area was returned to the original landowner, Union Carbide, to be addressed under CERCLA authority. Hence, the WWTP is the only area of the facility currently being addressed under Corrective Action. One of the two regulated units at the WWTP, the Former Equalization Basin (FEQB), was closed in accordance with an Ohio EPA approved closure plan in 1994. See Module G for more information about the FEQB. The other regulated unit, the Emergency Basin (EB), was retrofitted in 1988 with a double liner and leak detection system to meet RCRA minimum technology standards.

Solvay Advanced Polymers, L.L.C. (Solvay) conducted a RCRA Facility Investigation (RFI) in accordance with an approved RFI workplan, and submitted an RFI Report to U.S. EPA and Ohio EPA. The RFI Report was approved by U.S. EPA in a letter dated January 6, 1999, with a recommendation for corrective measures. A Corrective Measures Study (CMS) was conducted by Solvay which resulted in a Corrective Measures Report (CMR) being submitted to U.S. EPA. The CMR was approved by U.S. EPA in a letter to Solvay dated June 11, 1999. Based on the results of the RFI and CMR, no active remedial measures were deemed to be necessary at the facility. The corrective measures selected by U.S. EPA for the site involve deed restrictions and institutional controls which maintain an acceptable level of risk to human health and the environment.

On March 3, 2004, Director's Final Findings and Orders were journalized for a land use restriction agreement to create an equitable servitude. On March 30, 2004, the land use restriction agreement was recorded in the public record with the Washington County Recorder in book 389, page 2615 to 2622. At this time, the corrective action requirements for the remaining CAMU (i.e. the wastewater treatment facility) were completed.

If land use conditions or potential exposure scenarios change at any time in the future, the risks will be re-evaluated and interim and/or corrective measures will be implemented as necessary.

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D.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 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.

D.2. Corrective Action Beyond the Facility Boundary
OAC Rules 3745-54-101

The Permittee must implement Corrective Action(s) 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.

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

The WWTP is the only WMU at the facility. Refer to Figure 1-3 of the RFI Report for a layout of the WWTP area.

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

Reserved

D.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 D.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

For newly discovered waste management units, the Permittee must submit a written RFI Workplan to Ohio EPA, on a time frame established by Ohio EPA.

- (i) Within sixty (60) 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 ninety (90) 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 sixty (60) 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.

D.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.

D.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

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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

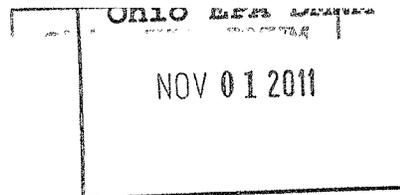
A determination of no further action shall not preclude Ohio EPA from requiring further investigations, studies, or remediation at a later date, if new information or subsequent analysis indicates that a release or potential release from a WMU at the Facility may pose an unacceptable risk to human health 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 D.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.

D.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 D.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 sixty (60) 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 ninety (90) 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 sixty (60) 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.

D.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 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).

D.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);

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- (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.

D.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 D.5. This determination will be made based on the information submitted in accordance with Permit Condition D.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.

D.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.

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D.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.

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MODULE E - SURFACE IMPOUNDMENTS

E.1. MODULE HIGHLIGHTS

There are two surface impoundments at the Marietta plant, the Former Equalization Basin (FEQB) and the Emergency Basin (EB). The EB is a component of the wastewater treatment plant and is located within the confines of the 100-year flood protection dike. The wastewater treatment plant is located to the south of State Route 7 along the Ohio River. The FEQB, also located at the Wastewater Treatment Plant (WWTP), has been removed from service, has undergone closure, and is in post-closure care. Information regarding post-closure care of the FEQB can be found in Module G of this permit.

The EB has a normal capacity of 6,000,000 gallons. The EB is used to treat corrosive wastewaters, remove solids from the wastewater, as well as provide a buffer to the biological treatment system. The EB is permitted to receive corrosive wastes (D002) and waste exhibiting the chlorobenzene toxicity characteristic (D021) during emergency situations with a design capacity of 162,000 gallons per day. The EB was retrofitted in 1988 with a double liner and leachate collection system.

