



August 2012

Draft Hazardous Waste Permit Renewal

Public Participation Procedures and Comment Period Ohio Administrative Code (OAC) Rule 3745-50-22 (B)(5)(a)&(b)

All persons, including the applicant, may submit written comments relating to this draft action. Written comments or requests for a public meeting may be submitted before the end of the comment period to the address in the box on the right.

The comment period begins on August 14, 2012, and ends on September 30, 2012. A copy of the permit application and the draft permit are available for review by the public at the following locations:

Ohio EPA, Northwest District Office 347 N. Dunbridge Road Bowling Green, Ohio 43402 (419) 352-8461

Ohio EPA, Central Office Division of Materials & Waste Management Lazarus Government Center 50 West Town St., Ste 700 Columbus, Ohio 43215 (614) 644-2621

The draft permit is available for review by the public online:

http://www.epa.ohio.gov/dmwm

Facility Name: BP-Husky Toledo Refinery
U.S. EPA I.D.: OHD 005 057 542
Location: 4001 Cedar Point Road Oregon, Ohio 43616
Facility Owner: BP-Husky Refining LLC P.O. Box 696 Toledo, Ohio 43697
Facility Operator: BP Products North America, Inc. P.O. Box 696 Toledo, Ohio 43697
Activity: Hazardous Waste Permit Renewal to Conduct Corrective Action and Post-Closure Care
Comment Period: August 14, 2012 thru September 30, 2012
Submit Comments to: Ohio EPA, Attention: Dustin Tschudy Division of Materials and Waste Management Engineering, Remediation, and Authorizations Section P.O. Box 1049 Columbus, Ohio 43216-1049 (614) 644-2621 dmwmcomments@epa.state.oh.us

and at the following location:

Toledo Lucas County Public Library Oregon Branch 3340 Dustin Road Oregon, Ohio 43616 (419) 259-5250

Within sixty (60) days of the close of the public comment period, Ohio EPA will, without prior hearing, issue the permit (or deny the request) in accordance with Chapter 3734 of the Ohio Revised Code

(ORC). If Ohio EPA approves the application, a renewal permit will be issued with terms and conditions as are necessary to ensure compliance with hazardous waste rules.

Description of Facility OAC Rule 3745-50-22 (B)(1)

BP-Husky Refining LLC operates a petroleum refinery located in Oregon, Ohio.

Description of Requested Permit Renewal

OAC Rule 3745-50-22 (B)(2)

BP-Husky Refining LLC has two units in post-closure care and is also subject to the requirements of corrective action.

Regulatory Basis to Support the Decision to Renew the Permit Application

OAC Rule 3745-50-22 (B)(3)

Renewal

The Director has determined that BP-Husky Refining LLC has submitted an application for renewal one hundred eighty (180) days prior to the expiration date of its present permit which was issued by Ohio EPA on May 23, 2002. The Director has considered the application, inspection reports, a report regarding the facility's compliance with the present permit, and the rules adopted under ORC Section 3734. The Director has found that the Part B permit application meets the

Director's performance standards and that the facility has a history of compliance with this chapter, rules adopted under it, the existing permit, and orders entered into, which demonstrates reliability, expertise, and competency to subsequently operate the facility under this chapter, the rules, and the permit.

Contact Person OAC Rule 3745-50-22 (B)(6)

For additional information, please contact Wendy Miller, Ohio EPA Northwest District Office at (419) 373-3114.

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PUBLIC NOTICE

Lucas County

HAZARDOUS WASTE DRAFT PERMIT RENEWAL

On August 14, 2012, Ohio EPA issued a draft renewal Hazardous Waste Facility Installation and Operation Permit (Permit) to BP-Husky Refining, LLC (BP-Husky) for its facility located at 4001 Cedar Point Road, Oregon, Ohio 43616, in Lucas County. The Ohio EPA ID number is OHD005057542. BP-Husky operates a petroleum refinery. The draft renewal Permit authorizes BP-Husky to conduct corrective action and post-closure care at the facility. To issue this draft renewal Permit, Ohio EPA determined that the Permit application is complete and meets the appropriate standards, and that the applicant has a history of compliance with relevant environmental laws. You may send written comments or request a public meeting concerning this draft renewal Permit to Ohio EPA, Division of Materials and Waste Management, P.O. Box 1049, Columbus, Ohio 43216-1049, no later than September 30, 2012. A copy of the draft renewal Permit is available for review at the following locations: Toledo Lucas County Public Library (Oregon Branch), 3340 Dustin Road, Oregon, Ohio 43616, tel: (419) 259-5250, Ohio EPA Northwest District Office, 347 N. Dunbridge Road, Bowling Green, Ohio 43402, tel: (419) 352-8461, or Ohio EPA Central Office, Division of Materials and Waste Management, 50 West Town Street, Suite 700, Columbus, Ohio 43215, tel: (614) 644-2621.

OHIO ENVIRONMENTAL PROTECTION AGENCY
OHIO HAZARDOUS WASTE FACILITY
INSTALLATION AND OPERATION PERMIT RENEWAL

Permittee: **BP-Husky Refining LLC**

Mailing
Address: **P.O. Box 696**
Toledo, Ohio 43616

Owner: **BP-Husky Refining LLC**
P.O. Box 696
Toledo, Ohio 43616

Operator: **BP Products North America, Inc.**
P.O. Box 696
Toledo, Ohio 43616

Location: **4001 Cedar Point Road**
Lucas County, Oregon, Ohio 43616

Ohio Permit No.: **03-48-0411**

US EPA ID: **OHD 005 057 542**

Issue Date:

Effective Date:

Expiration Date:

AUTHORIZED ACTIVITIES

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

- **Post-Closure**
- **Corrective Action**

PERMIT APPROVAL

Scott J. Nally, Director
Ohio Environmental Protection Agency

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

Entered into the Journal of the Director this ____ day of _____, 2012

By _____ of the Ohio Environmental Protection Agency.

MODULE A - GENERAL PERMIT CONDITIONS

A. GENERAL PERMIT CONDITIONS

A.1. Effect of Permit

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

(a) The Permittee is authorized to operate in accordance with the terms and conditions of this Ohio hazardous waste permit (hereinafter 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 permit application. The renewal of the surface impoundment and land treatment unit is for the purpose of accomplishing post-closure activities. These units are currently inactive. These units shall not be reactivated for management of hazardous waste. The permit application, as submitted to Ohio EPA on November 17, 2011, and last updated on June 22, 2012, is hereby incorporated into this permit. In the instance of inconsistent language or discrepancies between the above, the language of the more stringent provision shall govern.

