



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

CERTIFIED

January 24, 2013

Ms. Lori Littrell
BP Products North America, Inc.
150 W. Warrenville Road
Naperville, IL 60563

Mr. Gary Vonderembse
Lima Refining Company
1150 South Metcalf Street
Lima, OH 45804

**Re: Final Director Initiated Modification
Lima Refining Company
OHD 005 051 826**

Dear Ms. Littrell and Mr. Vonderembse:

On January 24, 2013, Ohio EPA issued a Director Initiated Permit Modification (Permit) to Lima Refining Company for its facility at 1150 South Metcalf Street, Lima, Ohio 45804. The EPA Identification number for the facility is OHD 005 051 826. The Permit authorizes Lima Refining Company to remove hazardous waste management units from the permit that have had corrective action remediation activities completed. Corrective measures remedies (CMRs) have been completed for hazardous waste management units 41, 49, 50, 51, 52, 53, 61, 63, 64, 68, 69, 70, 71, and 72 and on-going /future operation and maintenance activities are not required. CMRs have been completed for hazardous waste management units 1, 3, 5, 7, 8, 46, 47, 57, 58, 62, 67, Group B, Group E, Group F, Ottawa River, and Zurmehly Creek and on-going/future operation and maintenance activities are required. The Ohio EPA received written comments concerning this Permit and those comments were addressed in the enclosed "Response to Comments." The final modified Permit is also enclosed. Please note that this Permit remains in effect until it is renewed, withdrawn, suspended or revoked.

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the

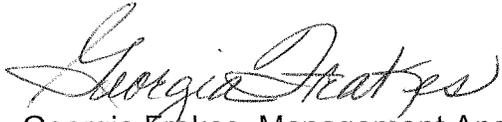
Lori Littrell
Gary Vonderembse
Lima Refining Company
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Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00 which the Commission, in its discretion, may reduce if by affidavit if you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

If you have any questions, please contact Don North in our Northwest District Office at (419) 352-8461.

Sincerely,



Georgia Frakes, Management Analyst
Materials and Waste Management

Enclosure

cc: Dustin Tshudy, DMWM, CO
Scott Hester, DMWM, CO
Don North, DMWM, NWDO
Darla Peelle, PIC
Todd Anderson, Legal
Ruthanne Flottman, DMWM, CO
Ed Lim, DERR, CO
Dawn Pleiman, DERR, NWDO
Chad Zajkowski, DDAGW, NWDO
Colleen Weaver, DMWM, NWDO
Gary Deutschman, DMWM, NWDO
Mike Terpinski, DERR, NWDO



PUBLIC NOTICE RECORD

Notification Type: HAZARDOUS WASTE FACILITY PERMIT ACTION

Entity Info	
Name:	Lima Refining Company
Address:	1150 South Metcalf Street
City/Township/Zip:	Lima, OH 45804
	County: Allen
Description:	Hazardous Waste

Notice Info	
<input checked="" type="checkbox"/>	Weekly Review
<input checked="" type="checkbox"/>	Public Notice
Date Of Action:	01/24/2013
Notification Number:	OHD005051826

Receiving Waters:

Meeting Details:

Standard Remark:

Other Remark:

On January 24, 2013, the director of Ohio EPA issued to BP Products North America and Lima Refining Company (Lima Refinery) a director initiated permit modification of the hazardous waste installation and operation permit (Permit) for the facility at 1150 South Metcalf Street, Lima, Ohio 45804. The EPA ID number for this facility is OHD005051826. Lima Refinery was originally constructed in 1886. The refinery produced gasoline, diesel fuel, jet fuel, kerosene, coke, heavy fuels, and benzene. The permit modification removes hazardous waste management units from the permit that have had corrective action remediation activities completed. Corrective measures remedies (CMRs) have been completed for hazardous waste management units 41,49, 50, 51,52, 53, 61, 63, 64, 68, 69, 70, 71, and 72 and on-going/future operation and maintenance activities are not required, CMRs have been completed for hazardous waste management units 1, 3, 5, 7, 8, 46, 47, 57, 58, 62, 67, Group B, Group E, Group F, Ottawa River, and Zurmehly Creek and on-going/future operation and maintenance activities are required.

OHIO E.P.A.
JAN 24 2013
REGISTERED DIRECTOR'S JOURNAL

OHIO ENVIRONMENTAL PROTECTION AGENCY

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

Date of Issuance: January 24, 2013
Effective Date: January 24, 2013

U.S. EPA ID No.: OHD 005 051 826
Ohio Permit No.: 03-02-0390

Name of Permittees: BP Products North America and
Lima Refining Company

Mailing Address: Lima Refinery
1150 South Metcalf Street
Lima, Ohio 45804-1199

Facility Location: 1150 South Metcalf Street
Lima, Ohio 45804-1199

Person to Contact: Lori Littrell
Atlantic Richfield Company
Operations Project Manager
Remediation Management
150 W. Warrenville Road
Naperville, IL 60563

This Modified Ohio Hazardous Waste Facility Installation and Operation Permit is issued pursuant and subject to Section 3734.05(I) of the Ohio Revised Code and Rule 3745-50-51(J) of the Ohio Administrative Code.

The Ohio Hazardous Waste Facility Installation and Operation Permit with the above-referenced permit number as issued by the Ohio Environmental Protection Agency and journalized on June 20, 2003, is hereby incorporated by reference in its entirety, except as it may be modified herein.

This modification of the permit shall remain in effect until such time as the Ohio Hazardous Waste Facility Installation and Operation Permit is renewed, modified, withdrawn, suspended or revoked.

The modified Terms and Conditions of this permit are attached hereto and are incorporated herein by reference. The modified Terms and Conditions supersede and replace the corresponding pages found in the June 20, 2003 renewal permit.

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



Scott J. Nally
Director

By:  Date: 1-24-13

MODULE E – CORRECTIVE ACTION REQUIREMENTS

E. Corrective Action Summary

The United States Environmental Protection Agency (U.S. EPA) issued BP Oil Company (BP) a hazardous waste permit for the Lima Refinery on June 28, 1989. As a condition of this permit, U.S. EPA required completion of corrective action for the release of hazardous waste and hazardous waste constituents from solid waste management units (SWMUs) and SWMU groups identified in the permit.

The Permittee submitted a draft RCRA Facility Investigation (RFI) Workplan to U.S. EPA during March 1990 and the final approval for the RFI Workplan was granted on August 7, 1997.

The Phase I RFI was conducted during August and September 1997. The Phase I Report and Phase II Workplan were submitted to U.S. EPA on January 15, 1999. On November 29, 1999, U.S. EPA granted approval of the Phase II RFI Workplan. BP notified the Agencies of their intent to commence Phase II RFI Workplan field activities on December 6, 1999. A Draft Phase II Report, Human Health Risk Assessment, and Detailed Ecological Risk Assessment were submitted on April 3, 2001. On October 24, 2001, U.S. EPA issued final approval of the RFI report. On the same date, U.S. EPA issued a conditional approval of a Corrective Measures Study (CMS). A Final CMS was submitted on November 16, 2001 and approved on December 12, 2001.

On December 31, 2001, U.S. EPA gave public notice of its intent to modify BP's Federal RCRA permit to incorporate Corrective Measures. A draft Corrective Measures Implementation Conceptual Work Plan (CMICWP) and draft Performance Based Ground Water Monitoring Plan (PBGWMP) dated March 2002 were conditionally approved by U.S. EPA on April 19, 2002. On April 24, 2002, U.S. EPA issued a final modification to BP's federal permit requiring implementation of Corrective Measures.

As part of the Corrective Measures, BP implemented deed restrictions on June 7, 2002, and submitted the documents to U.S. EPA. U.S. EPA approved the final CMICWP/PBGWMP on August 16, 2002. A table listing all of the SWMUs, Areas of Concern (AOCs), remedies and dates approved can be found in Attachment 3.

The transition of the corrective action program from the U.S. EPA to Ohio EPA occurred on June 20, 2003. Ohio EPA has assumed the oversight role for Corrective Action at the facility. Corrective action is complete at the site except for some on-going operations and maintenance activities. In addition, Area 3 maintains a Technical Impracticability Demonstration that must be updated every five years for its corrective measures.

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 discernable 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. 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. 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 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 3745-54-101

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 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 3745-54-101

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

- 1) The units or groups of units which were identified during the course of Corrective Action are listed in Attachment 3. The following units from Attachment 3 have completed their corrective measures remedy and require on-going/future operations and maintenance activities:

- SWMU 1 – Land Treatment Unit
- SWMU 7 – L-5 Landfill
- SWMU 8 – L-6 Landfill
- SWMU 46 – Old Primary Pond
- SWMU 47 – Primary Pond
- SWMU 57 – North Ditch
- SWMU 58 – Tank 231
- SWMU 62 – E-Pond
- SWMU 67 – Former Coke Pile
- SWMU Group A – Old Drum Storage Area (SWMU 3) and L-3 Waste Pile (SWMU 5)
- Area 3 - SWMU Groups B, E, and F

Ottawa River – Area of Concern
Zurmehly Creek – Area of Concern

E.4. Reserved

E.5. 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.

a) RFI Workplan

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

- 1) If necessary, Ohio EPA shall provide written comments on the RFI 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 RFI Workplan that incorporates Ohio EPA's comments.
- 3) Ohio EPA shall 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 shall implement the RFI Workplan according to the terms and schedule in the approved RFI Workplan.

c) RFI Final Report

Within sixty (60) days after the completion of the RFI, the Permittee shall submit an RFI Final Report to Ohio EPA. The RFI Final Report shall 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.