E.2. Permitted and Prohibited Waste Identification

The Permittee may manage hazardous wastes under the following conditions:

- (a) The Permittee may treat the following hazardous wastes in the EB, subject to the terms of this Permit

Impoundment Designation	Type of Unit	Capacity (gallons/day)	Dimensions of Impoundment	Type of Waste	Hazardous Waste No.
Emergency Basin	Treatment	162,000	3.8 acres	Wastewater & Wastewater Sludge	D002 D021

- (b) The Permittee is prohibited from storing, treating, or disposing in the EB any hazardous waste that is not identified in Permit Condition E.2(a).

E.3. Design, Construction, and Operating Requirements OAC Rule 3745-56-21

- (a) The Permittee must maintain two liners and a leachate collection and removal system between such liners, in accordance with the design plans and reports contained in Section 4.4 of the Part B permit application. The

Permittee must manage the leachate collected from the leachate collection and removal system in accordance with the design plans and reports contained in Section 4.4 of the Part B permit application.

- (b) The Permittee must operate and maintain the EB in accordance with the plans and reports contained in Section 4.4 of the Part B permit application.
- (c) The Permittee must operate and maintain the EB to prevent overtopping, in accordance with the detailed design plans and operating practices contained in Section 4.4 of the Part B permit application.
- (d) The Permittee must maintain the EB dikes according to the detailed design plans and operating practices contained in Section 4.4 of the Part B permit application.

E.4. Leak Control Procedures
OAC Rule 3745-56-27

- (a) The Permittee must monitor separately each leak detection system at the EB, for the presence of liquids, daily during the active life of the facility. The Permittee must completely remove all liquid from each leak detection system as expeditiously as possible. The Permittee must manage this liquid according to the plans and procedures described in Section 4.4 of the Part B permit application. The Permittee must mitigate leakage into the leak detection system.
- (b) In the event of a sudden drop in the liquid level of the EB, that is not known to be caused by changes in the flow into or out of the impoundment, or if the dike leaks, the Permittee shall remove the EB from service immediately and complete the following actions:
 - (i) Immediately shut off the flow or stop the addition of wastes into the impoundment; and
 - (ii) Immediately contain any surface leakage which has occurred or is occurring; and
 - (iii) Immediately stop the leak; and
 - (iv) Take any other necessary steps to stop or prevent catastrophic failure; and

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- (v) If a leak cannot be stopped by any other means, empty the impoundment; and
 - (vi) Notify the Director of the problem in writing within seven (7) days after detecting the problem.
- (c) The EB that has been removed from service pursuant to this permit condition may be returned to service only if the portion of the impoundment which was failing is repaired and the following steps are taken:
- (i) If the impoundment was removed from service as the result of actual or imminent dike failure, the dike's structural integrity must be recertified by a qualified engineer, in accordance with OAC Rule 3745-56-26(C), or
 - (ii) If the impoundment was removed from service as the result of a sudden drop in the liquid level, then, for any existing portion of the impoundment, a liner must be installed in compliance with OAC Rule 3745-56-21(A), and for any other portion of the impoundment, the repaired liner system must be certified by a qualified engineer as meeting the design specifications contained in Permit Condition E.3.
- (d) The EB that has been removed from service, in accordance with the requirements of OAC Rule 3745-56-27, and is not being repaired, must be closed in accordance with the provisions of OAC Rule 3745-56-28.

E.5. Inspection Schedules and Procedures
OAC Rule 3745-56-26

- (a) The Permittee must inspect the EB in accordance with the inspection schedule included in appendix G.2 of the Part B application.
- (b) If the EB is removed from service for more than six (6) months, then, prior to returning to service, the Permittee must obtain a certification from a qualified engineer that the EB's dike, including that portion of any dike which provides freeboard, has structural integrity. The certification must establish that the dike:

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- (i) Will withstand the stress of the pressure exerted by the types and amounts of wastes to be placed in the EB.
- (ii) Will not fail due to scouring or piping, without dependence on any liner system included in the EB construction.

