



State of Ohio Environmental Protection Agency

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Northwest District Office

**DIV. OF HAZARDOUS
WASTE MGT.**

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Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director

May 1, 2008

Certified Mail 7006 3450 0001 0661 2584

Mr. G. Michael Darr
Environmental Business Manager
BP Products North America Inc.
4850 East 49th Street
Cuyahoga Heights, Ohio 44125

**Re: Hazardous Waste Permit Modification
Class 1 Acknowledgment
BP Products North America
Lima Refining Company
U.S. EPA ID# OHD 005051826/ Ohio Permit # 03-02-0390**

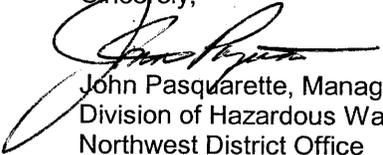
Dear Mr. Darr:

On December 14, 2007, Ohio EPA received a notification for a Class 1 hazardous waste permit modification from BP Products North America, Inc. and Lima Refining Company. With this letter, Ohio EPA acknowledges the above referenced Class 1 modification, submitted pursuant to Ohio Administrative Code Rule 3745-50-51, and accordingly has updated the facility's Part B permit application and permit.

- ▶ The permit has been modified to correct certain typographical errors and update the reference to the Post-Closure Ground-Water Detection Monitoring Plan. This modification was assigned the tracking number 071214-1-1.

Attached is a copy of the revised pages of the permit terms and conditions. This has been included to ensure that all involved parties have written confirmation of the changes. If you have any questions concerning this action, please contact Don North at the Ohio EPA Northwest District Office.

Sincerely,


John Pasquarette, Manager
Division of Hazardous Waste Management
Northwest District Office

/cs

pc: Dave Sholtis, Assistant Chief, DHWM, CO
Jeremy Carroll, Supervisor, Engineering Unit, DHWM, CO
Don North, DHWM, NWDO
Gary Deutschman, DHWM, NWDO
DHWM, NWDO, Premcor Permit File
DHWM, NWDO, Premcor Terms & Conditions, Doc. Library
ec: Gary Deutschman, DHWM, NWDO
John Pasquarette, DHWM, NWDO

MODULE 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 conduct closure, post closure, and corrective action activities in accordance with the terms and conditions of this permit, ORC Chapter 3734, all applicable Ohio hazardous waste rules, all applicable regulations promulgated under the Resource Conservation and Recovery Act (RCRA), as amended, and the approved hazardous waste facility installation and operation permit renewal application, as such application has been revised and supplemented and as such application may be modified pursuant to the hazardous waste rules. The renewal of the surface impoundments and the landfarms is for the purposes of accomplishing closure and post closure activities. These units are currently inactive and undergoing closure. These units shall not be reactivated for management of hazardous waste. The approved Part B permit application as submitted to Ohio EPA on March 26, 1997 and any subsequent amendment thereto including the latest Part B Application revision submitted August 13, 1999, 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.
- c) For the purposes of this permit, the facility owners are BP Products North America and Lima Refining Company. The owners are not responsible for the acts or omissions concerning new or newly created RCRA responsibilities under the terms of the facility permit that occur on a parcel owned by another facility parcel owner unless the owner meets the definition of an operator for that new or newly created RCRA responsibility. New or newly created responsibilities are those that occur on or after the effective date of this permit.

A.2. Permit Actions

OAC Rule 3745-50-58(F)

This permit may be modified, revoked, suspended, or renewed as specified by Ohio law. The filing of a request for a permit modification, revision, revocation,

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

The Permittee shall expeditiously take all reasonable steps necessary to minimize or correct any adverse impact on the environment or the public health resulting from noncompliance with this permit.

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

The Permittee shall 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, but is not limited to, 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 shall furnish the Director, within a reasonable time, any relevant information which the Director may request to determine whether cause exists for modifying, revising, revoking or suspending this permit or to determine compliance with this permit. The Permittee shall also furnish 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 shall 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) individual(s) who performed the sampling or measurements;
- iii) date(s) analyses were performed;
- iv) individual(s) who performed the analyses;
- v) sampling and monitoring equipment used, including calibration settings;
- vi) analytical technique(s) or method(s) used; and
- vii) results of such analyses.

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

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

A.14. Retention of Records
OAC Rules 3745-50-58(J) and 3745-50-58(M)

- a) The Permittee shall 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 paragraph B(9) of rule 3745-54-73 of the Administrative Code, 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. Once any enforcement action is resolved, the Permittee shall maintain relevant documentation for a period of one year beyond the date of final resolution or three years from the original date of sample measurement, report of record, whichever is greater.

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

and

Ohio EPA, Northwest District Office
Division of Hazardous Waste Management
347 North Dunbridge Road
Bowling Green, Ohio 43402

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

- i) Updated Closure/Post-Closure Cost Estimate
OAC Rules 3745-55-42 and 3745-55-44

Section I of the application containing the financial assurance mechanism for closure shall be updated to include a copy of the current closure/post-closure cost estimate as set forth in OAC Rules 3745-55-42 and 3745-55-44.

- ii) Updated Financial Assurance Mechanism for Closure
OAC Rules 3745-55-43 and 3745-55-45

Section I of the application containing the financial assurance mechanism for closure shall be updated to include a copy of the current financial assurance mechanism, as set forth in OAC Rules 3745-55-43 and 3745-55-45, and as specified by the wording requirements of OAC Rule 3745-55-51. The value of the financial assurance mechanism must reflect at least the current amount of the closure/post-closure cost estimate.

During the life of the Part B permit the facility may change the financial assurance mechanism as stated in OAC Rules 3745-55-43 and 3745-55-45. The facility must submit the financial assurance mechanism documentation to the Director of Ohio EPA in accordance with the parameters set forth in OAC Rules 3745-55-43 and 3745-55-45. In addition, send copies of the mechanism to DHWM's Compliance Assurance Section (CAS) and the Engineering and Risk Assessment Section (ERAS).

MODULE B – GENERAL FACILITY CONDITIONS

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

The Permittee shall design, construct, maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste constituents to air, soil, and ground or surface waters which could threaten human health or the environment.

B.2. Reserved.

B.3. Reserved.

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

The Permittee shall comply with the security provisions of OAC Rule 3745-54-14 and the approved permit application.

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

The Permittee shall follow the inspection schedule set out in Appendix G of the Closure Plan of Primary and "C" Ponds, September 2001, of the approved Part B permit application. The Permittee shall remedy any deterioration or malfunction discovered by an inspection, as required by OAC Rule 3745-54-15(C). Records of inspection shall be kept as required by OAC Rule 3745-54-15.