- 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 or the Permittee may propose 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) Permit Modification

Based on the results of the completed RFI or other relevant information, the Permittee may submit an application to Ohio EPA for a Class 3 permit modification under OAC Rule 3745-50-51 to terminate specific Corrective Action tasks which are enumerated throughout Section E of the permit. Other Corrective Action tasks identified in Section E will remain in effect. This permit modification application must conclusively demonstrate that there are no releases of hazardous waste or constituents from SWMUs 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, including comments received during the initial sixty (60) day public comment period required for Class 3 permit modifications, 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.

(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 Attachment 3. 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)

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 in Permit Condition E.9.

a) CMS Workplan

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

- 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 must submit either an amended or new CMS Workplan that incorporates Ohio EPA's comments.
- 3) 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 sixty (60) days after the completion of the CMS, the Permittee must submit a CMS Final Report to Ohio EPA. The CMS Final report must summarize the results of the investigations for each remedy studied and must include an evaluation of each remedial alternative.

- 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 must submit either an amended or new CMS Report that incorporates Ohio EPA's comments.
- 3) 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 for a newly discovered waste management unit, 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. 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 from the Phase II RCRA Facility Investigation (RFI), Human Health Risk Assessment (HHRA), and Detailed Ecological Risk Assessment (DERA) completed in 2001, 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

medium were based. Tables 2 and 3 present the MCSs for soil and ground water, respectively.

Table 1 – Action Level Criteria for Each Medium

Medium	Action Level Criteria
Ground Water	<ul style="list-style-type: none"> • U.S. EPA MCLs • Risk-based action levels developed based on HHRA results
Soil	<ul style="list-style-type: none"> • U.S. EPA Region 9 industrial Preliminary Remediation Goals (PRGs) • Risk-based action levels developed based on HHRA results

Table 2 – MCSs for Soil

COC	MCS (milligram per kilogram)
Benzene	1.5
Ethylbenzene	230
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
Lead	750

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 3 – MCSs for Ground Water	
COC	MCS (milligram per liter)
Benzo(k)fluoranthene	0.000092
Benzo(a)pyrene	0.0002
Bis(2-ethylhexyl)phthalate	0.006
Chrysene	0.0092
Dibenz(a,h)anthracene	0.000097
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
Pyridine	0.036
Metals	
Antimony	0.006
Arsenic	0.05
Barium	2.0

Table 3 – MCSs for Ground Water	
COC	MCS (milligram per liter)
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
Thallium ^b	0.002
Vanadium	0.26
Zinc	11.0

Notes: ^a COC for SWMU 63 only
^b COC for SWMUs 62 and 63 only

ii) Points of Compliance (POC)

A POC is a location at which an MCS must be met. For soil, the POC is the lateral extent of the boundary of the SWMU, SWMU Group, Area of Concern, or SWMU Group Area and vertical extent where COCs are present at concentrations equal to or exceeding the MCSs or where post-remedial risk evaluations show that COCs pose a significant risk above Ohio EPA's acceptable risk goal of 10^{-5} or a total hazard index greater than 1.

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- 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.

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b) Reserved

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c) Specific Remedies

Specific remedies for individual SWMUs, SWMU groups, and areas at the facility are described in Attachment 3. These remedies were implemented in accordance with the CMICWP approved by U.S. EPA and the Terms and Conditions of this Permit.

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d) Ground Water Monitoring

Reserved

e) Progress Reports

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

The Permittee must submit inspection reports to Ohio EPA annually for the L-5 Landfill (SWMU 7) and SWMU Group F in accordance with the Operation and Maintenance (O&M) Plans in the approved Construction Completion Reports.

The Permittee must reassess the technical impracticability (TI) of light non-aqueous phase liquid (LNAPL) remediation at Area 3 in 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 was submitted on October 30, 2007.

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

h) 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 thirty (30) days of discovery, the following information regarding any new WMU identified at the Facility by Ohio EPA or the Permittee:

- i) The location of the unit on the site topographic map;
- ii) Designation of the type of unit;
- iii) General dimensions and structural description (supply any available drawings);

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- iv) When the unit was operated; and
 - v) Specification of all waste(s) that have been managed at the unit.
- b) Release Information

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

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

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E.13 Documents Requiring Professional Engineer Stamp
ORC Section 4733.01

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

Final Interim Measures Report

Corrective Measures Final Design

Corrective Measures Construction Completion Report

Corrective Measures Attainment of Groundwater Performance Standards Report

Corrective Measures Completion of Work Report

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

MODULE G – POST-CLOSURE CARE

G.1. Module Highlights

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

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:

ATTACHMENT 3

Lima Refinery

OHD 005 051 826

SWMU and AOC Table

<u>Unit Name</u>	<u>SWMU or AOC</u>	<u>Dates of Operation</u>	<u>Constituents of Concern¹ wastes</u>	<u>Remedy</u>	<u>Remedy Document</u>	<u>Approval Date</u>
Land Treatment Unit	SWMU 1	Wastes received between 1981 and 1990.	Oil and grease, heavy metals, VOCs and SVOCs (waste codes K048, K049, K051 & D008) Arsenic and chromium in sediment BEHP and 1,4-dioxane in GW	Excavation and consolidation of impacted soil, install soil cover (geotextile, soil), creation of stormwater management wetland, institutional control (IC) (annual soil cover inspection)	CCR approved by Ohio EPA on August 16, 2006	
Spent Lime Application Area	SWMU 2	Area was never used.	-	NFA	RFI DOCC Report (incorporated into the Phase I RFI Workplan) approved by U.S. EPA on 8/7/1997.	
Old Drum Storage Area	SWMU 3 (Part of SWMU Group A)	Unknown, area closed in 1990	No records on the type of materials stored in area, not used on a routine basis to store wastes.	Stored drums were tested and disposed, soil excavation and confirmatory soil sampling, IC (annual	CCR approved by U.S EPA 12/30/2002	

¹ COCs listed are constituents that exceed the Phase II Comparison Criteria.

This table is for summary purposes. For detailed information refer to the remedy document for each SWMU, SWMU Group or Area.

Dates of Operation Constituents of Concern¹ Remedy Document Approval Date

wastes

<u>Unit Name</u>	<u>SWMU or AOC</u>	<u>Dates of Operation</u>	<u>Constituents of Concern¹</u> <u>wastes</u>	<u>Remedy</u> (sign inspection)	<u>Document</u>	<u>Approval Date</u>
Tank 63	SWMU 4	Disassembled in 1991	RFA recommended no further action.	NFA	RFI DOCC Report (incorporated into the Phase I RFI Workplan) approved by U.S. EPA on 8/7/1997.	
L-3 Waste Pile	SWMU 5 (Part of SWMU Group A)	Unknown per Phase II RFI Page 4-71	Benzene, ethylbenzene, toluene, total xylenes, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene	Soil excavation and confirmatory soil sampling, IC (annual sign inspection)	CCR approved by U.S EPA 12/30/2002	
L-4 Landfill	SWMU 6	Not Described	benzo(a)pyrene, dibenz(a,h)anthracene,	Soil sampling, passed HHRA, NFA	Phase II RFI Report approved by U.S EPA on 10/24/2001	
L-5 Landfill Old Refinery Dump	SWMU 7	Mid-1940s until 1960s	Foundry wastes, construction debris and refinery (petroleum) wastes Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene,	2 feet of clay placed over disposal area, some excavated soil disposed off-site. The CMI Response Area consists of a steel sheet wall, liquid collection	CCR approved by Ohio EPA on September 1, 2004.	

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¹ COCs listed are constituents that exceed the Phase II Comparison Criteria. This table is for summary purposes. For detailed information refer to the remedy document for each SWMU, SWMU Group or Area.

<u>Unit Name</u>	<u>SWMU or AOC</u>	<u>Dates of Operation</u>	<u>Constituents of Concern¹, wastes</u>	<u>Remedy</u>	<u>Remedy Document</u>	<u>Approval Date</u>
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L-6 Landfill	SWMU 8 (Part of Area 1)	1939 or 1951 until 1954	dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, arsenic, chromium and lead in soil Benzene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, indeno(1,2,3-cd)pyrene, and lead in GW	trench, installation of low permeability landfill cover and wetland cell. Semi-annual performance-based ground water monitoring was required and completed in 2007. On-going landfill water level elevation monitoring, annual report, annual inspection and cover maintenance, sign inspection, IC	Ohio EPA permit modification to remove performance-based GW monitoring 8/12/08.	
Container Storage Building	SWMU 9	Container Storage Facility issued a RCRA hazardous waste permit in August 1989.	lead in soil	Limited excavation of soil Institutional control (annual sign inspection)	CCR approved by U.S. EPA on January 2, 2003	
Container Storage Pad	SWMU 10		RFA recommended no further action.	NFA	RFI DOCC Report (incorporated into the Phase I RFI Workplan) approved by U.S. EPA on 8/7/1997.	
Non-Hazardous Container	SWMU 11					

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<u>Unit Name</u>	<u>SWMU or AOC</u>	<u>Dates of Operation</u>	<u>Constituents of Concern¹</u> <u>wastes</u>	<u>Remedy</u>	<u>Remedy Document</u> <u>Approval Date</u>
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Storage Area					
Old Container Storage Area	SWMU 12 (Part of SWMU Group B and Area 3)	Closed (backfilled 1990)	benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, benzo(a)anthracene	SWMU Group B passed the U.S. EPA HHRA for industrial scenarios, IC, NFA.	Phase II RFI Report approved by U.S. EPA on 10/24/2001
C-3 Drum Collection Area	SWMU 13 (Part of SWMU Group C)	Not Described	arsenic	SWMU Group C passed U.S. EPA HHRA, NFA.	Phase II RFI Report approved by U.S. EPA on 10/24/2001
Influent Sump	SWMU 14 Part of SWMU Group D	Constructed in the early 1950s Part of the WWT facility	None	No visible signs of a release, NFA	Phase I RFI Report approved by U.S. EPA on 11/24/1999
WP-1 Spent Catalyst Pile	SWMU 15 (Part of Area 4)	Taken out of service in 1986	Benzene, benzo(a)pyrene, benzo(a)anthracene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, arsenic and chromium	passed U.S. EPA HHRA, NFA	Phase II RFI Report approved by U.S. EPA 10/24/2001
Less-Than 90-Day Storage	SWMU 16	1985/1986	RFA recommended no further action.	NFA	RFI DOCC Report (incorporated)