(b) Any management of hazardous waste not authorized by this permit is prohibited, unless otherwise expressly authorized or specifically exempted by law. Issuance of this permit does not convey property rights of any sort or any exclusive privilege, nor does it authorize any injury to persons or property, or invasion of other private rights. Compliance with the terms and conditions of this permit does not obviate Permittee's obligation to comply with other applicable provisions of law governing protection of public health or the environment including but not limited to the Community Right to Know law under ORC Chapter 3750.

A.2. Permit Actions

OAC Rule 3745-50-58(F)

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

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

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

A.4. Severability

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

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

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

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

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

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

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

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

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

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

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

The Permittee must at all times properly operate and maintain the facility (and related appurtenances) to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes effective management practices, adequate funding, adequate operator staffing and training, and where appropriate, adequate laboratory and process controls, including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the terms and conditions of this permit.

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

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

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

- (a) The Permittee must allow the Director, or an authorized representative, upon stating the purpose and necessity of the inspection and upon proper identification, to:
- (i) enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the terms and conditions of this permit;
 - (ii) have access to and copy, at reasonable times, any records required to be kept under the terms and conditions of this permit;
 - (iii) inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the terms and conditions of this permit; and

- (iv) sample, document, or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by ORC Chapter 3734 and the rules adopted thereunder, any substances or parameter at any location.
- (b) Any record, report or other information obtained under the hazardous waste rules or Chapter 3734 of the Revised Code shall not be available to the public upon the Permittee's satisfactory showing to Ohio EPA that all or part of the information would divulge methods or processes entitled to protection as trade secrets pursuant to Ohio Trade Secret Law and OAC Rule 3745-50-30.

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

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

(vi) results of such analyses.

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

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

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

- (a) The Permittee must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this permit, the certification required by OAC Rule 3745-54-73(B)(9), and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report, certification, or application.
- (b) The record retention period may be extended by request of the Director at any time and is automatically extended during the course of any unresolved enforcement action regarding the facility.
- (c) The Permittee must maintain, in accordance with the Ohio hazardous waste rules, records of all data used to complete the permit application and any amendments, supplements or modifications of such application. The Permittee must retain a complete copy of the current application for the effective life of the permit as indicated in Permit Condition A.3.
- (d) The Permittee must maintain records from all ground water monitoring wells and associated ground water surface elevations for the active life of the facility, and for disposal facilities for the post-closure care period as well.
- (e) The Director may require the permittee to establish and maintain an information repository at any time, based on the factors set forth in OAC Rule 3745-50-39(C)(2). The information repository will be governed by the provisions in OAC Rules 3745-50-39(C)(3) through (C)(6).

- (f) Corrective Action records must be maintained at least three (3) years after all Corrective Action activities have been completed.

A.15. Planned Changes

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

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

A.16. Waste Shipments

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

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

A.17. Anticipated Noncompliance

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

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

A.18. Transfer of Permits

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

- (a) The permit may be transferred to a new owner or operator only if such transfer is conducted in accordance with ORC Chapter 3734 and the rules adopted thereunder. This permit may be transferred by the Permittee to a new owner or operator only if the permit has been modified under OAC Rule 3745-50-51. Before transferring ownership or operation of the facility, the Permittee must notify the new owner or operator in writing of the requirements of ORC Chapter 3734 and the rules adopted thereunder (including all applicable Corrective Action requirements).
- (b) The Permittee's failure to notify the new owner or operator of the requirements of the applicable Ohio law or hazardous waste rules does

not relieve the new owner or operator of its obligation to comply with all applicable requirements.

A.19. Compliance Reports

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

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

A.20. Immediate Reporting of Noncompliance

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

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

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

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

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

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

The Permittee must report to the Director all other instances of noncompliance not provided for in Permit Conditions A.19 and A.20. These reports must be submitted within thirty (30) days of the time at which the Permittee is aware of such noncompliance. Such reports must contain all information set forth within Permit Condition A.20.

A.23. Reserved

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

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

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

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

A.26. Reserved

A.27. Reserved

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 an independent, registered professional engineer, pursuant to OAC Rule 3745-55-15, and until the Director releases the Permittee from financial assurance requirements pursuant to OAC Rule 3745-55-43, the following documents (including amendments, revisions and modifications):

- (i) 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.
- (ii) post-closure plan, as required by OAC Rule 3745-55-18(A) and the terms and conditions of this permit.
- (iii) annually-adjusted cost estimate for facility post-closure, as required by OAC Rule 3745-55-44 and the terms and conditions of this permit.

- (iv) all other documents required by Module A, Permit Condition A.12 and Module E.
- (b) The Permittee must maintain copies of all inspection logs at the facility for a period not less than three (3) years from the date of inspection.

A.29. Reserved

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MODULE B - GENERAL FACILITY CONDITIONS

B. GENERAL FACILITY CONDITIONS

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

- (a) The Permittee must design, construct, maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, ground water or surface waters which could threaten human health or the environment.
- (b) The Permittee shall not accept hazardous waste from any off-site sources during the life of the permit until such time as this Condition is modified, renewed, or revised. This is a facility-wide limitation and includes all hazardous waste management units. However, this Condition shall not be interpreted as a prohibition on the Permittee's practice of accepting tank water draws from BP product terminals or BP's off-site laboratory for treatment in Permittee's wastewater treatment system.

B.2. Reserved

B.3. Reserved

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

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

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

The Permittee must inspect the facility in accordance with OAC Rule 3745-54-15 and the inspection schedule set forth in Section F-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.

B.6. Reserved

B.7. Reserved

B.8. Reserved

B.9. Reserved

B.10. Reserved

B.11. Reserved

B.12. Reserved

B.13. Reserved

B.14. Reserved

B.15. Reserved

B.16. Reserved

B.17. Reserved

B.18. Reserved

B.19. Reserved

B.20. Reserved

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. Reserved

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

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

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

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

B.26. Reserved

B.27. Reserved

B.28. Reserved

B.29. Reserved

B.30. Reserved

B.31. Reserved

B.32. Reserved

B.33. Reserved

B.34. Reserved

B.35. General Post-Closure Requirements

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

(a) Post-Closure Care Period

The Permittee has begun post-closure care for the surface impoundment (North Stormwater Pond) and land treatment unit (LTU) 4, after acceptance of the closure certifications which were May 18, 2004 for North Stormwater Pond and June 14, 2005 for LTU 4. Post-closure care, for each hazardous waste disposal unit, must continue for 30 years after these dates, respectively. Post-closure care must be in accordance with OAC Rule 3745-55-17 and the post-closure plan.