B.6. Reserved.

B.7. Reserved.

B.8. Reserved.

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

At a minimum, the Permittee shall maintain at the facility all the equipment required by OAC Rule 3745-54-32 and the equipment set forth in Section F of the approved Part B permit application.

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

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

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

The Permittee shall maintain access to the communications systems, as required by OAC Rule 3745-54-34, Attachment E of the Part B permit application, and the terms and conditions of this permit.

B.12. Reserved.

B.13. Reserved.

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

The Permittee shall immediately carry out the provisions of the approved contingency plan found in Appendix G of the Closure Plan of Primary & "C" Ponds, September 2001 and follow the emergency procedures described in OAC Rule 3745-54-56, whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which threatens or could threaten human health or the environment.

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

The Permittee shall comply with OAC Rule 3745-54-52 and the contingency plan, as set forth in Appendix G of the Closure Plan of Primary & "C" Ponds, September 2001 of the approved Part B permit application.

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

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

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

The Permittee shall furnish upon Ohio EPA request, and retain all records at the Lima Facility in accordance with OAC Rule 3745-54-74.

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

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

B.23. Contingency Plan Records
OAC Rules 3745-54-73 and 3745-54-56(J)

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

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

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

3745-55-43 and 3745-55-45 and Permit Condition B.39.

- c) The Permittee must revise the closure cost estimate and post-closure cost estimate whenever there is a change in the facility's Closure Plan and/or Post-Closure Plan that increases the cost of closure, as required by OAC Rules 3745-55-42(C) and 3745-55-44(C).
- d) The Permittee must submit to the Ohio EPA and keep at the facility the latest closure cost estimate and post-closure cost estimate as required by OAC Rules 3745-55-42(D) and 3745-55-44(D).

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

The Permittee shall maintain continuous compliance with OAC Rules 3745-55-43, 55-45 and/or 55-46 and provide documentation of financial assurance, which meets the requirements of OAC Rule 3745-55-51, in at least the amount of the cost estimates required by Permit Condition B.36. Changes in financial assurance mechanisms must be approved by the Director pursuant to OAC Rule 3745-55-43.

B.38. Liability Requirements
OAC Rule 3745-55-47

The Permittee shall maintain continuous compliance with the requirement of OAC Rule 3745-55-47 and the documentation of liability by providing liability coverage which meets the requirements of OAC Rule 3745-55-51 for sudden accidental occurrences in the amount required by the applicable rules, exclusive of the legal defense costs.

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

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

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

B.40. Reserved.

- SWMU 8 (L-6 Landfill) Corrective Measures Implementation Construction Completion Report, dated October 25, 2002.
- SWMU 58 (Tank 231) – Corrective Measures Implementation Construction Completion Report, dated October 25, 2002.
- SWMU Group A (L-3 Waste Pile and Drum Storage Area) – Corrective Measures Implementation Construction Completion Report, dated October 25, 2002.
- SWMU 46 (Old Primary Pond) - Corrective Measures Implementation Construction Completion Report, dated December 2, 2002.

The construction completion report for SWMU Group A (L-3 Waste Pile and Drum Storage Area) was approved by U.S. EPA on December 30, 2002. U.S. EPA approved the construction completion reports for SWMU 8 (L-6 Landfill) and SWMU 58 (Tank 231) on January 2, 2003. The construction completion report for SWMU 46 (Old Primary Pond) was approved by U.S. EPA on January 4, 2003.

BP submitted a Technical Impracticality Demonstration for the Area 3 LNAPL (light non-aqueous phase liquid) to U.S. EPA on October 30, 2002. The SWMUs 52 and 53 (North & South Plant Sewer System) Corrective Measures Implementation Thermal Infrared Radiation Investigation Report was submitted to U.S. EPA on December 18.

The transition of the corrective action program from the U.S. EPA to Ohio EPA will occur on the effective date of this renewal permit. Ohio EPA will then assume the oversight role for Corrective Action at the facility.

E.1. Corrective Action at the Facility
OAC Rules 3745-50-10 and 3745-55-011

In accordance with OAC Rule 3745-50-10 “waste management unit” means any discernable unit at which wastes have 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. As used in this permit, the term “waste management unit” shall be consistent with and equivalent to the term “solid waste management unit” as that term is defined in Section 3004(u) of RCRA. The terms Interim Measure (IM), RCRA Facility Investigation (RFI), Corrective Measures Study (CMS) and Corrective Measure Implementation (CMI) are defined in Attachment 1, Ohio EPA’s Corrective Action Plan (OCAP).

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

E.2. Corrective Action Beyond the Facility Boundary
OAC Rule 3745-55-011

The Permittee must implement Corrective Action(s) beyond the Facility property boundary, where necessary to protect human health and the environment, unless the Permittee demonstrates to the satisfaction of Ohio EPA that, despite the Permittee's best efforts, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of any 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 3745-55-011

The units or groups of units which were investigated during the Phase 1 RFI are listed in Attachment 2.

E.4. Reserved.

- 1) If necessary, Ohio EPA shall provide written comments on the RFI Report to the Permittee.
- 2) Within forty-five (45) days of receipt of Ohio EPA's comments, the Permittee shall submit either an amended or new RFI Report that incorporates Ohio EPA's comments.
- 3) Ohio EPA shall approve or modify and approve, in writing, the amended or new RFI Report. The RFI 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 Report must be authorized by Ohio EPA.

E.6. Interim Measures (IM)

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

E.7. Determination of No Further Action

a) SWMUs Identified as No Further Action

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 SWMU Groups listed below do not pose a threat to human health and the environment. Therefore, these SWMUs and SWMU Groups do not require further action.

SWMU 41 – Miscellaneous Sump
SWMU 64 – Old Fire Training Area
SWMU 68 – Former Lube Plant
SWMU 69 – Aromatics Closed Drain System
SWMU 70 – Tank 214
SWMU 71 – Tank 207
SWMU 72 – Tank 209
Partial SWMU Group G – SWMU 49 – D-Pond; SWMU 50 – A-Pond; SWMU 51 – B-Pond.

E.8. Corrective Measures Study (CMS)

Within ninety (90) days of Permit issuance, the Permittee shall conduct a CMS for SWMU 42 (AFU / Oily Sludge Pond) and shall submit a CMS Report to Ohio EPA in accordance with Condition E.8.c.

In the case of a newly discovered waste management unit, 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 shall 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 by Ohio EPA.

a) CMS Workplan

In the case of a newly discovered waste management unit, the Permittee shall submit a written CMS Workplan to Ohio EPA within ninety (90) days from the notification by Ohio EPA of the requirement to conduct a CMS.