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<u>Unit Name</u>	<u>SWMU or AOC</u>	<u>Dates of Operation</u>	<u>Constituents of Concern¹, wastes</u>	<u>Remedy</u>	<u>Remedy Document</u>	<u>Approval Date</u>
Area						into the Phase I RFI Workplan) approved by U.S. EPA on 8/7/1997.
API Wastewater Separator	SWMU 17 Part of SWMU Group D	Constructed in the early 1950s, covers installed on the unit in 1981.	K051 hazardous waste sludge	No visible signs of a release, NFA	Phase I RFI Report approved by U.S. EPA on 11/24/1999	
Air Flotation Unit	SWMU 18		RFA recommended no further action.	NFA	RFI DOCC Report (incorporated into the Phase I RFI Workplan) approved by U.S. EPA on 8/7/1997.	
AFU Sump	SWMU 19 Part of SWMU Group D	Part of the AFU, constructed in 1966	RFA recommended no further action.	No visible signs of a release, NFA	Phase I RFI Report approved by U.S. EPA on	

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<u>Unit Name</u>	<u>SWMU or AOC</u>	<u>Dates of Operation</u>	<u>Constituents of Concern¹, wastes</u>	<u>Remedy</u>	<u>Remedy Document</u>	<u>Approval Date</u>
Vacuum Filter	SWMU 20	1951-1991	RFA recommended no further action.	NFA	RFI DOCC Report (incorporated into the Phase I RFI Workplan) approved by U.S. EPA on 8/7/1997.	11/24/1999
Belt Filter Press	SWMU 21	1983-1993	RFA recommended no further action.	NFA	RFI DOCC Report (incorporated into the Phase I RFI Workplan) approved by U.S. EPA on 8/7/1997.	
Equalization Tank	SWMU 22	October 1983 -present	RFA recommended no further action.	NFA	RFI DOCC Report (incorporated into the Phase I RFI Workplan) approved by U.S. EPA on 8/7/1997.	
<u>Aeration Basins A & B</u>	<u>SWMU 23</u>					
Clarifiers A &	SWMU 24					

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<u>Unit Name</u>	<u>SWMU or AOC</u>	<u>Dates of Operation</u>	<u>Constituents of Concern¹, wastes</u>	<u>Remedy</u>	<u>Remedy Document Approval Date</u>
B					U.S. EPA on 8/7/1997.
Rapid Sand Filter	SWMU 25				
Effluent Sump	SWMU 26				
Sludge Thickener	SWMU 27				
Aerobic Digester	SWMU 28	Not Described	RFA recommended no further action.	NFA	RFI DOCC Report (incorporated into the Phase I RFI Workplan) approved by U.S. EPA on 8/7/1997.
Sanitary Package Treatment Plant	SWMU 29	Not Described	RFA recommended no further action.	NFA	RFI DOCC Report (incorporated into the Phase I RFI Workplan) approved by U.S. EPA on 8/7/1997.

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Dates of Operation
Constituents of Concern¹
wastes

<u>Unit Name</u>	<u>SWMU or AOC</u>	<u>Dates of Operation</u>	<u>Constituents of Concern¹</u> <u>wastes</u>	<u>Remedy</u>	<u>Approval Date</u>
Tank 77, Tank 77A, Tank 78, Tank 79	SWMU 30 SWMU 31 SWMU 35 SWMU 36 SWMU Group E (Part of Area 3)	Part of Operating Refinery WWTP	Used to store slop emulsion and WWTP sludges prior to dewatering. Benzo(a)pyrene	SWMU Grps. B, E and F combined into Area 3 for further evaluation. Poses a risk for high frequency workers IC (annual sign inspections)	Phase II RFI Report approved by U.S EPA on 10/24/2001
South Container Drying Pit	SWMU 32 (Part of SWMU Group B and Area 3)	Taken out of service in 1989	dibenz(a,h)anthracene,	SWMU Group B passed the U.S. EPA HHRA for industrial scenarios, IC, NFA.	Phase II RFI Report approved by U.S EPA on 10/24/2001
New Lime Pit	SWMU 33	Closed in 1986	Stored boiler house waste lime sludge, RFA recommended no further action.	During closure, pit area excavated, cleaned, regraded and seeded. NFA	RFI DOCC Report (incorporated into the Phase I RFI Workplan) approved by U.S. EPA on 8/7/1997.
North Container	SWMU 34 (Part of SWMU Group B and	Taken out of service in	benzo(a)pyrene	SWMU Group B passed the U.S. EPA HHRA for industrial scenarios, IC,	Phase II RFI Report approved by

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Dates of Operation Constituents of Concern¹, wastes Remedy Approval Date

<u>Unit Name</u>	<u>SWMU or AOC</u>	<u>Dates of Operation</u>	<u>Constituents of Concern¹, wastes</u>	<u>Remedy</u>	<u>Approval Date</u>
Drying Pit	Area 3)	1989		NFA.	U.S EPA on 10/24/2001
Tank 84	SWMU 37	1951-present	Components of the refinery's slop oil emulsion treatment plant. RFA recommended no further action.	NFA	RFI DOCC Report (incorporated into the Phase I RFI Workplan) approved by U.S. EPA on 8/7/1997.
Tank 85	SWMU 38				
Sludge Storage Tank 72	SWMU 39	November 1985-present	RFA recommended no further action.	NFA	RFI DOCC Report (incorporated into the Phase I RFI Workplan) approved by U.S. EPA on 8/7/1997.
API Bottoms Thickener	SWMU 40	1984-present	RFA recommended no further action.	NFA	RFI DOCC Report (incorporated into the Phase I RFI Workplan)

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This table is for summary purposes. For detailed information refer to the remedy document for each SWMU, SWMU Group or Area.

Unit Name	SWMU or AOC	Dates of Operation	Constituents of Concern ¹ wastes	Remedy	Approval Date
Miscellaneous Sump	SWMU 41	Not Described	No Phase II criteria exceedances - SWMU 41 eliminated during Phase I	NFA	Phase I RFI Report approved by U.S. EPA on 11/24/1999
AFU Sludge Pond, Oily Sludge Pond, and Sludge and Sludge Drying Pit	SWMUs 42, 43 & 60 SWMU Group F	AFU and Oily Sludge Pond were in service from ~1950 until 1985	Benzene, benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, dibenz(a,h)anthracene and indeno(1,2,3-cd)pyrene Lead in GW	Removal of stabilized hazardous waste, in-situ stabilization of oily sand, low permeability cover overlain with gravel and concrete, passed HHRA for industrial scenarios, IC, annual inspection of cover system and submit report to Ohio EPA	CCR approved by Ohio EPA on November 9, 2006
Acid Pond / Impounding Pond	SWMU 44	Sludge removed in the 1970's	Arsenic and benzene Contained corrosive sludges	passed HHRA, NFA	Phase II RFI Report approved by U.S. EPA on 10/24/2001
North Impounding	SWMU 45 (Part of SWMU Group B and	1973 until 1989 and	Benzo(a)pyrene, benzo(a)anthracene,	SWMU Group B passed the U.S. EPA HHRA for	Phase II RFI Report

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Dates of Operation
Constituents of Concern,¹
wastes

<u>Unit Name</u>	<u>SWMU or AOC</u>	<u>Dates of Operation</u>	<u>Constituents of Concern,¹ wastes</u>	<u>Remedy</u>	<u>Approval Date</u>
Pond	Area 3)	backfilled in 1990	benzo(b)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene and arsenic Sludge and contaminated soils were stabilized and disposed off-site after testing non-hazardous	industrial scenarios, IC, NFA.	approved by U.S EPA on 10/24/2001
Old Primary Pond	SWMU 46 (Part of Area 4)	1960s to 1984 closed in 1985	Groundwater: lead, benzene and 1-4-Dioxane Soil: benzene, benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene arsenic and chromium	Material within SWMU boundary (including the sand immediately underneath the sludge) was removed, stabilized and placed back into the SWMU in 1985. The unit was re-stabilized in 2002. Semi-annual performance-based ground water monitoring was required. Annual sign inspection, cover inspection and maintenance.	CMI CCR from U.S. EPA on Jan. 4, 2003. Ohio EPA permit mod to remove performance-based GW monitoring 8/12/08
Primary Pond *RCRA	SWMU 47 (Part of SWMU Group G)	1972 to 1984 (secondary containment)	No Phase II criteria exceedances - SWMU Group G eliminated during Phase I	Addressed under RCRA Closure program: landfill closure: sludge stabilized	Phase I RFI Report (1/2000),