(b) Post-Closure Security

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

(c) Amendment to Post-Closure Plan

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

(d) Reserved

(e) Certification of Completion of Post-Closure Care

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

B.36. Cost Estimate for Facility Post-Closure
OAC Rule and 3745-55-44

- (a) The Permittee's most recent post-closure cost estimate, prepared in accordance with OAC Rule 3745-55-44 is specified in Appendix I-1 of the permit application.
- (b) The Permittee must adjust the post-closure cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with OAC 3745-55-45
- (c) The Permittee must revise the post-closure cost estimate whenever there is a change in the facility's post-closure plan that increases the cost of post-closure care, as required by OAC Rule 3745-55-44(C).
- (d) The Permittee must submit to the Ohio EPA and keep at the facility the latest post-closure cost estimate as required by OAC Rule 3745-55-44(D) and (E).

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

The Permittee must maintain continuous compliance with OAC Rule 3745-55-45 and provide documentation of financial assurance, which meets the requirements of OAC Rule 3745-55-51, in at least the amount of the cost estimates required by Permit Condition B.36.

B.38. Reserved

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

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

B.40. Reserved

MODULE C – RESERVED

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MODULE D – RESERVED

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MODULE E – CORRECTIVE ACTION REQUIREMENTS

Corrective Action Summary

The United States Environmental Protection Agency (U.S. EPA) issued the Permittee a Resource Conservation and Recovery Act (RCRA) hazardous waste management permit on December 27, 1988, effective January 30, 1989. As a condition of this permit, U.S. EPA directed the Permittee to undertake corrective action for releases of hazardous waste or constituents from Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) at the Toledo Refinery as identified in the June 10, 1988 RCRA Facility Assessment (RFA) report (Jacobs, 1988).

The Permittee submitted a RCRA Facility Investigation (RFI) Workplan to U.S. EPA in April 1989. After several rounds of review, U.S. EPA issued final approval of the RFI Workplan on February 24, 1999. The Phase I RFI was conducted in April 1999. The Phase I Report and Phase II Workplan were submitted to U.S. EPA on March 23, 2000. U.S. EPA issued a Notice of Deficiency (NOD) for these submittals on June 19, 2000. Based upon the Permittee's August 11, 2000 response to this NOD, U.S. EPA issued a Conditional Approval of the Phase I Report and Phase II Workplan on September 27, 2000. The Permittee responded to this Conditional Approval on October 26, 2000. The Permittee submitted a Final Phase I RFI Report and Final Phase II RFI Workplan to U.S. EPA on November 21, 2000. U.S. EPA granted approval of these submittals on February 5, 2001. On August 31, 2001, the Permittee submitted its Phase II RFI Report. On February 25, 2002, U.S. EPA granted a conditional approval to the Phase II RFI Report. With one exception, Ohio EPA was in agreement with the conditions of U.S. EPA's February 25, 2002 conditional approval. For purposes of the ecological evaluation in the Driftmeyer Ditch, Ohio EPA required that additional sediment sampling be conducted on-site and downstream. The results of the sediment sampling were submitted in a May 2003 report, and showed that Driftmeyer Ditch does not pose a risk.

The transition of the corrective action program from the U.S. EPA to Ohio EPA occurred on May 23, 2002. Ohio EPA accepted all documents and activities performed as part of workplans submitted to and approved under U.S. EPA authority prior to issuance of this permit. Conditional approval of the Permittee's Final Phase II Report was granted by U.S. EPA on February 25, 2002. The Permittee subsequently submitted an RFI report in March of 2002, and a CMS April of 2002. On May 10, 2002, U.S. EPA approved both the RFI report and the CMS.

The Permittee submitted CMS Workplans for the SWMUs and AOC identified in Permit Condition E.9. Construction Completion Reports (CCRs) were approved for each of the

identified units. Eight units went through corrective action. Three of those eight units have on-going operations and maintenance responsibilities. The last unit to complete corrective action was SWMU 10, South Pond, and the completion report was approved on November 17, 2011.

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

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

The Permittee must perform ground water investigation and monitoring as necessary in order to fulfill the requirements of OAC Rule 3745-54-101.

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

The Permittee must implement Corrective Action beyond the Facility property boundary, where necessary to protect human health and the environment, unless the Permittee demonstrates to the satisfaction of Ohio EPA that, despite the Permittee’s best efforts, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the Facility boundary where off-site access is denied. On-site measures to address such

releases will be addressed under the RFI, CMS, and CMI phases, as determined to be necessary, on a case-by-case basis.

E.3. Identification of SWMUs

OAC Rules 3745-50-44(D) and 3745-54-101

The RFI and VSI conducted on March 28 and 29, 1988, identified fifty-four (54) SWMUs and fourteen (14) AOCs.

A visual representation of the SWMUs and AOCs may be found in Figure 1-2 of BP Products North America, Toledo Refinery's RCRA Facility Investigation: Task 3 Work Plan.

E.4. Reserved.

E.5. RCRA Facility Investigation (RFI)

OAC Rule 3745-54-101

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

(a) RFI Workplan

The Permittee must submit a written RFI Workplan to Ohio EPA within ninety (90) days after the discovery of a new waste management unit, or upon 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.

- (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.

E.6. Reserved.

E.7. Determination of No Further Action

(a) Permit Modification

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

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

(b) Periodic Monitoring

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

(c) Further Investigations

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

E.8. Corrective Measures Study (CMS)

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

(a) CMS Workplan

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

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

(b) CMS Workplan Implementation

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

(c) CMS Final Report

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

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

E.9. Corrective Measures Implementation (CMI)

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

If two or more of the Corrective Measures studied meet the threshold criteria set out above, Ohio EPA will authorize the Corrective Measures Implementation by considering remedy selection factors including: (1) long-term reliability and effectiveness; (2) the degree to which the Corrective Measure will reduce the toxicity, mobility or volume of contamination; (3) the Corrective Measure's short-term effectiveness; (4) the Corrective Measure's implementability; and (5) the relative cost associated with the alternative.

In authorizing the proposed Corrective Measures, Ohio EPA may also consider such other factors as may be presented by site-specific conditions.

(a) Corrective Action Objectives

- (i) Based on the results of the RCRA Facility Investigation (RFI), Human Health Risk Assessment (HHRA), and Ecological Risk Assessment (ERA), Media Cleanup Standards (MCSs) were developed to help determine the specific areas of the Facility that require corrective measures. An MCS is defined as a medium-specific, health- and environment-based contaminant concentration determined to be protective of human health and the environment. Table 1 presents the criteria upon which the action levels for each medium were based. Tables 2 and 3 present the MCSs for soil and ground water, respectively.