- 1) If necessary, Ohio EPA shall provide written comments on the CMS Workplan to the Permittee.
- 2) Within forty-five (45) days of receipt of Ohio EPA's comments, the Permittee shall submit either an amended or new CMS Workplan that incorporates Ohio EPA's comments.
- 3) Ohio EPA shall approve or modify and approve, in writing, the amended or new CMS Workplan. The CMS 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 CMS Workplan must be authorized by Ohio EPA.

b) CMS Workplan Implementation

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

c) CMS Final Report

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

- 1) If necessary, Ohio EPA shall provide written comments on the CMS Report to the Permittee.
- 2) Within forty-five (45) days of receipt of Ohio EPA's comments, the Permittee shall submit either an amended or new CMS Report that incorporates Ohio EPA's comments.
- 3) Ohio EPA shall approve or modify and approve, in writing, the amended or new CMS Report. The CMS 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 approve CMS Report must be authorized by Ohio EPA.

E.9. CMI

The Permittee shall implement the Corrective Measures Implementation Conceptual Work Plan (CMICWP) approved by U.S. EPA and the Performance Based Groundwater Monitoring Plan (PBGWMP). The Permittee also shall implement any additional Corrective Measures authorized by Ohio EPA for SWMU 42 (AFU/Oily Sludge Pond) once the CMS for this SWMU is approved by Ohio EPA.

Based on the results of the CMS for a newly discovered waste management unit, the Permittee shall implement one or more of the Corrective Measures authorized by Ohio EPA. Ohio EPA shall authorize one or more of the Corrective Measures in the CMS, and shall notify the Permittee in writing of the decision. Ohio EPA will select a Corrective Measure for implementation based on the following factors: 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 Measure(s), Ohio EPA may also consider such other factors as may be presented by site-specific conditions. The Corrective Measure(s) described below are for the SWMUs identified in Condition E.3.

a) Corrective Action Objectives

The Corrective Action objectives the Permittee is required to meet are based on information gathered during previous investigations and are intended to protect human health and the environment. These objectives focus on Upper and Middle Sand ground water, surface soil and subsurface soil contamination identified at the facility. The general objectives are as follows:

1) Establish Media Cleanup Standards for Points of Compliance

The first general corrective action objective involves establishing Media Cleanup Standards (MCSs) for the Point of Compliance (POC) specified for the contaminated media. MCSs were established for the media exhibiting exceedances of action levels. The MCSs and POCs for these media are described below.

i) Media Cleanup Standards

Based on the results of the RCRA Facility Investigation (RFI), Human Health Risk Assessment (HHRA), and Detailed Ecological Risk Assessment (DERA), action levels were developed during the CMS to help determine the specific areas of the facility that require corrective measures. For a CMS, an action level 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

Table 3 – MCSs for Ground Water

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 ^a	0.0046
Chloroform	0.16
1,2-Dichloroethane	0.005
1,1-Dichloroethylene	0.007
1,2-Dichloropropane ^a	0.005
1,4-Dioxane	0.0061
Ethylbenzene	0.7
Methyl ethyl ketone	1.9
Styrene	0.1
Toluene	1.0
1,1,1-Trichloroethane	0.2
Trichloroethene	0.005
Tetrachloroethene	0.005
Vinyl chloride ^a	0.002
Xylenes (total)	10.0
Semivolatile Organic Compounds	
Acenaphthene	0.37
Anthracene	1.8
Benzo(a)anthracene	0.000092
Benzo(b)fluoranthene	0.000095

Table 6 – Point of Compliance

SWMU or Area	Sand Unit	POC
SWMU 7	Middle Sand	Unit Boundary
SWMU 46	Middle Sand	Unit Boundary
SWMU 62	Middle Sand	Facility Boundary
SWMU 63	Middle Sand	Facility Boundary
Area 3	Upper Sand	Initial POC – Area of the Plume Final POC – Area Boundary

- 2) After implementing corrective measures for soils, samples will be collected to determine if Constituents of Concern (COCs) are present at levels above the MCSs. If COCs are present at levels above the MCSs, a post-remedial risk evaluation will be conducted. If the post-remedial risk evaluation shows that the COCs that are present at levels above the MCSs do not pose a significant risk above Ohio EPA's acceptable risk level of 10^{-5} or Hazard Index of less than 1, then no further corrective measures will be implemented. However, if the post-remedial risk evaluation shows that the COCs that are present at levels above the MCSs do pose a significant risk above Ohio EPA's acceptable risk level of 10^{-5} or Hazard Index greater than 1, then further corrective measures will be implemented.
- 3) For ground water, if a COC is detected at concentrations above its MCS, the Permittee will be required to evaluate the analytical results and collect additional samples in accordance with the PBGWMP to confirm that a release to ground water has occurred. If it is determined that a release to ground water has occurred, the Permittee will be required to evaluate and if necessary, implement appropriate corrective measures response actions. These actions are required to provide additional information on the potential impact to human health or the environment of surface or ground water, or migration off-site to evaluate the risks to human health and the environment. These actions can include:

- i) additional sampling of the wells in accordance with the PBGWMP;
- ii) evaluation of risk to humans and other environmental receptors who may be exposed to COCs in ground water;
- iii) installation and sampling of additional wells in accordance with the PBGWMP to determine the extent of contamination;
- iv) evaluation of ground water migration pathways to determine the potential for off-site migration of COCs to drinking water sources or surface waters; and
- v) evaluation of corrective measures alternatives to mitigate risk.

b) Selected Remedies

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

SWMU 41 – Miscellaneous Sump

SWMU 64 – Old Fire Training Area

SWMU 68 – Former Lube Plant

SWMU 69 – Aromatics Closed Drain System

SWMU 70 – Tank 214

SWMU 71 – Tank 207

SWMU 72 – Tank 209

Partial SWMU Group G – SWMU 49 - D-Pond; SWMU 50 - A-Pond; SWMU 51 - B-Pond.

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- 3) Within one hundred sixty (160) days of the effective date of the permit, the Permittee shall submit to the Ohio EPA a description of its policies and procedures for (a) providing a notice of hazards to those performing work in areas that pose unacceptable risk due to wastes left in place; and (b) protecting its workers from the hazards.

c) Specific Remedies

Specific remedies for individual SWMUs, SWMU groups, and areas at the facility are described below. These remedies shall be implemented in accordance with the CMICWP approved by U.S. EPA and the Terms and Conditions of this Permit.