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<u>Unit Name</u>	<u>SWMU or AOC</u>	<u>Dates of Operation</u>	<u>Constituents of Concern¹, wastes</u>	<u>Remedy</u>	<u>Remedy Document</u>	<u>Approval Date</u>
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Closure*		1984 to 1984 (primary containment)		and consolidated/RCRA cover constructed over mass. Void space clean closed and backfilled. Semi-annual post-closure GW monitoring ongoing. On-going cap inspection and maintenance.	approved by U.S EPA on 11/24/1999 Ohio EPA approved RCRA Closure certification on 12/12/02	
C-Pond New Secondary Pond *RCRA Closure*	SWMU 48 (Part of SWMU Group G)	1970 until replaced by storm water impoundment tank (G-tank) by March 29, 1994	No Phase II criteria exceedances - SWMU Group G eliminated during Phase I.	Addressed under RCRA Closure program: sludge stabilized/consolidated into Primary Pond along with contaminated soil. C Pond was "Clean Closed". No GW monitoring required. NFA	Phase I RFI Report approved by U.S EPA on 11/24/1999 Ohio EPA approved RCRA Closure certification on 12/12/02	
D-Pond	SWMU 49 Part of SWMU Group G	1970-1983	Biological wastewater treatment polishing pond, wastewater effluent No Phase II criteria exceedances - SWMU Group G eliminated during Phase I.	Pond drained in 1988, sludge dewatered and stabilized, some stabilized sludge disposed off-site, other sludge stayed on-site NFA	Phase I RFI Report approved by U.S EPA on 11/24/1999	

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<u>Unit Name</u>	<u>SWMU or AOC</u>	<u>Dates of Operation</u>	<u>Constituents of Concern¹, wastes</u>	<u>Remedy</u>	<u>Remedy Document</u>	<u>Approval Date</u>
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A-Pond	SWMU 50 Part of SWMU Group G	Still in service	Biological wastewater treatment polishing pond, wastewater effluent No Phase II criteria exceedances - SWMU Group G eliminated during Phase I.	NFA	Phase I RFI Report approved by U.S EPA on 11/24/1999	
B-Pond	SWMU 51 Part of SWMU Group G	Still in service	Biological wastewater treatment polishing pond, wastewater effluent No Phase II criteria exceedances - SWMU Group G eliminated during Phase I.	NFA	Phase I RFI Report approved by U.S EPA on 11/24/1999	
North and South Sewer Systems	SWMU 52 & 53 Part of SWMU Group D	North Sewer constructed in the early 1950s South Sewer constructed in the 1980s. Still in service.	Materials handled by the Systems include: Cooling Tower Blowdown, Boiler Blowdown, Stormwater Runoff, BP Terminals Water Draws, BP Chemical V2 Water and Sanitary Wastewater.	An integrity study conducted at the North and South sewers involved Thermal Infrared Radiation (TIR) study was completed in May 2002 and roughly 29,000 lineal feet of sewer were investigated. NFA	U.S. EPA approved the TIR Summary Report on May 1, 2003.	
Slop Pond	SWMU 54 Part of SWMU Group	1930s or 1940s until	Stormwater run-off, benzene, benzo(a)pyrene	Drained, filled and replaced w/tankage (AST 248 & 249) SWMU Group H passed the	Phase II RFI Report approved by	

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This table is for summary purposes. For detailed information refer to the remedy document for each SWMU, SWMU Group or Area.

Dates of Operation
Constituents of Concern¹
wastesRemedy
Document

<u>Unit Name</u>	<u>SWMU or AOC</u>	<u>Dates of Operation</u>	<u>Constituents of Concern¹</u> <u>wastes</u>	<u>Remedy</u>	<u>Approval Date</u>
	H, part of Area 1	1956		HHRA, NFA.	U.S EPA on 10/24/2001
Oil Pond No. 1	SWMU 55 Part of SWMU Group H, part of Area 1	1930s or 1940s until 1956	Stormwater run-off, benzo(a)pyrene, dibenz(a,h)anthracene,	Drained, filled and replaced w/tankage (AST 248 & 249) SWMU Group H passed the HHRA, NFA.	Phase II RFI Report approved by U.S EPA on 10/24/2001
Oil Pond No. 2	SWMU 56 Part of SWMU Group H, part of Area 1	1930s or 1940s until 1956	Stormwater run-off benzo(a)pyrene,	Drained, filled and replaced w/tankage (AST 248 & 249) SWMU Group H passed the HHRA, NFA.	Phase II RFI Report approved by U.S EPA on 10/24/2001
North Ditch	SWMU 57	Replaced by plant sewer system, covered by RR track embankment	Stormwater convergence structure, surface run-off arsenic, benzo(a)pyrene	SWMU 57 passed the HHRA, IC, annual sign inspection,	Phase II RFI Report approved by U.S EPA on 10/24/2001
Tank 231	SWMU 58	1939 or 1951 until 1954	Arsenic and benzene in Tank 231 soil.	Limited excavation of soil Tank stored toluene (product), spill. Tank 231 passed U.S. EPA risk assessment but benzene identified as a COC due to	CCR approved by U.S. EPA on January 2, 2003

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Constituents of Concern¹,
wastesDates of
OperationSWMU or AOCUnit NameRemedy

<u>Unit Name</u>	<u>SWMU or AOC</u>	<u>Dates of Operation</u>	<u>Constituents of Concern¹, wastes</u>	<u>Remedy</u>	<u>Document</u> <u>Approval Date</u>
Trolumen Area	SWMU 61	1970-1991	benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene and dibenz(a,h)anthracene in soil	risk-management decision Institutional control (annual sign inspection) Excavation and disposal of the impacted soil and concrete debris. The affected areas were backfilled with soil from an on-site borrow area. NFA	CCR approved by Ohio EPA on May 7, 2008
E-Pond	SWMU 62	1958-October 1977	benzo(a)pyrene, dibenz(a,h)anthracene, PCBs (Aroclor 1248) and chromium, in soil Benzene, 1,4-dioxane, antimony, arsenic, thallium and lead in GW	October 1977 sludge was removed and covered w/a clay cap. The ecological remedy consisted of placement of a soil cover over the area, site grading and planting of native species over the area. Performance-based ground water monitoring was required (semi-annual) until 8/12/08 permit mod. Annual sign and cover inspections kept at facility.	CCR approved November 18, 2002 by U.S. EPA Ohio EPA permit mod to remove GW monitoring 8/12/08.

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<u>Unit Name</u>	<u>SWMU or AOC</u>	<u>Dates of Operation</u>	<u>Constituents of Concern¹, wastes</u>	<u>Remedy</u>	<u>Remedy Document</u>	<u>Approval Date</u>
Buckeye Road Landfill	SWMU 63	1972-1984,	Refinery and municipal wastes BEHP, 1,2-dichloropropane, chloroethane, VC, arsenic, cadmium, lead and thallium in GW	Institutional Controls per CMS and CMI Work Plan Performance-based ground water monitoring was required (semi-annually) until 8/12/08 permit modification. NFA	U.S EPA 12/12/2001, 8/18/2002 (CMI & PBGMP) OEPA Permit Modification to remove PBGM 8/12/2008	
Old Fire Training Area	SWMU 64	?-1991	18 inches of surface soils disposed off-site as non-hazardous in 1991. No Phase II criteria exceedances - SWMU 64 eliminated during Phase I.	NFA	Phase I RFI Report approved by U.S EPA on 11/24/1999	
Old Sludge Pond	SWMU 65 (Part of Area 2)	Unknown. AST 214 (SWMU 70) was/is currently at the location	Benzene, total xylenes	SWMU 65 passed the Phase II RFI HHRA, NFA.	Phase II RFI Report approved by U.S EPA on 10/24/2001	
Leaded Waste Area	SWMU 66	Spill in Feb. 1982	Tetraethyl lead spill, benzo(a)pyrene in soil	Passed Phase II HHRA and Eco Risk, NFA	Phase II RFI Report approved by U.S EPA on	

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Unit Name	SWMU or AOC	Dates of Operation	Constituents of Concern ¹ , wastes	Remedy	Approval Date
Former Coke Pile	SWMU 67	?-summer 1989	Arsenic, benzo(a)pyrene & dibenz(a,h)anthracene in soil	Coke fines shipped to customers, upper soils removed, area regraded and fill layer added over footprint of area Passed U.S. EPA's HHRA, IC, annual sign inspection	10/24/2001 Phase II RFI Report approved by U.S EPA on 10/24/2001
Former Lube Plant	SWMU 68	Unknown	Lubricating oils for industrial and mechanical applications, No Phase II criteria exceedances - SWMU 68 eliminated during Phase I.	NFA	Phase I RFI Report approved by U.S EPA on 11/24/1999
Aromatics Closed Drain System	SWMU 69	2 leaks detected on 4/23/96	Off-specification products collected, benzo(a)pyrene	single, low level exceedance, NFA	Phase I RFI Report approved by U.S EPA on 11/24/1999
AST 214	SWMU 70	Leak determined on 6/26/96	Gasoline storage, arsenic exceedance	Isolated, low level exceedance NFA	Phase I RFI Report approved by U.S EPA on 11/24/1999

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Dates of Operation Constituents of Concern¹, wastes Remedy Document Approval Date

<u>Unit Name</u>	<u>SWMU or AOC</u>	<u>Dates of Operation</u>	<u>Constituents of Concern¹, wastes</u>	<u>Remedy</u>	<u>Remedy Document</u>	<u>Approval Date</u>
AST 207	SWMU 71	Leak determined on 3/26/97	Used to store gasoline. No Phase II criteria exceedances - SWMU 71 eliminated during Phase I	NFA	Phase I RFI Report approved by U.S. EPA on 11/24/1999	11/24/1999
AST 209	SWMU 72	Several holes discovered in the floor of the tank on 7/8/97.	Used to store gasoline. No Phase II criteria exceedances - SWMU 72 eliminated during Phase I	NFA	Phase I RFI Report approved by U.S. EPA on 11/24/1999	11/24/1999
Area 2	SWMU Group A (Old Drum Storage Area (SWMU 3) and L-3 Waste Pile (SWMU 5)) Old Sludge Pond (SWMU 65)	Old Drum Storage area closed in 1990	Benzene, ethylbenzene, toluene, xylene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene & indeno(1,2,3-cd)pyrene in soil	involved institutional controls, limited soil excavation activities and backfilling with clean soil. NFA	CCR approved by U.S. EPA on 12/30/2002.	12/30/2002
Area 3	SWMU Groups B, E and F	See individual SWMU Groups	Benzene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene & indeno(1,2,3-cd)pyrene in soil	Area covered with asphalt and gravel, therefore no exposed surface soils. Semi-annual performance-based GW monitoring until 8/12/08 permit modification. Annual technical impracticability (TI)	CMI Conceptual Work Plan (7/2002) approved by U.S. EPA 8/16/02	8/16/02

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This table is for summary purposes. For detailed information refer to the remedy document for each SWMU, SWMU Group or Area.