E.6. Recordkeeping and Reporting
OAC Rule 3745-56-27

The Permittee must notify the Director, in writing, within seven (7) days from detecting either a leak in the EB dike or a sudden drop in the liquid level (and the drop is not caused by changes in the flows into or out of the impoundment).

E.7. Closure and Post-Closure Care
OAC Rule 3745-56-28

At closure of the EB, the Permittee must follow the procedures in the approved Closure Plan contained in Appendix I-2 of the Part B permit application.

MODULE F - GROUND WATER COMPLIANCE MONITORING

F.1. Module Highlights

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:

Solvay Specialty Polymers USA, L.L.C. Wastewater Treatment Plant (WWTP) facility includes two regulated units - the Emergency Basin (EB) and the Former Equalization Basin (FEQB). The EB is an active surface impoundment that manages waste prior to biological treatment at the WWTP. In 1988, the EB was retrofitted with double synthetic liners and a leak detection system. The FEQB is an inactive surface impoundment that has undergone closure. The FEQB was removed from service on November 8, 1988, and is currently in post-closure care.

Due to their close proximity to each other, Solvay Specialty Polymers USA, L.L.C. has combined the ground water monitoring programs for the Emergency Basin and the FEQB. Solvay Specialty Polymers USA, L.L.C.'s compliance ground water monitoring system consists of 22 wells - 7 of which are background wells. A complete summary of compliance monitoring well locations with respect to the regulated units and well completion data is presented in Tables 1 and 2 of Appendix E-1 of the Part B permit application.

- (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 at the compliance point under OAC Rule 3745-54-95. Therefore, the Permittee must institute a compliance monitoring program under OAC Rule 3745-54-99.

F.2. Ground Water Protection Standard

OAC Rules 3745-50-44(B), 3745-54-92 through 3745-54-96, and 3745-54-100(A)

The Permittee must ensure that the hazardous constituents under OAC Rule 3745-54-93 detected in the ground water from a regulated unit listed in this Permit Condition do not exceed the concentration limits under OAC Rule 3745-54-94 in the uppermost aquifer underlying the waste management area beyond the point of compliance under OAC Rule 3745-54-95 during the compliance period under OAC Rule 3745-54-96. 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 (ug/l)
Benzene	5
Ethylbenzene	700
Methylene Chloride	5
Monochlorobenzene (MCB)	100
Styrene	100
Toluene	1000
1,2-Dichlorobenzene	600
1,4-Dichlorobenzene	75
1,1-Dichloroethane	252
Carbon Disulfide	670
Barium	2000

Hazardous Constituents	Concentration Limits (ug/l)
Chromium	100
Copper	1300
Selenium	50
Arsenic	65
Cobalt	58
Lead	79.5
Vanadium	112
Zinc	4600

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

Ground Water Quality or Field Parameters:

- pH
- Specific Conductance
- Temperature
- Turbidity

(b) Point of Compliance

OAC Rules 3745-54-91(A)(3), 3745-54-95, and 3745-54-100(A)(3) & (E)(1)

The point of compliance at which the ground water protection standard of OAC Rule 3745-54-92 applies is indicated in Appendix E-1, Figure 2. The Permittee must monitor the following: TW-65S, TW-65D, TW-58R, TW-57S, TW-57D, TW-63S, TW-63D, TW-15S, TW-15D, TW-14S, TW-14D, TW-16S, TW-16D, TW-11S, TW-11D representing the quality of ground water passing the point of compliance. The Permittee must also monitor the ground water, as necessary, between the point of compliance and the downgradient property boundary to determine if the concentration limit has been exceeded at any point between the compliance point and the downgradient property boundary.