- 1) Reserved
- 2) SWMU 7 – L-5 Landfill
 - i) Implement corrective measures in accordance with the CMICWP approved by U.S. EPA.
 - ii) Perform long-term ground water monitoring for contaminants of concern (COCs) in accordance with the PBGWMP.
- 3) SWMU 8 – L-6 Landfill
Implement corrective measures in accordance with the CMICWP approved by U.S. EPA.
- 4) SWMU 46 – Old Primary Pond
 - i) Implement corrective measures in accordance with the CMICWP approved by U.S. EPA.
 - ii) Perform long-term ground water monitoring for contaminants of concern (COCs) in accordance with the PBGWMP.
- 5) SWMU 52 – South Plant Sewer System and SWMU 53 – North Plant Sewer System

Implement corrective measures in accordance with the CMICWP approved by U.S. EPA.

6) SWMU 57 – North Ditch

Implement corrective measures in accordance with the CMICWP approved by U.S. EPA.

7) SWMU 58 – Tank 231

i) Implement corrective measures in accordance with the CMICWP approved by U.S. EPA.

ii) If contaminated soils are left in place due to the inability to excavate near utilities, implement policies and procedures to provide a notice of hazards to those performing future excavation work and to protect excavation workers from the hazards.

8) SWMU 61 – Trolumen Pile

i) Implement corrective measures in accordance with the CMICWP approved by U.S. EPA and the Permittee's June 20, 2002 Product Management Plan, Trolumen Pile – SWMU 61.

ii) Within sixty (60) days of ceasing current operations at SWMU 61, the Permittee shall submit to Ohio EPA a plan and schedule for investigating potential releases from the unit.

iii) After ceasing current operations and investigating potential releases at SWMU 61, the Permittee shall remediate any contamination that poses unacceptable risk to human health or the environment.

9) SWMU 62 – "E" Pond

i) Within one hundred sixty (160) days of the effective date of the permit, submit to Ohio EPA a plan and schedule to determine if ground water contaminated above unrestricted use standards has migrated beyond the facility property boundary.

- ii) Implement the plan to determine if contaminated ground water has migrated beyond the property boundary.
 - iii) If ground water contaminated above unrestricted use standards has migrated beyond the Facility property boundary, implement Corrective Action(s) in accordance with Condition E.2.
 - iv) Implement corrective measures for SWMU 62 in accordance with the CMICWP approved by U.S. EPA.
 - v) Perform long-term ground water monitoring for contaminants of concern (COCs) in accordance with the PBGWMP.
- 10) SWMU 63 – Buckeye Road Landfill
- i) Within one hundred sixty (160) days of the effective date of the permit, submit to Ohio EPA a plan and schedule to determine if ground water contaminated above unrestricted use standards has migrated beyond the Facility property boundary.
 - ii) Implement the plan to determine if contaminated ground water has migrated beyond the property boundary.
 - iii) If ground water contaminated above unrestricted use standards has migrated beyond the Facility property boundary, implement Corrective Action(s) in accordance with Condition E.2.
 - iv) Perform long-term ground water monitoring for contaminants of concern (COCs) in accordance with the PBGWMP.
- 11) SWMU 67 – Former Coke Pile
- Implement corrective measures in accordance with the CMICWP approved by U.S. EPA.

- 12) SWMU Group A – Old Drum Storage Area (SWMU 3) and L-3 Waste Pile (SWMU 5)

Implement corrective measures in accordance with the CMICWP approved by U.S. EPA.

- 13) Area 3 – SWMU Groups B, E, and F

SWMU Group B consists of:
 - Old Container Storage Area (SWMU 12)
 - South Container Drying Pit (SWMU 32)
 - North Container Drying Pit (SWMU 34)
 - North Impounding Pond (SWMU 45)
SWMU Group E consists of:
 - Tank 77 (SWMU 30)
 - Tank 77A (SWMU 31)
 - Tank 78 (SWMU 35)
 - Tank 79 (SWMU 36)
SWMU Group F consists of:
 - AFU Pond (SWMU 42)
 - Oily Sludge Pond (SWMU 43)
 - Sludge Drying Pit (SWMU 60)
 - i) Implement corrective measures in accordance with the CMICWP approved by U.S. EPA.
 - ii) Reassess the technical impracticability of light non-aqueous phase liquid (LNAPL) remediation at five-year intervals to determine if advances in technology would allow removal of LNAPL, and report the reassessment results to Ohio EPA. The first report shall be submitted by October 30, 2007.
 - iii) Perform long-term ground water monitoring for contaminants of concern (COCs) in accordance with the PBGWMP.
 - iv) If ground water monitoring indicates that the LNAPL is migrating or that COCs at concentrations posing unacceptable risk are present, implement remediation at the downgradient perimeter of the LNAPL as recommended in the October 2002 report titled "Technical Impracticability Area 3 LNAPL."

- 14) Ottawa River Area of Concern
 - i) Implement corrective measures in accordance with the CMICWP approved by U.S. EPA.

- ii) Implement deed restriction on the Permittee's property restricting the use of the Ottawa River from Permittee's property.

15) Zurmehly Creek Area of Concern

- i) Implement corrective measures in accordance with the CMICWP approved by U.S. EPA.
- ii) Implement deed restriction on the Permittee's property restricting the use of Zurmehly Creek from Permittee's property.

d) Ground Water Monitoring

The Permittee shall establish and implement a long-term ground water monitoring program in accordance with the PBGWMP.

e) Progress Reports

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

f) Corrective Measures Completion Report

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

- 1) If necessary, Ohio EPA shall provide written comments on the CM Completion Report and O&M Plan to the Permittee.
- 2) Within forty-five (45) days of receipt of Ohio EPA's comments, the Permittee shall submit either an amended or new CM Completion Report and O&M Plan.
- 3) Ohio EPA shall approve or modify and approve, in writing, the amended or new CM Completion Report and O&M Plan. The CM Completion 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 Completion Report and O&M Plan must be authorized by Ohio EPA.

g) 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 shall not implement the corrective measure until the permit is modified pursuant to OAC Rule 3745-50-51.

h) Financial Assurance
OAC Rule 3745-55-011

The Permittee shall provide financial assurance in the amount necessary to implement the corrective measure(s) as required by OAC Rules 3745-55-011 (b) and (c). In case of a newly discovered waste management unit that requires corrective measures, the Permittee shall provide financial assurance in the amount necessary to implement the corrective measure(s) as part of the modification of this permit to incorporate CMI.