TABLE 1 MCS CRITERIA FOR EACH MEDIUM	
Medium	Action Level Criteria
Ground water	<ul style="list-style-type: none"> • U.S. EPA MCLs • Risk-based action levels based on HHRA results
Soil	<ul style="list-style-type: none"> • U.S. EPA Region 9 Industrial Preliminary Remediation Goals • Risk-based action levels based on HHRA results

TABLE 2 MCSs FOR SOIL	
COC	MCS (milligram per kilogram)
Benzene	1.5
Toluene	520
Xylene	210
Benzo(a)pyrene	0.29
Benzo(a)anthracene	2.9
Benzo(b)fluoranthene	2.9
Indeno(1,2,3-cd)pyrene	2.9
Dibenz(a,h)anthracene	0.361
Quinoline	0.21
Arsenic	13.8
Chromium	450
Lead	750

TABLE 3 MCSs FOR GROUND WATER	
COC	MCS (milligram per liter)
Volatile Organic Compounds	
Benzene	0.005
Carbon disulfide	1.0
Chlorobenzene	0.1
Chloroethane	0.0046
Chloroform	0.16
1,2-Dichloroethane	0.005
1,1-Dichloroethane	0.007
1,4-Dioxane	0.0061
Ethylbenzene	0.7

TABLE 3 MCSs FOR GROUND WATER	
Ethylene dibromide	0.00005
Methyl ethyl ketone	1.9
Styrene	0.1
Toluene	1.0
1,1,1-Trichloroethane	0.2
Trichloroethene	0.2
Tetrachlorethene	0.005
Vinyl chloride	0.002
Xylenes (total)	10.0
Semivolatle Organic Compounds	
Acenaphthene	0.37
Anthracene	1.8
Benzo(a)anthracene	0.000092
Benzo(b)fluoranthene	0.000095
Benzo(k)fluoranthene	0.000092
Benzo(a)pyrene	0.0002
Bis(2-ethylhexyl)phthalate	0.006
Chrysene	0.0092
Dibenz(a,h)phthalate	0.006
Di-n-butyl phthalate	3.6
1,2-Dichlorobenzene	0.6
1,3-Dichlorobenzene	0.0055
1,4-Dichlorobenzene	0.075
Diethyl phthalate	29
2,4-Dimethylphenol	0.73
Dimethyl phthalate	360
2,4-Dinitrophenol	0.073
Fluoranthene	1.5
Fluorene	0.24
Indeno(1,2,3-cd)pyrene	0.000092
Methyl tertiary butyl ether	0.02
Naphthalene	0.0062
4-Nitrophenol	0.29
Phenanthrene	0.00075
Phenol	22.0
Pyrene	0.18

TABLE 3 MCSs FOR GROUND WATER	
Pyrene	0.18
Pyridine	0.036
Metals	
Antimony	0.006
Arsenic	0.01
Barium	2.0
Beryllium	0.004
Cadmium	0.005
Chromium (total)	0.1
Cobalt	2.2
Cyanide	0.2
Lead	0.015
Mercury	0.002
Nickel	0.73
Selenium	0.05
Silver	0.18
Vanadium	0.26
Zinc	11.0

- (ii) After implementing corrective measures for soils, samples will be collected, if necessary and applicable, to determine if contaminants are present at levels above the MCSs. Corrective measures for soil and soil sampling will be in accordance with the approved Corrective Measures Implementation Conceptual Work Plan (CMI CWP) (see Condition E.9).

If contaminants were present at levels above the MCSs, a post-remedial risk evaluation was conducted. If contaminant levels did not exceed MCSs, but there were multiple contaminants whose aggregate risk may be unacceptable, a post-remediation risk assessment was performed. If the post-remedial risk evaluation showed that the contaminant concentrations pose a risk above Ohio EPA's acceptable cancer risk level of 10^{-5} or acceptable Hazard Index of less than 1 for non-carcinogens, further corrective measures were implemented. However, if the post-remedial risk evaluation showed that the contaminant concentrations did not

pose unacceptable risks, no further corrective measures were implemented.

(b) Selected Remedies

Based on the results of the completed RFI and the establishment of facility-wide institutional controls (Condition E.9(b)), Ohio EPA has determined that the SWMUs and AOCs listed below do not pose a threat to human health and the environment. Therefore, these SWMUs and AOCs do not require further action.

SWMU 3	Tetraethyl Lead Contaminated Valves
SWMU 4	Filled Cooling Tower Base
SWMU 31	Leaded Sludge Weathering Pad
SWMU 34	Hazardous Container Storage Area
SWMU 35	Oily Ditch
AOC L	Underground Storage Tank (UST) 1 Area, Gasoline Dispensing Area
AOC M	UST 2 Area, Control Laboratory Area
AOC N	UST 3 & 4 Area, Gasoline Blending Area.

The human health risk assessment and ecological risk assessment performed during the RFI concluded that several SWMUs pose unacceptable potential risk to human health and/or the ecological receptors.

The human health risk assessment assumed industrial land use for the SWMUs. Institutional controls are required to ensure that site-wide land use remains industrial until such time when risk values for unrestricted land use are achieved. Under this permit, the institutional controls will consist of measures that limit the future use of the property in a manner that is consistent with the risk values for the site. This will be accomplished through an environmental covenant that was issued June 8, 2012 by Ohio EPA. An environmental covenant, as set forth in ORC §5301.80 through §5301.92, is a written agreement between Ohio EPA and the property owner arising under an environmental response project that imposes activity and/or use limitations on specific portions of a site.

The environmental covenant was filed with the Lucas County Recorder on June 11, 2012 in accordance with state law governing recording and

priority of interest in real property. The environmental covenant(s) will run with the land and be binding upon a future property owner should the property be sold. Monitoring the property owner's adherence to the environmental covenant(s) will help to ensure continued protection of human health and the environment. A violation of the environmental covenant(s) is enforceable by Ohio EPA. The environmental covenant(s) cannot be amended or terminated without the consent of Ohio EPA.

- (i) In accordance with the watershed approach for Otter Creek described in the Permittee's Otter Creek Problem Formulation (Phase I RFI Final Report, dated November 2000), the Permittee shall submit an annual report by May 1 of each year outlining any activities it has undertaken in support of a watershed partnership during the previous reporting period.

(c) Specific Remedies

Specific remedies for individual SWMUs, SWMU Groups, and Areas of Concern at the facility are summarized below. These remedies were implemented in accordance with the CMI CWP submitted in accordance with Permit Condition E.9 and approved by Ohio EPA.