(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 the active life of the waste management area, including any waste management activity prior to permitting and the closure period. The compliance period began on October 31, 1994. The ending date will be determined by one of three scenarios, whichever is longer: (1) 30

years from submittal of the closure certification of the FEQB (December 1, 1995), or (2) the end of the closure period of the EB, or (3) if the EB cannot be clean closed, 30 years beyond submittal of closure certification of the EB.

- (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 corrective action activities during the compliance period when the ground water protection standard has not been exceeded at any well listed in Permit Condition F.3(b) for any constituent listed in Permit Condition F.2(a) for four (4) consecutive sampling events. The Permittee must continue a compliance monitoring program under OAC Rule 3745-54-99 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 Permit Condition F.2(c)(i). The length of time to extend the compliance period must be equal to the compliance period as defined in Permit Condition F.2(c)(i). The Permittee is required to continue compliance monitoring under OAC Rule 3745-54-99.

F.3. Well Location, Installation, Maintenance, and Removal

OAC Rules 3745-54-95, 3745-54-97(A) to (C), and 3745-54-100(D) & (E)

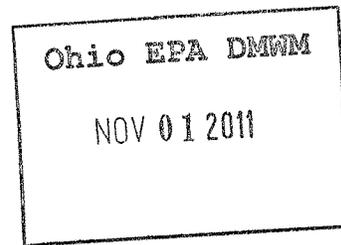
- (a) The Permittee's ground water monitoring system must consist of a sufficient number of wells, installed and screened at appropriate locations and depths, to yield ground water samples from the water bearing sand and gravel and overlying silty clay of the Ohio River Valley Aquifer which is considered to be the uppermost aquifer. The samples must:

- (i) Represent the quality of background water that has not been affected by leakage from the regulated unit;

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- (ii) Represent the quality of ground water passing the point of compliance, between the point of compliance and the downgradient property boundary, and beyond the property boundary, where necessary, to protect human health and the environment;
- (iii) Allow for the detection and measurement of contamination when hazardous waste or hazardous constituents have migrated from the waste management area to the uppermost aquifer; and
- (iv) If a facility contains more than one regulated unit, separate ground water monitoring systems are not required for each regulated unit provided that provisions for sampling the ground water in the uppermost aquifer will enable detection and measurement at the compliance point of hazardous constituents from the regulated units that have entered the ground water in the uppermost aquifer.
- (b) The monitoring system consists of the ground water wells as specified on Figure 2 in Appendix E-1 found in the Permit Application and in conformance with the following list:

7 Background Wells	9 Background Trigger Wells	15 Compliance Wells
PZ-89-1	TW-78	TW-11S
TW-25AS	TW-59S	TW-11D
TW-25AD	TW-59D	TW-14S
TW-8CS	TW-60SR	TW-14D
TW-8CD	TW-60D	TW-15S
TW-56S	TW-61S	TW-15D
TW-56D	TW-61D	TW-16S
	TW-62S	TW-16D
	TW-62D	TW-57S
		TW-57D
		TW-58R
		TW-63S
		TW-63D



7 Background Wells	9 Background Trigger Wells	15 Compliance Wells
		TW-65S
		TW-65D

- (c) Wells identified in Permit Condition F.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 Appendix E-1, Table 2 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.

Appendix E-1 of the Permit Application contains ground water monitoring well construction details in Table 2 which illustrate compliance with OAC Rule 3745-54-97(A) to (C).

- (d) The Permittee must remove or replace any monitoring well listed in Permit Condition F.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 2 in Appendix E-1 for Permit Condition F.3(b).
- (e) Whenever any well specified in Permit Condition F.3(b) is replaced, the Permittee must demonstrate to Ohio EPA that the ground water quality at the replacement well meets the criteria in Permit Condition F.3(a) within a two year period of the date of replacement using means appropriate to the reason for replacement.

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

- (a) The Permittee must implement a ground water monitoring program in accordance with Appendix E-1 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 that are in compliance with OAC Rule 3745-54-97(D).

- (b) The Permittee's ground water monitoring program in accordance with Appendix E-2 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 Appendix E-2 of the Permit Application.

F.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 F.3(b) each time ground water is sampled using the methods in Appendix E-2 of the Permit Application.