E.10. Newly Identified SWMUs or Releases
OAC Rule 3745-55-011

a) General Information

The Permittee shall submit to Ohio EPA, within thirty (30) days of discovery, the following information regarding any new WMU identified at the Facility:

- 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);

MODULE F – GROUND WATER DETECTION MONITORING

F.1. Module Highlights

This module addresses the ground water monitoring program associated with the Primary Pond Waste Consolidation Area (PPWCA) at the Lima Refinery. The PPWCA is being monitored as a landfill with post-closure care under the PPWCA Post-Closure Ground-Water Detection Monitoring Plan (PCGWDMP), dated December 15, 2005, which was approved by Ohio EPA on July 5, 2006. The PCGWDMP is hereby incorporated into the approved permit application.

The Permittee's ground water monitoring system consists of three (3) monitoring wells and one piezometer which are screened in the Middle Sand. The Middle Sand is comprised primarily of sand and gravel, fine sand and considerable amounts of clay and thin lenses of silt and sand with considerable clay. The composition is typical of a unit deposited by a braided stream flowing before a glacial front and is Wisconsinian in age. The monitoring wells consist of one background well: FW-03S(a), two downgradient wells: FW-13S and FW-18S, and one piezometers, FW-15S.

F.2. Well Location, Installation and Construction OAC Rule 3745-54-97

The Permittee shall install and maintain a ground water monitoring system as specified below:

- a) The Permittee shall maintain, as part of a Ground Water Detection Monitoring System complying with OAC Rules 3745-54-97(A) and (B), the ground water monitoring wells on the map in Figure 2 of the Post-Closure Ground-Water Detection Monitoring Plan (PCGWDMP) and in conformance with the following list:

Unit	Background Wells	Point of Compliance Wells
Primary Pond Waste Consolidation Area	FW-03S(a)	FW-13S FW-18S

The ground water monitoring system must: yield samples in upgradient wells that represent the quality of the background ground water unaffected by leakage from any regulated unit(s), and in downgradient wells yield samples that represent the quality of water passing the point of compliance. The number and location of monitoring wells must be sufficient to identify and

define all logical release pathways to the uppermost aquifer from the regulated units based on site-specific hydrogeologic characterization.

- b) The Permittee shall maintain the monitoring wells identified in Permit Condition F.2(a), in accordance with the detailed plans and specifications presented in the PCGWDMP.
- c) The Permittee shall remove or replace any monitoring well identified in Permit Condition F.2(a) in accordance with the Appendix to OAC Rule 3745-50-51 permit modification process. Each change must be accompanied by a revised map as specified in Figure 2 of the PCGWDMP for Permit Condition F.2(a).
- d) All wells removed or replaced in accordance with Permit Condition F.2(c) shall be plugged and abandoned in accordance with the document entitled "State of Ohio Technical Guidance for Sealing Unused Wells" (State Coordinating Committee on Ground Water, 1996).
- e) Whenever any of the wells specified in Permit Condition F.2(a) are replaced, the Permittee must demonstrate to Ohio EPA that the ground water quality at the replacement well meets the criteria in Permit Condition F.2(a) within a two year period of the date of replacement using means appropriate to the reason for replacement.

F.3. Indicator Parameters and Monitoring Constituents
OAC Rule 3745-54-98

- a) The Permittee shall monitor all wells listed in Permit Condition F.2(a) for the following parameters and constituents:

Parameter/Constituent	Established Background Concentrations Milligrams per liter (mg/l)
Antimony	TBD
Arsenic	TBD
Barium	TBD
Beryllium	TBD
Cadmium	TBD
Chromium	TBD
Cobalt	TBD
Lead	TBD
Mercury	TBD
Nickel	TBD
Selenium	TBD
Vanadium	TBD
Benzene	0.001
Carbon disulfide	0.001
Chlorobenzene	0.001
Chloroform	0.001
1,2-Dichloroethane	0.001
Ethyl benzene	0.001
Ethylene dibromide	0.00003
Methyl ethyl ketone (2-butanone)	0.010
Styrene	0.001
Toluene	0.001
Xylene	0.002
Anthracene ¹	0.010
Benzenethiol ¹	0.010
Benzo(a)anthracene ¹	0.010
Benzo(a)pyrene ¹	0.0002
Benzo(b)fluoranthrene ¹	0.010
Benzo(k)fluoranthrene ¹	0.010
Bis (2-ethylhexyl) phthalate ¹	0.010
Butyl benzyl phthalate ¹	0.010
Chrysene ¹	0.010
¹ Samples will only be collected and analyzed for these semi-volatile organic compounds (SVOCs) on an annual basis	
TBD – To be determined upon the collection of an adequate amount of background data.	

- and analyze for each parameter or constituent specified in the permit, and
- ii) Background ground water quality for a monitoring parameter or constituent shall be based on data averaged from the appropriate number of sampling events of the background wells in order to provide at least eight background data points over a two year period. Additional sampling for the establishment of background ground water quality beyond the two year period will be allowed if adequately justified and approved by the Ohio EPA; or
 - iii) If an intra-well statistical method is to be used, then the Permittee shall collect at least eight data points from each well (background and compliance point wells).
- c) Background data collected in accordance with Permit Condition F.3(b) and OAC Rule 3745-54-97(G), for the establishment of background concentrations developed in accordance with OAC Rules 3745-54-97(H) and (I), may be updated in accordance with the following requirements:
- i) Background is not updated with less than 4 new data points at any one time.
 - ii) The new background (previous background data plus new background data) should be checked for slowly increasing trends. If a slowly increasing trend is identified then the background should not be updated unless concurrence from Ohio EPA is received that it has been adequately demonstrated that the increasing trend is not the result of a release from the regulated unit.
 - iii) Background updates should be accumulative and not a moving window, unless a trend is identified in the background data. As required in Permit Condition F.3(c)(ii), the identified trends would have to be adequately demonstrated to not be the result of a release from the regulated unit otherwise the background update would not be permitted.
 - iv) When a trend in background data has been identified and it has been adequately demonstrated to not be the result of a release from the regulated unit, then a moving window background should be used.

The size of the moving window will be dependent upon the rate of change and the best balance between background size and variance.