Constituents of Concern¹
wastesDates of
OperationUnit Name SWMU or AOCRemedy
DocumentApproval Date

<u>Unit Name</u>	<u>SWMU or AOC</u>	<u>Dates of</u> <u>Operation</u>	<u>Constituents of Concern¹</u> <u>wastes</u>	<u>Remedy</u>	<u>Remedy</u> <u>Document</u>	<u>Approval Date</u>
			arsenic and lead in GW	monitoring. Look for sheen on GW to determine if contamination migrating from soil to GW. If ground water monitoring indicates migration or unacceptable risk, implement remediation at the downgradient perimeter of the LNAPL as recommended in the October 2002 report titled "Technical Impracticability Area 3 LNAPL." Reassess technical impracticability (TI) of LNAPL remediation and submit a demonstration in 5 year intervals starting in 2007.	Technical Impracticability Demonstration (TID) (10/2002), approved by U.S. EPA 5/13/03	
Area 4	SWMUs 15 (WP-1 Spent Catalyst Pile), 46 (Old Primary Pond) & 73 (Intermediate Tank Area)	SWMU 15 – Storage of spent catalyst material until 1986 SWMU 46 – see "Old Primary	SWMU 15 - Benzene, benzo(a)anthracene, benzo(a)pyrene, dibenz(a,h)anthracene & indeno(1,2,3-cd)pyrene, arsenic & chromium in soil SWMU 46 - Benzene, 1,4-	Annual sign inspection around LNAPL area	SWMUs 15 & 73 passed U.S. EPA HHRA, IC, NFA SWMU 46- In 2001, material within SWMU boundary (including the sand immediately underneath the sludge) was stabilized. Semi-annual GW	SWMUs 15 & 73 - Phase II RFI Report, U.S EPA 10/24/2001 SWMU 46 - CMI CCR approved by

¹ COCs listed are constituents that exceed the Phase II Comparison Criteria.

<u>Unit Name</u>	<u>SWMU or AOC</u>	<u>Dates of Operation</u>	<u>Constituents of Concern¹, wastes</u>	<u>Remedy</u>	<u>Remedy Document</u>	<u>Approval Date</u>
		Pond" SWMU 73 - Jan 6, 1995: 8,200 barrel Jet A spill,	dioxane and lead in GW SWMU 73 - Oct 1996: "Jet A" discovered in monitoring well FW-09S	monitoring performed per PBGMP until 2008 permit modification. NFA	U.S EPA on 1/4/2003. OEPA Permit Modification to remove PBGM 8/12/2008	
C-3 Drum Collection Area and WP-2 Spent Catalyst Pile	SWMU 13 & SWMU 59 SWMU Group C	SWMU was used in the 1980's	Arsenic in soil	Passed U.S. EPA HHRA, IC, NFA	Phase II RFI Report approved by U.S EPA on 10/24/2001	
Ottawa River	AOC	NA	Sediment: Acenaphthene, benzo(a)anthracene, benzo(b)fluoranthene, diethyl phthalate, fluoranthene, fluorine, naphthalene, phenanthrene, pyrene carbon disulfide	Institutional controls per CMS and CMI Work Plan Passed HHRA and ERA, NFA Annual sign inspection.	U.S. EPA 12/12/2001, 8/18/2002	
Zurmeily Creek	AOC	NA	Lead in surface water, total cyanide and benzo(a)pyrene in sediment	Institutional controls per CMS and CMI Work Plan Annual sign inspection.	U.S. EPA 12/12/2001, 8/18/2002	

¹ COCs listed are constituents that exceed the Phase II Comparison Criteria.
This table is for summary purposes. For detailed information refer to the remedy document for each SWMU, SWMU Group or Area.

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: Air Flotation Unit (AFU) Pond (SWMU 42), Oily Sludge Pond (SWMU 43), Sludge Drying Pit (SWMU 60)

¹ COCs listed are constituents that exceed the Phase II Comparison Criteria.

This table is for summary purposes. For detailed information refer to the remedy document for each SWMU, SWMU Group or Area.

Acronyms & Abbreviations

AOC	Area of Concern			
AST	Aboveground Storage Tank	HHRA	Human Health Risk Assessment	
BEHP	Bis(2-ethylhexyl)phthalate	IC	Institutional Control	
COC	Constituent of Concern	LNAPL	Light non-aqueous phase liquid	
CCR	Construction Completion Report	NA	Not Applicable	
CMI	Corrective Measures Implementation	NFA	No Further Action	
CMS	Corrective Measures Study	PBGMP	Performance Based Groundwater Monitoring Plan	
DOCC	Description of Current Conditions	SWMU	Solid Waste Management Unit	
ERA	Ecological Risk Assessment	TI	Technical Impracticability	
GW	Ground Water	VC	Vinyl Chloride	

BP Lima SWMU table 010213.doc

¹ COCs listed are constituents that exceed the Phase II Comparison Criteria.

This table is for summary purposes. For detailed information refer to the remedy document for each SWMU, SWMU Group or Area.



Division of Materials and Waste Management

Response to Comments

**Project: BP Products North America and Lima Refining Company, Director
Initiated Permit Modification
Ohio EPA ID #: OHD 005 051 826**

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Ohio EPA issued a draft permit and initiated a comment period on August 10, 2012, regarding a director initiated permit modification. This document summarizes the comments and questions received during the associated comment period, which ended on September 24, 2012.

Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format.

Comments from Atlantic Richfield Company (a BP affiliated company)

Module E – Corrective Action Requirements

**Comment 1: Page 25, Module E – Corrective Action Requirements,
Corrective Action Summary, third paragraph.**

Recommend re-wording the following sentence, "On October 24, 2001, U.S. EPA determined that BP had met the conditions in the RFI approval." Suggested rewording, "On October 24, 2001, U.S.EPA issued final approval of the RFI report."

Response 1: Ohio EPA has changed the requested permit language.

Comment 2: **Page 27, Module E – Corrective Action Requirements, Section E.2. Corrective Action Beyond the Facility Boundary**

This activity is only relevant for newly identified WMUs at the Facility. Therefore, it is recommended that this paragraph begin with the following addition: "In the case of a newly identified WMU..."

Response 2: The permit condition language makes general statements to cover new or existing units. Operations and maintenance (O&M) activities continue at some SWMUs. The facility has not been released from all of its Corrective Action obligations. No change has been made to the permit with respect to this comment.

Comment 3: **Page 27, Module E – Corrective Action Requirements, Section E.3. Identification of SWMUs**

Although Attachment 2 is referenced in this Permit Condition, neither Attachment 1 nor Attachment 2 was provided as part of this draft permit modification. Recommend re-wording the revised (i.e., second) sentence as follows, "The units or groups of units investigated during the Phase II RFI are listed in Attachment 3. The units addressed under Corrective Action are also listed in Attachment 3."

Response 3: Ohio EPA regrets any confusion caused by referencing Attachments 1 and 2. References to Attachment 1 and 2 are already in the permit and "Attachment 3" was used to continue with the numbering process. Attachment 1 is a copy of the *Ohio Corrective Action Plan* and Attachment 2 contains a list of SWMUs and SWMU groups.

The second sentence of Section E.3 will be replaced with the following sentences: "The units or groups of units which were identified during the course of Corrective Action are listed in Attachment 3. The following units from Attachment 3 have completed their corrective measures remedy and require on-going/future operations and maintenance activities:

- SWMU 1 – Land Treatment Unit
- SWMU 7 – L-5 Landfill
- SWMU 8 – L-6 Landfill
- SWMU 46 – Old Primary Pond
- SWMU 47 – Primary Pond

SWMU 57 – North Ditch
SWMU 58 – Tank 231
SWMU 62 – E-Pond
SWMU 67 – Former Coke Pile
SWMU Group A – Old Drum Storage Area (SWMU 3) and L-3 Waste Pile (SWMU 5)
Area 3 - SWMU Groups B, E, and F
Ottawa River – Area of Concern
Zurmehly Creek – Area of Concern”

Comment 4: Page 28, Module E – Corrective Action Requirements, Section E.5. RFI, subsections (b) RFI Implementation and (c) RFI Final Report

Both these activities are complete for the identified WMUs at the Facility. Therefore, it is recommended that these two paragraphs begin with the following addition, “In the case of a newly identified WMU...”

Response 4: Subsection (a) of Section E.5, RFI Workplan, already contains this language. The proposed additional language would be duplicative and unnecessary. Ohio EPA understands that RFI work for the units currently identified in Condition E.3 is complete. No change has been made to the permit with respect to this comment.

Comment 5: Page 29, Module E – Corrective Action Requirements, Section E.6., Interim Measures

This activity is only relevant for newly identified WMUs at the Facility. Therefore, it is recommended that this paragraph begin with the following addition, “In the case of a newly identified WMU...”