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

Data on each hazardous constituent specified in Permit Conditions F.2(a) and F.10(a)(vi) will be collected from background wells and wells at the compliance point(s). The sampling procedure and interval for each constituent are described in Appendix E-1 of the Permit Application.

- (a) The number and kinds of samples collected to establish background must be appropriate for the form of statistical test employed, following generally accepted statistical principles.
- (b) The sample size must be as large as necessary to ensure with reasonable confidence that a contaminant release to ground water from a facility will be detected.
- (c) Background data must be updated as necessary in accordance with Appendix E-1 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.

F.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 specified in Permit

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Conditions F.2(a) and F.10(a)(vi) in each well listed in Permit Condition F.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 forty-five (45) 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 Appendix E-1 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 Conditions F.2(a) and F.10(a)(vi) 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 differs, 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(I)(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.

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- (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 database, 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.

F.8. Operating Record and Reporting

OAC Rules 3745-54-73, 3745-54-75, 3745-54-77, and 3745-54-100(G)

(a) Operating Record

The Permittee must enter all of the following information obtained in accordance with Permit Module F in the operating record as it becomes available:

- (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 full volatile and semi-volatile 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;

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- (v) Any field log documentation of deviation from the procedures in the Appendix E-2, Sampling and Analysis Plan 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 F.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).

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(b) 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 F.9, F.10, or F.11, the ground water elevation data required by Permit Conditions F.5 and F.8(a)(xiii), and the results of any statistical analyses required by Permit Condition F.9, F.10, or F.11. 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 3745-54-97(J).

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

The Permittee must comply with any reporting requirements that become necessary under Permit Condition F.9, F.10, or F.11 in accordance with the schedules covered by that permit condition and as required by OAC Rule 3745-54-77(C).

F.9. Detection Monitoring Program
OAC Rule 3745-54-98

Reserved

F.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 3745-54-100 must, at a minimum, discharge the following responsibilities:

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- (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 F.2.
- (ii) The Permittee must install a ground water monitoring system at the compliance point as specified under OAC Rule 3745-54-95 as defined in Permit Condition F.2(b). The ground water monitoring system must comply with the requirements in Permit Condition F.3.
- (iii) The program must include collection, preservation, and analysis of samples pursuant to Permit Conditions F.4, F.5, and F.6. Statistical analysis must be conducted pursuant to Permit Condition F.7.
 - (1) The Permittee must conduct a sampling program semi annually for each chemical parameter and hazardous constituent specified in Permit Condition F.2(a) from each well (background and compliance) specified in Permit Condition F.3(b) per Permit Condition F.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 F.7 and F.8 for the compliance period defined in Permit Condition F.2(c).
- (iv) The Permittee must determine whether there is statistically significant evidence of increased contamination for each hazardous constituent specified in Permit Condition F.2(a) semi-annually during the compliance period.
 - (1) In determining whether statistically significant evidence of increased contamination exists, the Permittee must use the statistical procedures specified in Permit Condition F.7. The methods must compare data collected at the compliance point(s) specified in Permit Condition F.3(b) to the concentration limits specified in Permit Condition F.2(a).
 - (2) The Permittee must determine whether there is statistically significant evidence of increased contamination at each monitoring well listed in Permit Condition F.3(b) at the compliance point within forty-five (45) days after receiving hard copies and electronic data files from the laboratory.

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- (v) The Permittee must determine the ground water flow rate and direction in the uppermost aquifer at least annually using the procedures specified in Appendix E-1 of the Permit Application.
- (vi) The Permittee annually must determine whether additional hazardous constituents from the Appendix to OAC Rule 3745-54-98, which could possibly be present but are not on the detection monitoring list in Permit Condition F.2(a), are actually present in the uppermost aquifer and, if so, at what concentration, pursuant to procedures in Appendix E-1 of the Permit Application as required by Permit Condition F.10(a)(iv). The Permittee must perform enhanced sampling during one event each year at all compliance point wells. Enhanced sampling means that samples from each of these monitoring wells shall be analyzed for all constituents from the Appendix to OAC Rule 3745-54-98 (except PCDDs, PCDFs, and 2,3,7,8 - TCDD), as listed in Appendix E-1, Table 5.