F.4. Sampling and Analysis Procedures
OAC Rule 3745-54-97

The Permittee shall use the following techniques and procedures when obtaining and analyzing samples from the ground water monitoring wells described in Permit Condition F.2.:

- a) Ground water elevations shall be measured using the techniques described in Sections 3.2 Sample Collection, 3.2.1 Procedures Prior to Sampling, and 3.2.1.1 Measurement of Ground-Water Elevations of the PCGWDMP.
- b) The well shall be checked for the presence of immiscible layers prior to purging in any monitoring wells where dissolved concentrations of any site-specific parameter indicate that immiscible layers could be present, using the methods described in Sections 3.2 Sample Collection, 3.2.1 Procedures Prior to Sampling, and 3.2.1.2 Detection of Immiscible Layers of the PCGWDMP.
- c) Samples shall be collected and handled (including well evacuation, sample withdrawal, preservation, containerization, filtration and shipment) using the techniques and equipment described in Sections 3.2 Sample Collection, 3.2.2 Sampling Procedures, 3.2.2.1 Sample Equipment, 3.2.2.3 Well Evacuation, 3.2.2.5 Sample Withdrawal and Filtration, and 3.2.2.6 Sample Containers, Preservation, and Holding Times of the PCGWDMP.
- d) Field analysis shall be performed using instruments, procedures, and forms described in the PCGWDMP. Instruments shall be calibrated as described in Sections 3.2 Sample Collection, 3.2.2 Sampling Procedures, and 3.2.2.7 Field Analysis of the PCGWDMP.
- e) Sampling equipment shall be decontaminated using techniques described in Sections 3.2 Sample Collection, 3.2.2 Sampling Procedures, and 3.2.2.2 Decontamination of Field Equipment of the PCGWDMP.
- f) Purge water shall be disposed of in accordance with procedures described in Sections 3.2 Sample Collection, 3.2.2 Sampling Procedures, and 3.2.2.4 Disposal of Purge Water of the PCGWDMP.

- g) Laboratory analytical methods, detection limits and sample holding time shall be in accordance with techniques described in Sections 3.3 Sample Parameters and Schedule, 3.3.1 Indicator Parameters, 3.3.2 Annual Parameters, 3.3.3 Background Data Collection Schedule, and 3.3.4 Detection Monitoring Schedule of the PCGWDMP as updated per Permit Condition F.7(f).
- h) Quality assurance, including field/lab/equipment blanks, duplicate samples and identification of potential interferences, shall be in accordance with the methods described in Sections 3.3 Sample Parameters and Schedule, 3.3.6 Quality Assurance/Quality Control, 3.3.6.1 Field QA/QC and 3.3.6.2 Laboratory QA/QC of the PCGWDMP.
- i) Chain of custody procedures, including standardized field tracking reporting forms, and sample labels, shall be in accordance with Sections 3.3 Sample Parameters and Schedules, and 3.3.5 Chain-of-Custody Procedures of the PCGWDMP.

F.5. Elevation of the Ground Water Surface

- a) The Permittee shall determine the elevation of the ground water surface at each well each time the ground water is sampled, in accordance with Permit Condition F.7(b).
- b) The Permittee shall record the total depth of any wells installed in accordance with Permit Condition F.2 and the surveyed elevation of the top of casing, ground surface and/or apron elevation, and elevation of the protective casing of the monitoring well(s) within thirty (30) days of the date of installation (with as-built drawings).

F.6. Statistical Procedures

When evaluating the monitoring results in accordance with Permit Condition F.7., the Permittee shall use the following procedures to identify statistically significant evidence of contamination:

- a) The Permittee shall use an appropriate statistical procedure for determining whether a statistically significant change has occurred. The statistical procedure shall be determined in accordance with the most recently finalized U.S. EPA statistical guidance document. The Permittee may follow the flow

- vii) If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.
- b) The Permittee shall choose and submit to the Ohio EPA the appropriate statistical method within ninety (90) days of the receipt of the last background sampling event data.

F.7. Monitoring Program and Data Evaluation

The Permittee shall establish and implement a detection ground water monitoring program that will determine, with reasonable confidence, whether any hazardous constituents have entered the ground water as a result of activities at the unit/area covered by the Part B Permit. The Permittee shall determine ground water quality as follows:

- a) The Permittee shall collect, preserve, and analyze samples pursuant to Permit Condition F.4.
- b) The Permittee shall determine ground water quality at each monitoring well (See Figure 1 attached to this module) semiannually during the post-closure care period of the PPWCA.

The Permittee shall express the ground water quality at each monitoring well in a form necessary for the determination of statistically significant increases.

- c) The Permittee shall determine the ground water flow rate and direction in the uppermost aquifer at least annually.
- d) The Permittee shall determine whether there are any statistically significant increases over the background values for all parameters identified in Permit Condition F.3(a) each time ground water quality is determined at the compliance point. In determining whether such increases have occurred, the Permittee must compare the ground water quality at each monitoring well specified in Permit Condition F.2(a) to the background ground water quality specified in Permit Condition F.3(a), in accordance with the statistical procedures specified in Permit Condition F.6. If there is a confirmed detection of any of the parameters identified in Permit Condition F.3(a), then the Permittee shall take the response actions and fulfill the requirements of Permit Condition F.10 regarding statistical evidence of contamination.

- e) The Permittee shall perform the evaluations described in Permit Condition F.7(d) within ninety (90) days after completion of sampling.

F.8. Recordkeeping and Reporting
OAC Rule 3745-54-97(J) and

Operating Record

OAC Rules 3745-54-73(B)(5)&(6), 3745-54-97(J), and 3745-54-98(C)

- a) Ohio EPA may request a copy of the full QA/QC report for a particular sampling event if circumstances warrant, but in general, QA/QC data will not be required except as described below. The Permittee shall enter all of the following information obtained in accordance with Permit Condition F.7 in the operating record as required by OAC Rules 3745-54-73(B)(5)&(6), 3745-54-97(J) and 3745-54-98(C):
 - i) 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, detection limits and units of measurement);
 - ii) The date each well was sampled (tabulated);
 - iii) The date, time, and identification of all blanks and duplicates;
 - iv) Any field log documentation of deviation from the procedures in the PCGWDMP, including documentation of parameter omissions during the sampling event;
 - v) The date the Permittee received the results from the laboratory;
 - vi) The date the Permittee completed their review of the analytical laboratory's verification of the accuracy and precision of the analytical data and determined its quality.
 - vii) The results of the data validation review per F.8(a)(vi) 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

include, at a minimum, the analytical results required by Permit Condition F.7(b), the ground water elevation data required by Permit Conditions F.5(a) and F.7(c), the results of the initial statistical analyses required by Permit Condition F.7(d), and the results of the evaluations required by Permit Condition F.7(e). 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 but not addressed in this Condition, must be submitted in accordance with the schedule stated in Permit Condition F.8(d) as required by OAC Rules 3745-54-75 and 3745-54-97(J).

d) Other Reports

The Permittee shall comply with any reporting requirements that become necessary under Permit Condition F.10 in accordance with the schedule in that Condition and as required by OAC Rule 3745-54-77(C). If any of these dates falls on a weekend, the reports will be due no later than the next business day. Resampling reports must include the same types of information as the initial reports pertaining only to the resampled well(s).