Response 5: The permit condition language makes general statements to cover new or existing units. The permit language is standard and customary and provides part of the framework for going through Corrective Action. Changing the language to specify “newly identified WMUs” may appear to cause a potential exclusion and would not be considered as protective as the current language. No change has been made to the permit with respect to this comment.

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Comment 6: Page 30, Module E – Corrective Action Requirements, Section E.7. Determination of No Further Action, subsection (a) Permit Modification

This activity is only relevant for newly identified WMUs at the Facility. Therefore, it is recommended that this paragraph begin with the following addition: “In the case of a newly identified WMU...”

Response 6: The permit condition language makes general statements to cover new or existing units. The permit language is standard and customary and provides part of the framework for going through Corrective Action. Changing the language to specify “newly identified WMUs” may appear to cause a potential exclusion and would not be considered as protective as the current language. No change has been made to the permit with respect to this comment.

Comment 7: Pages 31 and 32, Module E – Corrective Action Requirements, Section E.8. Corrective Measures Study, subsection (b) CMS Work Plan Implementation and (c) CMS Final Report

These activities are only relevant for newly identified WMUs at the Facility. Therefore, it is recommended that each paragraph begin with the following addition, “In the case of a newly identified WMU...”

Response 7: Subsection (a) of Section E.5, CMS Workplan, already contains this language. The permit language is standard and customary and provides part of the framework for going through Corrective Action. No change has been made to the permit with respect to this comment.

Comment 8: Page 32, Module E – Corrective Action Requirements, Section E.9. Corrective Measures Implementation, first paragraph.

This paragraph describes the proposed Corrective Action for units identified in Permit Condition E.3. The activities described in this paragraph are already complete; therefore this paragraph should be deleted.

Response 8: Ohio EPA agrees that the first paragraph of that section is no longer necessary. Therefore, Ohio EPA has made the requested permit change.

Comment 9: **Page 33, Module E – Section E.9. Corrective Measures Implementation, (a) Corrective Action Objectives (1) Establish Media Cleanup Standards for Points of Compliance.**

The second sentence states that, “MCSs were established for the media exhibiting exceedances of action levels.” This sentence should be deleted since these exceedances were specific to the Corrective Action already completed.

Response 9: The Condition explains that the MCS’ were developed as part of a process defining how Corrective Measures were addressed. Ohio EPA believes keeping these standards in the permit is reasonable. No change has been made to the permit with respect to this comment.

Comment 10: **Page 33, Module E – Section E.9. Corrective Measures Implementation, (a)(1)(i) Media Cleanup Standards.**

The first sentence of this paragraph should be deleted since it is specific to the Corrective Action already completed.

Response 10: The sentence provides historical information on what work has been conducted under Corrective Action and provides the public with some names of documents that can be researched if more information is needed. Ohio EPA has added more detail to the first sentence under Media Cleanup Standards to show how the Media Cleanup Standards were developed. Ohio EPA has added the year the Phase II RFI, HHRA and ecological risk assessments were concluded to show work that has been completed. The sentence will now read as follows, “Based on the results from the Phase II RCRA Facility Investigation (RFI), Human Health Risk Assessment (HHRA), and Detailed Ecological Risk Assessment (DERA) completed in 2001, action levels were developed during the CMS to help determine the specific areas of the facility that require corrective measures.” Ohio EPA has modified the permit language accordingly.

Comment 11: **Page 37, Module E – Section E.9. Corrective Measures Implementation, (a)(1)(ii) Points of Compliance (POC).**

Recommend adding the following to this paragraph, “The POC for groundwater is the property boundary.”

Response 11: The request is outside of the intent/scope of the director-initiated permit modification. The goal of the permit modification was to remove units that have completed all corrective action activities

from the permit and to include a table that summarizes all units identified during the investigation.

The comment also does not provide a justification for why the POC for ground water should be the property boundary. If this type of change needs to be made to the permit, it should be made separately from this director-initiated modification and must include more information. No change has been made to the permit with respect to this comment.

Comment 12a: **Page 38, Module E – Section E.9. Corrective Measures Implementation, Subsection (a), Corrective Action Objections, (2).**

This activity is only relevant for newly identified WMUs at the Facility. Therefore, it is recommended that this paragraph begin with the following addition, “In the case of a newly identified WMU...”

Response 12a: Section E.9., Corrective Measures Implementation (CMI), already states, “for a newly discovered waste management unit.” Changing the language to specify “newly identified WMUs” may appear to cause a potential exclusion and would not be considered as protective as the current language. No change has been made to the permit with respect to this comment.

Comment 12b: **Page 38, Module E – Section E.9. Corrective Measures Implementation, Subsection (a), Corrective Action Objections, (2).**

A Hazard Index (HI) of 1.0 is incorrect. The value of the HI should be 1, as risk/hazard is only calculated to one significant figure.

Response 12b: The Hazard Index was stated incorrectly by showing two significant figures instead of one. The error was also noted in Section E.9.(a)(1)(ii). Therefore, the permit was changed in both areas for consistency to show that the Hazard Index is 1 and not 1.0.

Comment 13: **Page 42, Module E – Section E.9. Corrective Measures Implementation (c) Specific Remedies.**

The CMICWP mentioned in this section describes Corrective Action already complete. This reference should be deleted.

Response 13: Referencing the CMICWP points out where more information can be found on the history of the various units. O&M activities continue

at some SWMUs. The facility has not been released from all of its Corrective Action obligations. No change has been made to the permit with respect to this comment.

Comment 14: Page 46, Module E – Section E.9. Corrective Measures Implementation (f) Corrective Measures Completion Report

This section is referring to any WMUs that may be identified in the future. Therefore, the phrase, “For any newly identified WMUs.....” should be added to the first sentence.

Response 14: Changing the language to specify, “For any newly identified WMUs,” may appear to cause a potential exclusion and would not be considered as protective as the current language. Section E.8.(a), the CMS section of the permit, already contains language applicable when a new unit is identified. No change has been made to the permit with respect to this comment.

Comment 15: Page 48, Module E – Section E.9. Corrective Measures Implementation (h) Financial Assurance

Since financial assurance is already in place for the existing WMUs, this section refers only to newly identified WMUs. Therefore, the phrase, “For any newly identified WMUs...” should be added to the first sentence.

Response 15: The permit language is standard and customary and provides part of the framework for going through Corrective Action. Changing the language to specify, “For any newly identified WMUs,” may appear to cause a potential exclusion and would not be considered as protective as the current language. Operations and maintenance (O&M) activities continue at some SWMUs. The facility has not been released from all of its Corrective Action obligations. Financial assurance must be maintained at WMUs that have O&M obligations and the permit is the mechanism to ensure this activity continues. No change has been made to the permit with respect to this comment.

Comment 16: Page 51, Module E – Section E.12. Completion of Corrective Action OAC Rule 3745-54-101.

Since this requirement has been met for WMUs requiring Corrective Action, the first sentence of this paragraph should be modified as follows, “After completing Corrective Action... from any newly identified WMUs at the Facility....”

Response 16: Changing the language to specify “any newly identified WMUs” may appear to cause a potential exclusion and would not be considered as protective as the current language. Section E.8.a), the CMS section of the permit, already contains language applicable when a new unit is identified. No change has been made to the permit with respect to this comment.

Comment 17: Page 69, Module G – Section G1. Module Highlights

The AFU, Oily Sludge, and Drying Pit Ponds unit was addressed under Corrective Action, which has been implemented and certified complete by Ohio EPA. Therefore it is recommended that all discussion of AFU/Oily sludge ponds be removed from this section.

Response 17: Ohio EPA agrees that this language can be removed from Module G as the SWMUs were addressed under Corrective Action. The SWMUS’ remedy is detailed in Attachment 3 and remaining O&M obligations are detailed in SWMU Group F’s Construction Completion Report.

Note: The draft permit erroneously labeled the first page of Module G as Page 69 rather than Page 67. This has been corrected in the final permit.

Attachment 3 SWMU and AOC Table

Comment 18: Attachment 3, Page 1, 3, 4, 5, 7:

The date of the RFI DOCC Report was 9/30/97. This should be added to all citations in Attachment 3.

Response 18: The “Remedy Document Approval Date” column should have listed the date the remedy document was approved, not the date on the report. Ohio EPA agrees that adding the date to each RFI DOCC Report reference will make the table more consistent. The DOCC report was initially incorporated into the Phase I RFI Workplan which was approved by U.S. EPA on August 7, 1997. Therefore, Ohio EPA has changed the requested permit language throughout the table.

Comment 19: Attachment 3, Page 2:

L-4 Landfill, (SWMU 6): Arsenic was not a COC for this unit and should be deleted. Arsenic was detected but at concentrations less than the risk-based screening level (RBSL), and was therefore not considered a trigger for delineation or further action.

Response 19: The COC list for soil was based on constituents that exceeded the Phase II Comparison Criteria. Arsenic was detected above the Phase II Comparison Criteria in both the Phase I and II RCRA Facility Investigations (RFIs). However, according to the Phase II RFI Report, arsenic concentrations below U.S. EPA's risk-based screening level (RBSL) of 29,000 ug/kg "are not considered triggers for further delineation." Ohio EPA will remove arsenic from L-4 Landfill's COC list. Therefore, Ohio EPA has changed the requested permit language.

Comment 20: **Attachment 3, Page 2:**

L-5 Landfill (SWMU 7): Under the Remedy Column, the following sentence should be revised to add the date completed, "Semi-annual performance-based ground water monitoring was required and completed in 2007."

Response 20: Ohio EPA has added "...and completed in 2007" to the sentence.

Comment 21: **Attachment 3, Page 3:**

SWMU 58 (Tank 231) should have its own entry on the table. It is not associated with SWMU 8 (L-6 Landfill).