If this sampling event indicates that constituents from the Appendix to OAC Rule 3745-54-98 are in the ground water that are not already identified in Permit Condition F.2(a), the Permittee may resample within sixty (60) days and repeat the analysis. If the second analysis confirms the presence of new constituents, the Permittee must report the concentration of these additional constituents to the Director within seven (7) days after the completion of the second analysis and add the constituents to the monitoring list in Permit Condition F.2(a). If the Permittee chooses not to resample, then the concentrations of these additional constituents must be reported to the Director within seven (7) days after completion of the initial analysis, and added to the monitoring list in Permit Condition F.2(a).

- (1) Within ninety (90) days, the Permittee must submit to the Agency an application for a permit modification to incorporate the additional constituent(s) identified in Permit Condition F.10(a)(vi) into Permit Condition F.2(a). The application must include an identification of the concentration of each new Appendix to OAC Rule 3745-54-98 constituent detected at the compliance point and a proposed concentration limit for each under OAC Rule 3745-54-94(A)(1) or (A)(2), or a notice of intent to seek an alternate concentration limit for a hazardous constituent under OAC Rule 3745-54-94(B).

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- (2) The Permittee must begin sampling and analyzing for the new constituents at the next regularly scheduled sampling event.
- (b) If the Permittee has made a statistical determination that any concentration limits identified in Permit Condition F.2(a) are being exceeded in any monitoring well either at the compliance point or between the compliance point and the downgradient property boundary, the Permittee must:
- (i) 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) The Permittee must submit to the Director an application for a permit modification to establish a corrective action program meeting OAC Rule 3745-54-100 requirements within one hundred and eighty (180) days of determining that any concentration limit has been exceeded, or within ninety (90) days if the Permittee has previously submitted an engineering feasibility study during detection monitoring. The application must at a minimum include the following information:
 - (1) A detailed description of corrective actions, including time frames, that will achieve compliance with the ground water protection standard specified in Permit Condition F.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 F.10(b), that any concentration limits specified in Permit Condition F.2(a) are being exceeded at any monitoring well at the compliance point or between the compliance point and 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, or statistical evaluation, or natural variation in the ground water. In making such a demonstration, the Permittee must:

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- (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 (90) 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 (90) 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 requirements of OAC Rule 3745-54-99, 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.

F.11. Corrective Action Program
OAC Rules 3745-50-44(B)(8) and 3745-54-100

Reserved

MODULE G - POST-CLOSURE CARE

MODULE HIGHLIGHTS

Post-closure care is required for the Former Equalization Basin (FEQB) which has been certified closed. The FEQB received D002 corrosive wastewaters from the facility while it was in operation. D002 is the hazardous waste code for a waste exhibiting the characteristic of corrosivity. After operation of the FEQB was discontinued in 1988, the basin was replaced with an equalization tank. The FEQB was closed as a landfill in accordance with Ohio Administrative Code rule 3745-68-10.

Closure of the FEQB included removal of contaminated soils and sludges from the bottom of the basin, backfilling with low permeable soils, and installation of a subsurface vacuum dewatering system designed to provide a hydraulic barrier zone beneath the former impoundment. The vacuum dewatering system consists of a network of 50 well points connected to a manifold and vacuum pump system. The dewatering system induces a vacuum in the subsurface through the well point network to remove contaminants and to establish a hydraulic barrier zone.

In lieu of a conventional cap, the approved FEQB closure plan utilized a two phase approach to closure. During Phase 1, the vacuum dewatering system was operated for 1 year to remove subsurface soil contaminants. In phase 2, the post-closure period, the system was operated at a higher vacuum pressure to establish a hydraulic barrier to control the movement of leachate and the migration of contaminants to the ground water table.