- (i) **SWMU 1 – Chemfix Landfill:** ecological cover; environmental covenant [see Conditions E.9(b) and E.9(e)(1)]; notice of hazards present and work protection when excavation work is performed; explanation of low-frequency site worker risk scenario. Construction Completion Report (CCR) approved by Ohio EPA on May 31, 2007. The Permittee must perform an annual inspection of the cover system and submittal of an inspection report to Ohio EPA.
- (ii) **SWMU 10 – South Pond:** risk based approach using industrial scenario; environmental covenant [see Conditions E.9(b) and E.9(e)(1)]. On November 17, 2011, Ohio EPA approved SWMU 10's CCR.
- (iii) **SWMU 14 – Acid Sludge Pits:** selective excavation and disposal of contaminated soil and sludge; environmental covenant [see Conditions E.9(b) and E.9(e)(1)]. On February 25, 2009, Ohio EPA approved the CCR.

- (iv) **SWMU 16 – North Tank Field LTU**: environmental covenant [see Conditions E.9(b) and E.9(e)(1)]; maintenance of 2 feet of clean soil over SWMU. Results of the HHRA indicated that SWMU 16 did not exceed risk standards for industrial exposure.
- (v) **SWMU 17 – LTU 2**: ecological cover; environmental covenant [see Conditions E.9(b) and E.9(e)(1)]. On March 20, 2008, Ohio EPA approved the CMI CCR. A non-hazardous waste accumulation pad was constructed on top of LTU 2 (part of a Class 1 permit mod). Ohio EPA acknowledged the Class 1 permit mod for the revised LTU 2 CCR on February 13, 2009. The Permittee must perform an annual inspection of the cover system and submittal of an inspection report to Ohio EPA.
- (vi) **SWMU 36 – LTU 3** ecological cover; environmental covenant [see Conditions E.9(b) and E.9(e)(1)]. The Permittee must perform an annual inspection of the cover system and submittal of an annual inspection report to Ohio EPA.
- (vii) **SWMU 37 – Process Refinery Sewers**: investigate thermal infrared radiation survey anomalies and repair sewers if necessary; environmental covenant [see Conditions E.9(b) and E.9(e)(1)]. On March 4, 2011, Ohio EPA approved SWMU 37's CCR.
- (viii) **SWMU 54 – Pure Oil Refinery**: selective excavation and disposal of contaminated soil; removal of water from pit; demolition of structures; characterize and remove or treat underlying soil if necessary; environmental covenant [see Conditions E.9(b) and E.9(e)(1)].

SWMU 54G Manifold Pit/Pump House Building – Removal of water within the manifold pit, characterization and removal of underlying soils and investigation of associated piping. On July 2, 2010, the CMI CCR was approved by Ohio EPA.

SWMU 54H Intermediate/Product Tanks – Pure Oil Refinery - Selective excavation of contaminated soils. On December 23, 2008, Ohio EPA approved the CMI CCR.

- (ix) **SWMU Group A:** environmental covenant [see Conditions E.9(b) and E.9(e)(1)]; notice of hazards present and worker protection when excavation work is performed. HHRA within U.S. EPA's acceptable range for industrial exposure.
- (x) **AOC C – Tank Farms:** environmental covenant [see Conditions E.9(b) and E.9(e)(1)]; notice of hazards present and worker protection when excavation work is performed at tank 152. HHRA within U.S. EPA's acceptable range for industrial exposure.

(d) **Progress Reports**

The Permittee shall submit monthly progress reports to Ohio EPA by the 12th of the month.

(e) **Corrective Measures Completion Report**

Within forty-five (45) days of completion of corrective measures implementation, the Permittee must submit to Ohio EPA a Corrective Measures Completion Report (CM Report) and Operation and Maintenance Plan (O&M Plan).

- (i) At the end of corrective action activities, the Permittee must finalize and record the environmental covenant(s) required by Condition E.9(b). A file and date-stamped copy of the environmental covenant(s) must be sent to Ohio EPA.
- (ii) If necessary, Ohio EPA shall provide written comments on the CM Report and O&M Plan to the Permittee.
- (iii) Within forty-five (45) days of receipt of Ohio EPA's comments, the Permittee shall submit either an amended or new CM Report and O&M Plan.
- (iv) Ohio EPA shall approve or modify and approve, in writing, the amended or new CM Report and O&M Plan. The CM Report and O&M Plan, 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 CM Report and O&M Plan must be authorized by Ohio EPA.

(f) Permit Modification

In case of a newly discovered waste management unit that requires corrective measures, 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.

(g) Financial Assurance
OAC Rule 3745-54-101

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

E.10. Newly Identified WMUs or Releases
OAC Rule 3745-54-101

(a) General Information

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

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

(b) Release Information

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

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

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

Further investigations or corrective measures will be established by Ohio EPA. The Permittee must make such submittal in accordance with time frames established by Ohio EPA.

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

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

E.13. Documents Requiring Professional Engineer Stamp
ORC 4733.01

Preparation of the following Corrective Action documents constitutes the "practice of engineering" as defined by ORC 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.

E.14. Reserved

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MODULE F – POST-CLOSURE CARE

F Post-closure Care

This section is applicable to units with in-place closure approval by Ohio EPA. The following units are subject to post-closure care:

North Stormwater Pond

A surface impoundment that received wastewater that was characteristically hazardous because of benzene (D018) content. The pond contains primary sludge (F037), which is a listed hazardous waste. The unit ceased operation March 29, 1994, went through closure that was certified by Ohio EPA on May 18, 2004, and requires thirty years of post-closure care.

Land Treatment Unit Cell 4 (LTU 4)

LTU cells 4, 5 and 6 received hazardous wastewater treatment unit sludges that were tilled into the soil at each cell until 1990. LTUs 4-6 were considered one unit and closure involved consolidation of treatment zone materials from LTUs 5 and 6 into LTU 4, construction of an ecological cover over the footprint of LTU 4 and clean closure of LTUs 5 and 6. LTU 4 has on-going post-closure cap inspections and maintenance.