Response 21: A change to the permit was made to provide SWMU 58 (Tank 231) in a separate row from SWMU 8 (L-6 Landfill).

Comment 22: **Attachment 3, Page 4:**

WP-1, Spent Catalyst Pile (SWMU 15.): In the Remedy Document Approval Date column the entry should read: "Phase II RFI Report approved by U.S. EPA..."

Response 22: The request could add some clarification to the table. Therefore, Ohio EPA has changed the requested permit language.

Comment 23: **Attachment 3, Page 7:**

North Container Drying Pit (SWMU 34...): No signs are required to be posted for Group B; thus sign inspections are not completed for this SWMU. Recommend deleting reference to annual sign inspection.

Response 23: SWMU 34 is part of SWMU Group B and is also grouped under Area 3. Area 3 has sign inspection requirements because of the LNAPL area but SWMU Group B does not since it is outside of the

LNAPL area. Ohio EPA has removed the annual sign inspection reference.

Comment 24: Attachment 3, Page 7:

AFU Sludge Pond... (SWMUs 42, 43, & 60): A low permeability cover was installed and overlain by a gravel cover. Recommend the following revised entry, "Removal of stabilized hazardous waste, in-situ stabilization of oily sand, low permeability cover overlain with gravel."

Response 24: The revision will add some additional detail to the Remedy description. Therefore, Ohio EPA has changed the requested permit language.

Comment 25a. Attachment 3, Page 11:

North and South Sewer Systems (SWMU 52 & 53): Both SWMU 52 and 53 remain in service. Recommend adding to the Dates of Operation column.

Response 25a: Ohio EPA has added, "Still in service" to the "Dates of Operation" column for SWMUs 52 and 53. Therefore, Ohio EPA has changed the requested permit language.

Comment 25b: The following should be added to the Remedy column, "No breaches to the integrity of the sewers identified and Corrective Action obligations met for SWMUs 52 and 53."

Response 25b: U.S. EPA approved the Thermal Infrared Radiation (TIR) Summary Report. U.S. EPA's approval letter for SWMUs 52 & 53 only says that it "approves the document." The request does not provide any justification for adding the sentence to the table. No change has been made to the permit with respect to this comment.

Comment 26: Attachment 3, Page 11:

Slop Pond (SWMU 54): Benzo(b)fluoranthene through 1,1,2,2 PCE should be deleted as COCs for this unit. These were not COCs for SWMU 54.

Response 26: The COCs shown in the table were identified during the Phase I RFI for Area 1 but did not exceed Phase II criteria. Upon further review of SWMU-specific data for SWMU 54, benzo(a)pyrene is the only COC that exceeded Phase II comparison criteria during the Phase I RFI. Benzene was detected above Phase II criteria during

the Phase II investigation. Therefore, Ohio EPA has changed the requested permit language.

Comment 27: Attachment 3, Page 11:

Oil Pond No. 1 (SWMU 55): Benzo(b)fluoranthene through 1,1,2,2 PCE should be deleted as COCs for this unit. These were not COCs for SWMU 55.

Response 27: The COCs shown in the table were identified during the Phase I RFI for Area 1 but did not exceed Phase II criteria. Upon further review of SWMU-specific data for SWMU 55, benzo(a)pyrene and dibenz(a,h)anthracene are the only COCs that exceeded Phase II comparison criteria during the Phase I RFI. Therefore, Ohio EPA has changed the requested permit language to reflect that benzo(a)pyrene and dibenz(a,h)anthracene were the only two constituents that exceeded Phase II criteria.

Comment 28: Attachment 3, Page 12:

Oil Pond No. 2 (SWMU 56): Benzo(b)fluoranthene through 1,1,2,2 PCE should be deleted as COCs for this unit. These were not COCs for SWMU 56.

Response 28: The chemicals shown in the table were identified during the Phase I RFI for Area 1, but they did not exceed Phase II criteria. Upon further review of SWMU-specific data for SWMU 56, benzo(a)pyrene is the only COC that exceeded Phase II comparison criteria during the Phase I RFI. Therefore, Ohio EPA has changed the requested permit language to show benzo(a)pyrene as the only constituent that exceeded Phase II criteria.

Comment 29: Attachment 3, Page 12:

E-Pond (SWMU 62): Chromium was incorrectly listed as a COC for SWMU 62 soil in the text of Phase II RFI report. Figure 4-9-6 of the Phase II RFI Report contains the correct COC list. Chromium should be deleted from the Attachment 3 table as a COC.

Response 29: Table 4-13-1 of the Phase I RFI report shows chromium as one of the chemicals exceeding Phase II Comparison Criteria for two samples. No change has been made to the permit with respect to this comment.

Comment 30: Attachment 3, Page 13:

Antimony and thallium were not COCs for SWMU 62 in soil and should be deleted from the table as COCs.

Response 30: Antimony and thallium concentrations at SWMU 62 did not exceed Phase II Comparison Criteria. Ohio EPA acknowledges the error. Antimony and thallium were deleted as COCs in soil at SWMU 62. Therefore, Ohio EPA has changed the requested permit language.

Comment 31: Attachment 3, Page 15:

Area 2 (SWMU Group A...): The entry in the Remedy Document Approval Date should be as follows, "CCR approved by U.S. EPA on 12/30/2002"

Response 31: The request could add some clarification to the table. Therefore, Ohio EPA has changed the requested permit language.

Comment 32: Attachment 3, Page 17:

The Buckeye Road Landfill is listed twice on this table. The entry on Page 17 should be deleted.

Response 32: The double listing was an oversight and Ohio EPA has revised the table to show Buckeye Road Landfill listed only once. Ohio EPA has changed the permit language accordingly.

Comment 33: Attachment 3, Page 18:

Ottawa River and Zurmehly Creek: The entry in the Remedy column should read as follows: "Annual sign inspection documented in monthly progress reports." The statement that annual sign inspections are not submitted to Ohio EPA should be deleted.

Response 33: Ohio EPA's intent was to remove the burden of monthly reporting and eliminate unnecessary reports as the majority of corrective action work is complete.

The original permit language for section E.(9)(e) specifying the submittal of monthly progress reports to Ohio EPA by the 12th of the month will be placed back into the permit along with the new permit language. The title of the section will remain "Progress Reports." The "Remedy" column of Attachment 3 for Ottawa River and

Zurmehly Creek will now read “Annual sign inspection” If the Permittee wants to change the reporting requirements, a permit modification can be submitted to Ohio EPA.

Comment 34a: Attachment 3, Page 19:

The acronym COC (Constituent of Concern) should be added to this list.

Response 34a: Ohio EPA has added “COC” to the list. Therefore, Ohio EPA has changed the requested permit language.

Comment 34b: In addition, PCE is not a COC, and should be removed from the acronym list.

Response 34b: Ohio EPA has removed PCE from the Acronyms and Abbreviations list. Ohio EPA noticed that vinyl chloride was not added to the list and has also added this chemical to the Acronyms and Abbreviations list.

Comments from Lima Refining Company

Comment 35: Comment Period

Neither the draft permit modification, nor the supporting materials, provides an adequate basis for LRC or the public to reasonably evaluate the basis for Ohio EPA’s conclusions regarding “completion” of the necessary work. As such, LRC requests that the comment period be extended to allow development of waste management specific information, as noted below, and then to allow at least 60 days for public comment on that information.

Response 35: Ohio EPA disagrees with LRC’s claim that neither the draft permit modification nor the supporting materials provided an adequate basis for Ohio EPA’s conclusions regarding “completion” of necessary work. As a part of the draft permit modification, Ohio EPA developed an Attachment 3 to the facility’s permit. Attachment 3 details the specific remedies for individual SWMUs, SWMU groups, and areas at the facility. Attachment 3 also specifies the document and approval date that signified that the specific corrective action remedy had been completed for the units listed in the attachment. The purpose of the permit modification is to have the permit reflect the work that has been completed and approved at the facility by removing the completed selected remedies from

the permit for the different units. Based on the information that has been provided for the draft permit modification, Ohio EPA sees no value to extending the public comment period for this permit modification. No change has been made to the permit with respect to this comment.

Comment 36: Cover Page

The proposed permit modification is based on Ohio EPA's authority under ORC § 3734.05(1) and OAC Rule 3745-50-51 (J), which relate to modifications to "hazardous waste installation and operation permits." The statutory obligation to obtain such permits extends only to those persons who "establish or operate a hazardous waste facility." ORC § 3734.05(C). Although BP was such an entity, such operations ceased well before LRC became the owner of the property. LRC is not conducting, and has never conducted, hazardous waste treatment, storage or disposal at this site and, therefore, is not subject to the permit requirements (or permit modification provisions) of ORC § 3734.05 and OAC Rule 3745-50-51. Accordingly, while LRC may be subject to other legal authorities with respect to environmental conditions on property it owns, it is not properly deemed a "Permittee" under ORC § 3734.05 and should be removed from the permit.

Response 36: ORC §3734.02(E) mandates that "no person shall establish or operate a hazardous waste facility... without a hazardous waste facility installation and operation permit issued in accordance with section 3734.05 of the Revised Code". Additionally, "facility" is defined in ORC § 3734.01(N) as " any site, location, tract of land, installation, or building used for ... the storage, treatment, or disposal of hazardous waste." In June 2003, Ohio EPA issued a hazardous waste permit renewal to BP Products North America and Premcor Refining Group, Inc. for closure/post-closure and corrective action activities required at the facility.