On April 8, 2003, Ohio EPA approved a modification to the permit that would allow Solvay to stop operation of the vacuum dewatering system for a trial period while conducting additional monitoring of wells TW-100 and TW-070S. On February 19, 2009, Ohio EPA and Solvay met to discuss the results of the trial shut down and the results of in-well statistical evaluation of TW-100 and TW-070S. In this meeting, Ohio EPA agreed that Solvay would not have to restart the vacuum extraction system and Solvay agreed to evaluate final cover options for the FEQB that would meet the closure performance standards of OAC Rule 3745-66-11 in lieu of the vacuum extraction system. In March of 2011, Solvay prepared a draft *30% Final Cover Design as a Closure Plan Addendum*.

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Current post-closure activities also include a ground water monitoring system, inspections, and routine maintenance activities. Post-closure care is expected to be conducted for 30 years.

G.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.
Surface Impoundment	FEQB	600,000 gallons	Plant Wastewater	D002

G.2. Post-Closure Procedures and Use of Property

- (a) The Permittee must conduct post-closure care for the hazardous waste management unit listed in Permit Condition G.1, above, to begin after completion of closure of the unit and continue for 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.
- (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 through 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 cap, as necessary, to correct the effects of settling, subsidence, erosion, and other events; and
 - (ii) Prevent run-on and run-off from eroding or otherwise damaging the final cover.
- (d) The Permittee must not allow any use of the unit designated in Permit Condition G.1 which will disturb the integrity of the final cover, liners, any

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components of the containment system, or the function of the facility's monitoring systems during the post-closure care period.

- (e) The Permittee must implement the Post-Closure Plan contained in Appendix I-3 of the permit application. All post-closure care activities must be conducted in accordance with the provisions of the Post-Closure Plan.

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

The Permittee must inspect the components, structures, and equipment at the site in accordance with the Inspection Schedule.

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

- (a) If the Permittee, or any subsequent owner or operator of the land upon which the hazardous waste disposal unit is located, wishes to remove hazardous wastes and hazardous waste residues, the liner, if any, or contaminated soils, then he shall request a modification to this post closure permit in accordance with the applicable requirements in OAC Chapter 3745-50. The Permittee or any subsequent owner or operator of the land shall demonstrate that the removal of hazardous wastes will satisfy the criteria of OAC Rule 3745-55-17(C).
- (b) No later than sixty (60) days after completion of the established post-closure care period for each hazardous waste disposal unit, the Permittee shall submit to the Director, by registered mail, a certification that the post-closure care 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 qualified professional engineer. Documentation supporting the 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.

G.5. Financial Assurance

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

- (b) The Permittee shall demonstrate to the Director that the value of the financial assurance mechanism exceeds the remaining cost of post-closure care, in order for the Director to approve a release of funds.
- (c) The Permittee shall submit itemized bills to the Director when requesting reimbursement for post-closure care.

G.6. Post-Closure Permit Modifications

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 through 3745-50-66, and must include a copy of the proposed amended Post-Closure Plan for approval by the Director. The Permittee shall request a permit modification whenever changes in operating plans or facility design affect the approved Post-Closure Plan, there is a change in the expected year of final closure, 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.

G.7. Discontinued Operation of the Vacuum Dewatering System

In accordance with the Stipulation and Final Settlement Agreement (Case No. ERAC 844616), the vacuum system at the FEQB has been shut down and will not be restarted.

In lieu of the vacuum dewatering system, within sixty (60) days of permit journalization, Solvay must submit a Closure Plan Addendum modifying the existing FEQB cover. The modified final cover must meet the closure performance standards of OAC Rule 3745-66-11 and shall be comprised of a high density polyethylene liner, gravel, and asphalt. The Closure Plan Addendum is to be submitted as a Class 1 modification requiring director's prior approval in accordance with OAC Rule 3745-50-51.

The Permittee shall comply with the existing post-closure plan for the FEQB (which includes operation and maintenance information as well as Seep Collection System requirements) except as provided for in this Condition.

END OF PERMIT CONDITIONS