F.1. Unit Identification

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

Type of Waste Unit	Unit No. or Other Designation	Maximum Waste Inventory	Description of Wastes Contained	Known Hazardous Waste No.
Surface Impoundment	North Stormwater Pond (SWMU 9)	19,000 yd ³	Wastewaters	D018, F037
Land Treatment Unit	Land Treatment Unit Cell 4 (LTU 4) Cells 4,5 and 6	N/A	Hazardous waste sludges	D017, K048, K049, K051

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

- (a) The Permittee must conduct post-closure care for each hazardous waste management unit listed in Permit Condition F.1. above, to begin after completion of closure of the unit and continue for 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. OAC Rule 3745-55-17(A)
- (b) The Permittee must maintain and monitor the ground water monitoring system at North Stormwater Pond and comply with all other applicable requirements of OAC Rule 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 final cover, as necessary, to correct the effects of settling, subsidence, erosion, and other events; and
 - (ii) Prevent run-on and run-off from otherwise damaging the final cover.
- (d) The Permittee must comply with the requirements for land treatment units, as follows:
 - (i) Continue all operations (including pH control) necessary to enhance degradation and transformation and sustain immobilization of hazardous constituents in the treatment zone to the extent that such measures are consistent with other post-closure care activities;
 - (ii) Maintain a vegetative cover over closed portions of the facility;

- (iii) Maintain the run-on control system required under OAC Rule 3745-56-72 (B);
 - (iv) Maintain the run-off management system required under OAC Rule 3745-56-72(C);
 - (v) Control wind dispersal of hazardous waste as required under OAC Rule 3745-56-72(E); and
 - (vi) Continue to comply with any prohibitions or conditions concerning growth of food-chain crops required under OAC Rule 3745-56-76.
- (e) The Permittee must comply with all security requirements, as specified in the permit application.
 - (f) The Permittee must not allow any use of the units designated in Permit Condition F.1. which will disturb the integrity of the final cover, liners, any components of the containment system, or the function of the facility's monitoring systems during the post-closure care period.
 - (g) The Permittee must implement the post-closure plans. All post-closure care activities must be conducted in accordance with the provisions of the post-closure plans.

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

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

F.4. Notices and Certification
OAC Rule 3745-55-20

No later than 60 days after completion of the established post-closure care period for each hazardous waste disposal unit, the Permittee must submit to the Director, by registered mail, a certification that the post-closure care period for the hazardous waste disposal unit was performed in accordance with the specifications in the approved Post-Closure Plan. The certification must be signed by the Permittee and an independent, qualified, registered professional

engineer. Documentation supporting the independent, qualified, registered professional engineer's certification must be furnished to the Director upon request until the Director releases the Permittee from the financial assurance requirements for post-closure care under OAC Rule 3745-55-45.

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

- (a) The Permittee must maintain financial assurance during the post-closure period and comply with all applicable requirements of OAC Rule 3745-55-40 through 3745-55-51.
- (b) The Permittee must 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 (or any other person authorized to conduct post-closure care) must submit itemized bills to the Director when requesting reimbursement for post-closure care.

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

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

MODULE J - GROUND WATER MONITORING

The Permittee is to meet the ground water monitoring requirements of OAC Rules 3745-54-90 through 101.

J. GROUND WATER MONITORING

This module addresses the uppermost aquifer ground water detection monitoring program associated with the closed surface impoundment, North Stormwater Pond also known as North Pond, which is a hazardous waste management unit (HWMU), at the BP Husky Toledo, Ohio Refinery.

The uppermost aquifer is the bedrock Silurian Age Lockport Formation Dolomite (Lockport Formation). The Permittee's ground water monitoring system consists of two monitoring wells, MW-15 upgradient/background well and MW-17 downgradient/compliance well (used for sampling and analysis and water level measurements), and 10 piezometers, 44, Blender, LPG, M-10, M-11, M-13, M-14, M-16, TW-6, TW-7 (used for water level measurements for ground water flow evaluation purposes only).

J.1. Applicability

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

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

The Permittee must institute a detection monitoring program under OAC Rule 3745-54-98.

J.2. Reserved

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

- (a) The Permittee's ground water monitoring system must consist of a sufficient number of wells, installed and screened at appropriate locations and depths to yield ground water samples from the Lockport Formation 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;
 - (ii) Represent the quality of ground water passing the point of compliance as defined in OAC Rule 3745-54-95, a vertical surface located at the hydraulically downgradient limit of the waste management area that extends down into the uppermost aquifer underlying the regulated unit;
 - (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.

(v) Reserved.

- (b) The monitoring system consists of the ground water wells as specified in Section 2.1 and shown on Figure 4 presented in the document entitled “Uppermost Aquifer Groundwater Detection Monitoring Plan” (UAGWDMP) dated November 14, 2011 (Revision #7) and in conformance with the following list:

Unit	Upgradient/ Background Wells ¹	Downgradient/ Compliance Wells	Piezometers (for water level measurements only)
Lockport Formation	MW-15	MW-17	M-10, M-11, M-13, M-14, M-16, 44, LPG, Blender, TW-6, and TW-7

¹ The flow direction of ground water in the bedrock is controlled by the on-site pumping of process wells. Flow in the area of the HWMU is to the south during the pumping season (generally April to September; sometimes continuing through November). During this period, the background monitoring well M-15 is upgradient. During non-pumping months, the potentiometric surface becomes flat and may show a slight flow direction to the east and monitoring well M-15 is side gradient.

- (c) Wells identified in Permit Condition J.3(b) must be cased in a manner that maintains the integrity of the monitoring well bore hole and complies with the detailed plans and specifications presented in Section 2.2 and Appendix B of the UAGWDMP. 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 B of the UAGWDMP contains ground water monitoring well construction diagrams which illustrate compliance with OAC Rule 3745-54-97(A) to (C).

- (d) The Permittee must remove or replace any monitoring well in Permit Condition J.3(b) in accordance with the Appendix to OAC Rule 3745-50-51 permit modification process. Each change must be accompanied by a revised well location map to replace figure 4 in the UAGWDMP, referenced in Permit Condition J.3(b).
- (e) Whenever any of the wells specified in Permit Condition J.3(b) are replaced, the Permittee must demonstrate to Ohio EPA that the ground

water quality at the replacement well meets the criteria in Permit Condition J.3(a) within a 90 day period of the date of replacement using means appropriate to the reason for replacement.

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

- (a) The Permittee must implement a ground water monitoring program per UAGWDMP (referenced in Section E of the Permit Application). This program includes consistent sampling and analysis procedures designed to ensure monitoring results that provide a reliable indication of ground water quality below the waste management area and are in compliance with OAC Rule 3745-54-97(D).
- (b) The Permittee's ground water monitoring program per Section 3 of the UAGWDMP 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) Reserved.

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

The Permittee must determine the ground water surface elevation at each well identified in the table in Permit Condition J.3(b) each time ground water is sampled using the methods in Section 3.2.1 of the UAGWDMP.

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

Data on each hazardous constituent specified in Permit Condition J.9(b) will be collected from background wells and wells at the compliance point. The sampling procedure and interval for each constituent are described in Section 3 of the UAGWDMP.

- (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 Section 4.1 and Appendix C, Section 1.8 of the UAGWDMP to provide an accurate representation of background ground water quality. New or revised background values must be established in the permit through the permit modification process in OAC Rule 3745-50-51.