It is recommended that the Permittee submit the analytical results required by Permit Conditions F.7(b) and F.7(c) and the results of the initial statistical analyses required by Permit Condition F.7(d), in accordance with the following schedule and as required by OAC Rule 3745-54-77(C):

<i>Samples to be Collected During the Preceding Months of:</i>	<i>Results Due to the Director By:</i>
<p>April – May</p> <p>October – November</p>	<p>Within 90 days of completion of the sampling event</p>

F.9. Assurance of Compliance

The Permittee shall assure the Director that the ground water monitoring program will ensure the earliest possible detection of contamination leakage from the

regulated units, that any contamination leakage would be characterized, and that the need for further action will be determined.

F.10. Special Requirements if Significant Increases Occur in Values for Parameters or Constituents

If the Permittee has determined a statistically significant increase in any of the parameters or constituents identified in Permit Condition F.3(a), in accordance with the statistical procedures in Permit Conditions F.6. and F.7., the Permittee must:

- a) Notify the Director, in writing, within seven (7) days of that determination. The notification must indicate what parameters or constituents have shown statistically significant increases and the corresponding analytical results.
- b) Within 30 days sample the ground water in the background well and the affected well and determine the concentration of all constituents identified in Tables 5 and 6 of the PCGWDMP not analyzed during the most recent event at which the statistically significant increase occurred [OAC Rule 3745-54-98(G)(2)].
- c) For any additional compounds detected under Permit Condition F.10(b), the Permittee may resample within one month and repeat the analysis for those compounds detected. If the results of the second analysis confirm the initial results, then these constituents, in addition to those noted in Permit Condition F.10(a), will form the basis for compliance monitoring. If the Permittee does not resample, or if the Permittee analyzed for all Table 5 and 6 site-specific indicator parameters during the most recent event at which the statistically significant increase occurred, then those detected constituents will form the basis for compliance monitoring. [OAC Rule 3745-54-98(G)(3)]

[Note: Per Permit Condition F.3(a), the facility has replaced the ground-water hazardous constituent list included in the appendix to OAC Rule 3745-54-98 with a site-specific indicator parameter list (Skinner List) of refinery-related constituents, which will be analyzed annually. In addition, all site-specific parameters, except the semi-volatile organic compounds included on Tables 5 and 6 of the monitoring plan, will be analyzed semiannually.]

- d) Within ninety (90) days of determining a statistically significant increase, submit, to the Director, an application for a permit modification to establish

a compliance monitoring program. The application must include the following information:

- i) An identification of the concentration of each Skinner List (found in Table 4 of the PCGWDMPP) constituent found in the ground water at each monitoring well at the point of compliance.
 - ii) Any proposed changes to the ground water monitoring system at the facility necessary to meet the requirements of compliance monitoring, as described in OAC Rule 3745-54-99.
 - iii) Any proposed changes to the monitoring frequency, sampling and analysis procedures, or methods or statistical procedures used at the facility necessary to meet the requirements of compliance monitoring and the Ground Water Protection Standards [OAC Rule 3745-54-92].
 - iv) For each hazardous constituent detected at the compliance point, a proposed concentration limit, or a notice of intent to seek an alternate concentration limit (ACL) for a hazardous constituent under OAC Rule 3745-54-94(B).
 - v) The Permittee shall 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.
- e) Submit to the Director an engineering feasibility plan (EFP) for corrective action and all data necessary to satisfactorily justify an alternate concentration limit within one hundred eighty (180) days of determining a statistically significant increase, unless the concentrations of all hazardous constituents identified under Permit Condition F.3(a) do not exceed their respective values listed in Table 1 of OAC Rule 3745-54-94 (or their respective MCLs), or the Permittee has sought an ACL variance for every hazardous constituent identified under Permit Condition F.3(a). If the Permittee's ACL request is denied the Permittee shall specify a time frame for the submittal of the EFP.
- f) If the Permittee determines, pursuant to Permit Condition F.7., there is a statistically significant increase above the background values for the parameters specified in Permit Condition F.3(a), he may demonstrate that a source other than a regulated unit caused the increase or that the increase

resulted from error in sampling, analysis, or evaluation. In such cases, the Permittee shall:

- i) Notify the Director, in writing, within seven (7) days of determining a statistically significant increase, that he intends to make a demonstration.
- ii) Within ninety (90) days of determining a statistically significant increase, submit a report to the Director which successfully demonstrates that a source other than a regulated unit caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation.
- iii) Within ninety (90) days of determining a statistically significant increase, submit to the Director an application for a permit modification to make any appropriate changes to the detection monitoring program at the facility.
- iv) 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 same period of ninety (90) days is required for both a successful "Other Source Demonstration" and the submittal of the permit modification application for compliance ground water monitoring. The Permittee is not relieved of the ninety (90) day requirement for a permit modification unless the "Other Source Demonstration" is deemed successful by the Agency prior to the ninety (90) day time limit.
- v) Continue to monitor in accordance with the detection monitoring program at the facility.

F.11. Request for Permit Modification
OAC Rule 3745-54-98(H)

If the Permittee or the Director determines the detection monitoring program no longer satisfies the requirements of the regulations, the Permittee must, within ninety (90) days of the determination, submit the date of that determination and an

application for a permit modification to make any appropriate changes to the program which will satisfy the regulations.

F.12. Compliance Schedule

The Permittee shall, within ninety (90) days of permit journalization, submit an amended PCGWDMP to meet the revisions required by this permit. The submittal of the revised PCGWDMP constitutes a Class 1 permit modification for which the Director's approval is required. The Permittee shall address the following: [The Permittee submitted the amended PCGWDMP, dated September 10, 2003, on September 25, 2003. The amended version addresses each of the items listed below.]

F.2.c) – "... Each change must be accompanied by a revised map as specified on Figure 2 of the PCGWDMP for Permit Condition F.2(a)." This is not stated in the PCGWDMP.

F.3.b)iii) – "If an intra-well statistical method is to be used, then the Permittee shall collect at least eight data points from each well (background and compliance point wells)." The PCGWDMP does not explicitly designate at which monitoring wells the samples will be collected.

F.3.c) – "Background data collected in accordance with Permit Condition F.3(b) and OAC Rule 3745-54-97(G), for the establishment of background concentrations developed in accordance with OAC Rules 3745-54-97(H) and (I), may be updated in accordance with the following requirements: ..." The Permittee stated that the topic of updating the background database would not be discussed in the PCGWDMP and that if the need arose to update the background database, then the Permittee would supply language of its own.