For the purposes of a permit modification, Ohio Revised Code ("ORC") § 3734.05(I) defines "Owner" to mean the person who owns a majority or controlling interest in a facility. Nothing in the definition limits the concept of "owner" to a certain time period. Therefore, a person purchases a hazardous waste facility and as the owner assumes the same legal obligations relating to the property as those of the prior owner. A new owner, even one who had not caused the contamination at the facility, is still obligated to perform any closure/post-closure and corrective action activities the facility requires. In this instance, the Lima Refining Company was added to the 2003 hazardous waste permit through an October

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2007 permit modification as, among other things, an owner (replacing the Premcor Refining Group Inc.).

A modification is a change to an existing permit. The August draft modification would remove certain waste management units from the current joint permit; the draft action did not propose to remove Lima Refining Company from the hazardous waste installation and operation permit. Lima Refining Company will not be removed from the cover page of the permit.

Comment 37: Module E - at Page 26 of 71

The next to last sentence of the Corrective Action Summary section states "Corrective action is complete at the site except for some on-going operations and maintenance activities." This is imprecise and overly broad. Contrary to the language in the draft modification, the permit addresses only RCRA requirements, and Corrective Action is complete, at most, only for SWMUs specifically identified. This sentence should be revised to state "Ohio EPA identified Corrective Action activities under RCRA at waste management units identified in Section E.3 are complete except for certain on-going operations and maintenance activities." In addition, as discussed below with respect to Section E.4, neither the draft permit modification, nor the supporting materials, provide an adequate basis for LRC or the public to reasonably evaluate the basis for Ohio EPA's conclusions regarding BP's "completion" of the necessary work.

Response 37:

Permit language stating that, "corrective action is complete," is accurate because currently all identified units have been addressed. LRC's comment about the permit stating that corrective action is complete and for that only being true for the units identified so far is also accurate. Should a new unit be identified, Section E.10, Newly Identified WMUs or Releases, would apply. The permit is a living document that will be updated or modified as conditions change at the facility.

According to U.S. EPA records, a RCRA Facility Assessment (RFA) was completed on September 1, 1985. A Statement of Basis was issued by U.S. EPA in December 2001 explaining the proposed remedy for contaminated soil, surface water and sediment and ground water at the facility. The facility went through a RCRA Facility Investigation (RFI) Phase I and II, a Corrective Measures Study (CMS), Corrective Measures Implementation and submitted Construction Completion Reports for the units identified as requiring corrective measures. All of this information is available to LRC and the public.

E.1. Corrective Action at the Facility

Comment 38a: The introductory paragraph in this section (starting at page 26 of 71) defines a waste management unit with language that is not the same as appears in the referenced OAC 3745-50-10 and in other recent renewal permits. The language used in the permit modification should be consistent with the regulations and with other recent Ohio EPA RCRA permits.

Response 38a: Ohio EPA acknowledges the slight difference in the definition of waste management unit and will update the definition to match OAC 3745-50-10 and reflect standard permitting language. The permit language will now read as follows: *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.*

Comment 38b: As the Section title and the regulatory citation to OAC 3745-54-101 suggest, the definition of the facility should be as follows:

"For the purpose of implementing corrective action under rule 3745-54-101 of the Administrative Code, all contiguous property under the control of the owner or operator seeking a permit under the hazardous waste rules. This definition also applies to facilities implementing corrective action under RCRA Section 3008(h) or section 3734.20 of the Revised Code."

Response 38b: Ohio EPA agrees with the suggestion and for consistency purposes with other Ohio EPA RCRA permits, the permit language will be changed to reflect standard permitting language. The permit language will now read as follows, "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."

Comment 38c: Section E.1 references Ohio EPA's Corrective Action Plan. Guidance, particularly old guidance, should generally not be referenced in a permit. The attachment should be deleted.

Response 38c: For consistency with other Ohio EPA RCRA permits, the Agency will change the permit language to reference U.S. EPA's Corrective Action Plan. The permit language will now read as follows, "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)."

E.3 Identification of SWMUs.

Comment 39a: This section typically includes all identified waste management units at the facility including those identified by US EPA, Ohio EPA, and the facility (in accordance with E.10). As written, Section E.3 of the draft modification references Attachments 2 and 3 when identifying waste management units. We are not clear why Attachment 2 will still be included in the permit when Attachment 3 seems to include information from Attachment 2.

Response 39a: Ohio EPA believes the information is helpful for understanding why certain units were grouped with other units. Keeping Attachment 2 did not appear to contradict Attachment 3 and maintaining it does not appear to be unreasonable. If LRC wants to remove Attachment 2, then a permit modification should be provided to Ohio EPA. No change has been made to the permit with respect to this comment.

Comment 39b: To fully explain and document corrective action status, the permit should provide an easy to follow list or table with the following information:

- WMU name
- WMU#
- Regulatory status of each unit (regulated unit vs. WMU)
- Check boxes indicating which units:
 - Underwent investigation through the RFI
 - Required Corrective Measures or Closure
 - Completed Corrective Measures with no O&M necessary
 - Require ongoing O&M

The table should be supplemented with a plot plan showing the location and approximate boundaries of each WMU. The number of units at this site is such that the plot plan will need to be at a large scale, in order to differentiate among units. For convenience, a standard blueprint sized site plot plan should be required, with larger scale drawings for individual units where appropriate. Supplying these electronically would be sufficient, and indeed preferred. Attachment 3 of the permit modification provides some of

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the requested information, but does not provide sufficient information on the status of each management unit.

Response 39b: Ohio EPA has added “NFA” to the following SWMUs under the “Remedy” column to make it clearer that no further action is required at the unit: New Lime Pit (SWMU 33), C Pond (SWMU 48), D Pond (SWMU 49), Trolumen Area (SWMU 61), Buckeye Road Landfill (SWMU 63), Area 2 and Area 4. If LRC wants to supplement the table and provide a map of the various WMU boundaries through a permit modification, Ohio EPA would be receptive to the idea. See also Ohio EPA Response 3 above.

Comment 39c: Additionally, LRC believes that since an RFA was never completed for the site, the list of waste management units identified during Corrective Action activities may not be complete. For example, during pre-characterization for recent construction projects, LRC has discovered extensive, previously unidentified contamination in areas where Corrective Action “complete” status has been granted, and therefore believes that current waste management unit boundaries are likely not correct and the list of identified BP waste management units may not be exhaustive. LRC and the public will reasonably require at least 60 days to review and add information to the table described above prior to final approval of the permit modification. Therefore, LRC requests an extension of the comment period by an appropriate length of time to allow for the development and review of the proposed table.

Response 39c: All evidence available to Ohio EPA indicates that unit boundaries have been defined and that Corrective Action activities are complete for the previously identified units. According to U.S. EPA records, an RFA was completed on September 1, 1985. Ohio EPA takes LRC’s assertion quite seriously. Any evidence supporting this position must be submitted to Ohio EPA in accordance with permit condition E.10.

Based on the information that has been provided for the draft permit modification, extending the public comment period for this permit modification is unnecessary. No change has been made to the permit with respect to this comment.

E.5.(a) RFI Workplan, E.8 Corrective Measures Study, E.8(a) CMS Work Plan, and E.9 Corrective Measures Implementation.

Comment 40: As written, this requirement is limited to newly “discovered” waste management units. The term newly “discovered” waste management unit is not referenced as part of this permit. Newly

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"identified" waste management units or releases are discussed in E.10. As alluded to in E.10, the use of word discovered suggests a chain of events in which a unit is discovered, and then identified through correspondence with Ohio EPA. As written the use of newly discovered may require action prior to notification to Ohio EPA.

We suggest changing language in these sections (see page 28 of 71 in draft permit for reference) as follows: "In the case of newly identified waste management units (see E.10.(a)) releases from existing waste management units (see E.10.(b)), or at waste management units where new data has been collected (see E.3), the Permittee shall....."

Response 40: The request is unrelated to the changes proposed in the Agency's draft permit modification. This director-initiated permit modification is to remove RCRA units from the permit that have completed all corrective action activities. Changes to the permit conditions may be accomplished through the permit modification process outlined in OAC rule 3745-50-51.

No change has been made to the permit with respect to this comment.

E.6. Interim Measures

Comment 41: This section should allow for voluntary Interim Measures. In the second line of the section, include "or the Permittee may propose" after "...Ohio EPA may require." This would be consistent with other recent permits.

Response 41: Ohio EPA has changed the requested permit language. The sentence will now read as follows, "Based on the RFI Final Report or other information documenting a release of hazardous waste or constituents to the environment, Ohio EPA may require or the Permittee may propose the development and implementation of an 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.(a) Permit Modification

Comment 42: The first paragraph on page 30 of 71 points to a schedule of compliance; however, no compliance schedule is included. We suggest revising this condition to read as follows; "Based on the results of the completed RFI or other relevant information, the

Permittee may submit an application to Ohio EPA for a permit modification under OAC Rule 3745-50-51 to terminate specific Corrective Action tasks which are enumerated throughout Section E of the permit. Other Corrective Action tasks identified in Section E will remain in effect."

Response 42: The Schedule of Compliance was removed as it was specific to the previous RFI. References to the Schedule of Compliance should have been removed as well. As LRC points out, tasks and timeframes are enumerated throughout Section E of the permit. Ohio EPA acknowledges the error and has changed the requested permit language.

E.8. Corrective Measures Study (CMS)

Comment 43: As noted above, the provision uses newly "discovered" waste management unit, instead of "identified." The latter term is defined, and "discovered" is not. This section should be revised accordingly.

Response 43: See response to Section E.5.(a) above.

E.9(g) Permit Modification

Comment 44: As written, this requirement is limited to newly "discovered" waste management units. The term newly "discovered" waste management units is not defined as part of this permit. Newly "identified" waste management units or releases are defined in E.10. The use of word discovered as discussed in E.10 suggests a chain of events in which a unit is discovered and then identified through correspondence with newly identified WMUs."

Response 44: See response to Section E.5.(a) above.

End of Response to Comments