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

The Permittee must use the following statistical procedures in evaluating ground water monitoring results for each hazardous constituent in Permit Condition J.9(b) in each well in Permit Condition J.3(b) 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 90 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 detailed in Section 4.1 and Appendix C of the UAGWDMP.

- (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 determine whether such leakage of hazardous constituents into the ground water exceeds specified concentration limits. The statistical procedures must comply with the following performance standards:
 - (i) The statistical evaluation of ground water monitoring data must be conducted separately for each hazardous constituent specified in Permit Condition J.9(b) 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.
- (v) If a tolerance or prediction interval procedure is used, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, must be proposed by the Permittee and approved in the permit. These parameters must be determined after considering the number of samples in the background data base, the data distribution, and the range of concentration values for each constituent of concern.
- (vi) The statistical method must account for data below the limit of detection with one or more statistical procedures. Any practical quantitation limit (PQL) approved in the permit that is used in the statistical method must be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the Permittee.
- (vii) If necessary, the statistical method must include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.

J.8. Operating Record and Reporting

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

(a) Operating Record

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

- (i) Ground water monitoring data collected in accordance with this permit including actual levels of constituents;
- (ii) The laboratory results from each of the wells and their associated qualifiers including the laboratory sheets for the 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;
- (v) Any field log documentation of deviation from the procedures in the UAGWDMP, including documentation of parameter omissions during the sampling event;
- (vi) The date the Permittee received the results from the laboratory;
- (vii) The date the owner or operator completed their review of the analytical laboratory's verification of the accuracy and precision of the analytical data and determined its quality;
- (viii) The results of the data validation review per Permit Condition J.8(a)(vii) including: report completeness, chain of custody, sample receipt form, signed statement of validity, technical holding time review, data qualifiers including their definitions, dilutions, blank data, spikes, spike recovery %, surrogate recovery, and an explanation of any rejected results;
- (ix) Results of all blanks and duplicates (trip, field, equipment, and method);

- (x) Results of the field parameters;
 - (xi) The statistical evaluation of the data (must include all computations, results of statistical tests, and date the statistical evaluation was completed);
 - (xii) Any change in well status (i.e., going from unaffected to affected status and vice versa);
 - (xiii) Ground water surface elevations taken at the time of sampling each well;
 - (xiv) Data and results of the annual determination of the ground water flow rate and direction, including potentiometric maps;
 - (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); and
 - (xvi) Reserved.
- (b) Annual, Semi-annual, & Other Periodic Required Reporting
- (i) Required Annual Reporting

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

The annual reports must include, at a minimum, the analytical results required by Permit Conditions J.9, the ground water elevation data required by Permit Conditions J.5 and J.8(a)(xii)&(xiii), and the results of any statistical analyses required by Permit Condition J.9. In addition, a copy on disk of all ground water and blank data must be submitted electronically in the format supplied by the Director, a hard copy of well-specific information (location (latitude and longitude), depth, construction, etc.) for any new/replacement wells, and any other information specified in the

instructions for the annual report not addressed in this Permit Condition must be submitted in accordance with OAC Rules 3745-54-75 and 97(J).

(ii) Required Semi-annual Reporting

The Permittee must submit a Data Report and Evaluation for each semi-annual sampling and analysis event, conducted in April/May and October/November each year. The reports must be submitted in accordance with the schedule in the Table below.

Samples to be Collected During the Preceding Months of:	Results Due to the Director By:
April - May	Within 90 days of Completion of Each Semi-Annual Sampling Event
October - November	

The reports must include all of the following information obtained in accordance with Permit Module J:

- (a) Ground water monitoring data collected in accordance with this permit including actual levels of constituents tabulated.
- (b) The results of the laboratory review of the data 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;
- (c) The date, time, and identification of all blanks and duplicates;
- (d) Field data sheets for monitoring well sampling and any field log documentation of deviation from the procedures in the UAGWDMP, including field/stabilization parameter results

and documentation of parameter omissions during the sampling event;

- (e) Results of all blanks and duplicates tabulated (trip, field, equipment, and method);
- (f) Results of the statistical evaluation, identifying any hazardous constituents showing statistically significant evidence of contamination, that shall serve as the notification required by OAC Rule 3745-54-98 (G)(1);
- (g) Any notification in accordance with OAC Rule 3745-54-98(G)(6)(a) that the Permittee intends to make a demonstration of a false indication of a release under paragraphs (G) to (G)(6)(d) of OAC Rule 3745-54-98.
- (h) Any change in well status (i.e., going from unaffected to affected status and vice versa);
- (i) Ground water surface elevations taken at the time of sampling each well tabulated;
- (j) Results of the determination of the ground water flow rate and direction including potentiometric surface maps;
- (k) The results of inspections conducted in accordance with the Ground-Water Monitoring Well Integrity Program, described in Section 3.4 of the UAGWDMP.
- (l) Description of any well maintenance performed since the last semi-annual report and a schedule to perform any repairs not complete.
- (m) Evaluation of the detection monitoring program including the determination of whether the ground water monitoring system still consists of a sufficient number of wells installed at appropriate locations and depths to meet the requirements of Permit Condition J.3.

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

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

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

- (a) The Permittee must establish and implement a detection ground water monitoring program as required by OAC Rule 3745-54-98.
- (b) The Permittee must determine concentrations of the parameters in the following table that provide a reliable indication of the presence of hazardous constituents in ground water at each monitoring well listed in Permit Condition J.3(b) semi-annually or annually as indicated in the Table below during the active life of the regulated unit plus the closure period and post-closure care period. These concentrations will be compared to the background concentrations set forth below as per Permit Conditions J.6 and J.7.

Semi-annual Dissolved Metal		Established Background Concentration (ug/l)
Antimony		<6*
Arsenic		<10*
Barium		<20*
Beryllium		<3*
Cadmium		<2
Chromium		<5
Cobalt		<7
Lead		<3
Mercury		<0.2
Nickel		<40*
Selenium		<5
Vanadium		<7
Semi-annual Volatile Organic Compounds		Established Background Concentration (ug/l)
Benzene		<1
Carbon disulfide		<1
Chlorobenzene		<1
Chloroform		<1
1,2-Dichloroethane		<1
Ethyl benzene		<1
Ethylene dibromide		<0.03
Methyl ethyl ketone (2-Butanone)		<10
Styrene		<1
Toluene		<1
Xylenes		<2
Annual Semi-volatile Organic Compounds		Established Background Concentration (ug/l)
Anthracene		<10
Benzenethiol		<10
Benzo(a)anthracene		<10
Benzo(a)pyrene		<0.2
Benzo(b)fluoranthene		<10
Benzo(k)fluoranthene		<10
Bis (2-ethylhexyl) phthalate		<10
Butyl benzyl phthalate		<10