F.6 Statistical Procedures – "When evaluating the monitoring results in accordance with Permit Condition F.7., the Permittee shall use the following procedures to identify statistically significant evidence of contamination: ..." The company has referenced the rules. This section of the permit is almost identical to the rules except for F.6.b) referenced below. In order to remain consistent, the Permittee may want to add this language to the PCGWDMP.

F.6.b) – "The Permittee shall choose and submit to the Ohio EPA the appropriate statistical method within ninety (90) days of the receipt of the last background sampling event data. "The PCGWDMP states one hundred eighty (180) days instead of ninety (90) days. The time period should be changed to ninety (90) days in the PCGWDMP.

F.7.c) – “The Permittee shall determine the ground water flow rate and direction in the uppermost aquifer at least annually.” The PCGWDMP does not explicitly state that this will be done. The plan states that a map will be constructed after each semi-annual event and that the reporting rules will be followed.

F.7.d) This condition discusses how statistical comparisons will be performed and where they will be performed (i.e., at the compliance point). The Permittee again simply states that the rules will be followed.

F.7.e) – “The Permittee shall perform statistical evaluations within ninety (90) days after completion of sampling.”. This is not stated in the PCGWDMP.

F.8. – Recordkeeping and Reporting – The Permittee references the rules for this section of the PCGWDMP, but had formerly agreed to include the language from the permit in the plan per the April 17, 2002 conference call between the Agency and the Permittee.

F.8.b) – This condition requires submission of background values and computations of the values within ninety (90) days of the completion of the last sampling event. This is not explicitly stated in the PCGWDMP. However, the PCGWDMP does reference the reporting rules and state that the Permittee will strive to submit the semi-annual reports in ninety (90) days.

F.10 – “Special Requirements if Significant Increases Occur ...” - The Permittee references the rule, but the language in Permit Condition F.10 has modified some of the requirements of the rule. The Permittee should include all or at least the relevant parts of Permit Condition F.10 (those different from the rule) in the PCGWDMP.

F.11. – Request for Permit Modification – “If the Permittee or the Director determines the detection monitoring program no longer satisfies the requirements of the regulations, the Permittee must, within ninety (90) days of the determination, submit the date of that determination and an application for a permit modification to make any appropriate changes to the program which will satisfy the regulations.” The Permittee did not include this language in the PCGWDMP.

MODULE G – POST-CLOSURE CARE

G.1. Module Highlights

This section is applicable to units with in-place closure approval by Ohio EPA.

AFU, Oily Sludge, and Drying Pit Ponds (Surface Impoundment)

An above and below-grade surface impoundment used to store liquid/sludge waste. Wastes disposed in the unit included dewatering process water, various tank bottom wastes, and storm water. The pond was taken out of service in 1985, and in 1986 the sludge was stabilized and partially removed. Ohio EPA is requiring the RCRA closure of this unit to be incorporated as part of corrective action. See Module E of this permit for specifics.

Primary and C Ponds (Surface Impoundment)

An above and below-grade surface impoundment used to store liquid wastes. Wastes disposed in the unit included storm and process water. The Primary Pond closed portion of this unit will require thirty (30) years of post-closure ground water monitoring. C Pond will not require post-closure ground water monitoring, as it has been clean closed.

G.2. Unit Identification

The Permittee shall provide post-closure care for the following hazardous waste management unit as found in this Permit and OAC Chapter 55, subject to the terms and conditions of this permit:

Type of Waste Unit	Unit No. or Other Designation	Description of Wastes Contained	Hazardous Waste No.
Surface Impoundment	Primary Pond	Petroleum refinery primary oil/water/solids separation sludge (from WWTP) and benzene	F037, D018

G.3. Post-Closure Procedures and Use of Property

- a) The Permittee shall conduct post-closure care for each hazardous waste management unit listed in Permit Condition G.2. above, to begin after completion of closure of the unit and continue for 30 years after that date, except that the 30-year post-closure care period may be shortened upon application and demonstration approved by Ohio EPA that the facility is secure, or may be extended by Ohio EPA if the Director finds this is necessary to protect human health and the environment.
- b) The Permittee shall maintain and monitor the ground-water monitoring system and comply with all other applicable requirements of OAC Rules 3745-54-90 through 99 and 3745-55-01 during the post-closure period.
- c) The Permittee shall comply with the requirements for surface impoundments as follows:
 - i) maintain the integrity and effectiveness of the final cover, including making repairs to the cap, as necessary, to correct the effects of settling, subsidence, erosion, and other events; and
 - ii) prevent run-on and run-off from eroding or otherwise damaging the final cover.
- d) Reserved

- e) The Permittee shall comply with all security requirements, as specified in the Part B permit application.
- f) The Permittee shall not allow any use of the units designated in Permit Condition G.2. 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 shall implement the procedures as detailed in the Post-Closure Plan within Section I of the approved application. All post-closure care activities must be conducted in accordance with the provisions of the Post-Closure Plan.

G.4. Inspections

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

G.5. Notices and Certification

- a) No later than sixty (60) days after certification of closure of each permitted hazardous waste disposal unit, the Permittee shall submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the Director, a record of the type, location, and quantity of hazardous wastes disposed of within each cell or other disposal unit of the facility. For hazardous wastes disposed of before January 12, 1981, the Permittee shall identify the type, location, and quantity of the hazardous wastes to the best of his knowledge and in accordance with any records he has kept.
- b) Within sixty (60) days of certification of closure of the first and the last hazardous waste disposal unit, the Permittee shall:
 - i) Record, in accordance with Ohio law, a notation on the deed to the facility property, or on some other instrument that is normally examined during the title search, that will in perpetuity notify any potential purchaser of the property that:
 - aa) The land has been used to manage hazardous wastes;
 - bb) Its use is restricted under OAC Rules 3745-55-10 thru 20; and
 - cc) The survey plat and record of the type, location, and quantity of hazardous wastes disposed of within each cell or other hazardous waste disposal unit of the facility have been filed with the Director and the Allen County zoning authority.
 - ii) Submit a certification to the Director, signed by the Permittee, that he has recorded the notation specified in Permit Condition G.3(b)(i), including a copy of the document in which the notation has been placed.
- c) If the Permittee or any subsequent owner or operator of the land upon which the hazardous waste disposal unit is located, wishes to remove hazardous wastes and hazardous waste residues, the liner, if any, or contaminated soils, then he shall request a modification to this post closure permit in accordance with the applicable requirements in OAC Chapter 3745-50. The

Permittee or any subsequent owner or operator of the land shall demonstrate that the removal of hazardous wastes will satisfy the criteria of OAC Rule 3745-55-17(C).

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

G.6. Financial Assurance

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

G.7. Post-Closure Permit Modifications

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

END OF PERMIT CONDITIONS