Chrysene	<10
Dibenz(a,j)acridine	<50
Dibenz(a,h)anthracene	<10
1,2-Dichlorobenzene	<10
1,3-Dichlorobenzene	<10
1,4-Dichlorobenzene	<10
Diethyl phthalate	<10
7,12-Dimethylbenz(a)anthracene	<20
2,4-Dimethylphenol	<10
Dimethyl phthalate	<10
2,4-Dinitrophenol	<50
Di(n)butyl phthalate	<10
Di(n)octyl phthalate	<10
1,4-Dioxane	<10
Fluoranthene	<10
Indene	<20
6-Methyl chrysene	<20
Naphthalene	<10
1-Methyl naphthalene	<10
2-Methylphenol	<10
4-Methylphenol/3-Methylphenol	<20
4-Nitrophenol	<50
Phenanthrene	<10
Phenol	<10
Pyrene	<10
Pyridene	<20
Quinoline	<10

*Background based on PQL that does not meet the requirements of OAC Rule 3745-54-97(l)(5). The background comparison standard will be updated when 8 analysis results using a lower PQL are available.

- (c) The Permittee's ground water monitoring program must include collection and preservation of samples and analysis of the above listed elements and compounds pursuant to Permit Conditions J.4, J.5, and J.6. 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 Conditions J.7 and J.8.
- (d) Statistical analysis shall be conducted semi-annually [comparison to established background limit in the above Table in Permit Condition

J.9.(b)] to determine whether there is statistically significant evidence of contamination for any parameter or hazardous constituent specified in Permit Condition J.9(b).

- (e) The Permittee must determine the ground water flow rate (at least annually) and direction in the uppermost aquifer each semi-annual sampling event using the procedures specified in Section 3.2.1.1 of the UAGWDMP.
- (f) The Permittee must determine whether there is statistically significant evidence of contamination for any chemical parameter or hazardous constituent specified in Permit Condition J.9(b) semi-annually and include the results in the semi-annual data report in accordance with Permit Condition J.8(b)(ii)(f) after completion of each sampling event. In determining whether statistically significant evidence of contamination exists, the Permittee must use the methods specified in Permit Condition J.7 to compare data collected at the compliance point(s) to the background ground water quality data.
- (g) If the Permittee determines, pursuant to Permit Condition J.9(f), that statistically significant evidence of contamination for any chemical parameter or hazardous constituent specified in Permit Condition J.9(b) has been confirmed at any monitoring well at the compliance point, then the Permittee must:
 - (i) Notify the Director of this finding in writing in the semi-annual data report in accordance with Permit Condition J.8(b)(ii)(f). The notification must indicate what chemical parameters or hazardous constituents have shown statistically significant evidence of contamination, the corresponding analytical results, and the well(s) with the confirmed evidence;
 - (ii) Immediately sample the ground water at the compliance well listed in Permit Condition J.3(b) and determine whether constituents identified in the Appendix to OAC Rule 3745-54-98 are present, and if so, in what concentration.
 - (iii) For any compounds listed in the Appendix to OAC Rule 3745-54-98 [or an approved subset] found in the analysis pursuant to Permit Condition J.9(f)(ii), the Permittee may re-sample affected wells

within one month or at an alternative site-specific schedule approved by the Director and repeat the analysis for those compounds detected. If the results of the second analysis confirm the initial results, or if the Permittee elects not to re-sample, then these constituents form the basis for compliance monitoring.

- (iv) Within 90 days of determining a statistically significant increase, submit to the Director an application for a permit modification to establish a compliance monitoring program meeting the requirements of OAC Rule 3745-54-99. The application must include the following information:
- (a) Identification of the concentration of any Appendix to OAC Rule 3745-54-98 or approved site-specific constituent detected in the ground water at each monitoring well at the point of compliance or between the compliance point and the downgradient facility boundary;
 - (b) Any proposed changes to the ground water monitoring system at the facility necessary to meet the requirements of compliance monitoring under OAC Rule 3745-54-99 including wells necessary to meet OAC Rule 3745-54-91(A)(3) with a visual representation of the point of compliance required by OAC Rule 3745-54-95;
 - (c) Any proposed additions or changes to the monitoring frequency, sampling and analysis procedures or methods, or statistical methods used at the facility necessary to meet the requirements of OAC Rule 3745-54-99;
 - (d) For each hazardous constituent detected at the compliance point or between the compliance point and the downgradient property boundary, a proposed concentration limit 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);
 - (e) The compliance period as defined in OAC Rule 3745-54-96; and

- (f) A statement that the Permittee will begin sampling and analyzing for the new constituents at the next regularly scheduled sampling event following the event in which they were determined to be present.
- (v) Within 180 days of determining a statistically significant increase submit to the Director:
 - (a) All data necessary to satisfactorily justify an alternate concentration limit under OAC Rule 3745-54-94(B); and
 - (b) An engineering feasibility plan (EFP) for a corrective action program necessary to meet the requirements of OAC Rule 3745-54-100.
- (vi) If the Permittee determines, pursuant to Permit Condition J.9, that there is a statistically significant difference for chemical parameters or hazardous constituents specified in Permit Condition J.9(b) at any monitoring well at the compliance point or between the compliance point and the downgradient property boundary, a demonstration may be submitted 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.

The Permittee may make this demonstration in addition to, or in lieu of, submitting a permit modification application for a compliance ground water monitoring program under OAC Rule 3745-54-99. However, the Permittee is not relieved of the requirement to submit a permit modification application within ninety (90) days unless the demonstration made under this Permit Condition is deemed successful by the Agency prior to the ninety (90) day time limit.

In such cases, the Permittee must:

- (a) Notify the Director in writing in the semi-annual data report in accordance with Permit Condition J.8(b)(ii)(g) that such a demonstration will be made;

- (b) Within 90 days of the date of the semi-annual data report, submit a report to the Director which successfully demonstrates that a source other than a regulated unit caused the contamination or that the increase resulted from error in sampling, analysis, or evaluation;
 - (c) Within 90 days of the date of the semi-annual data report, submit to the Director an application for a permit modification to make any appropriate changes to the detection monitoring program at the facility; and
 - (d) Continue to monitor in accordance with the approved detection monitoring program established under this permit.
- (h) If the Permittee determines in the evaluation required by Permit Condition J.8(b)(ii)(m) that the detection monitoring program no longer satisfies the requirements of OAC Rule 3745-54-98, the Permittee must, within ninety (90) days of the date of the semi-annual data report, submit an application for a permit modification per OAC Rule 3745-50-51 to make any appropriate changes to the program.

J.10. Reserved

J.11. Reserved

END OF PERMIT CONDITIONS

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