



July/August 2012

Draft Hazardous Waste Permit Modification

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

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

The comment period begins on August 10, 2012, and ends on September 24, 2012. A copy of the draft permit modification is available for review by the public at the following locations:

Lima Public Library Main Branch 650 West Market Street Lima, Ohio 45801 (419) 228-5113

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

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

Facility Name: Lima Refining Company
U.S. EPA I.D.: OHD 005 051 826
Location: 1150 South Metcalf Street Lima, Ohio 45804-1199
Facility Owner: BP Products North America Lima Refining Company 1150 South Metcalf Street Lima, Ohio 45804-1199
Facility Operator: BP Products North America Lima Refining Company 1150 South Metcalf Street Lima, Ohio 45804-1199
Activity: This modification initiated by the Director of the Ohio EPA proposes to remove hazardous waste management units from the permit that have completed corrective action remediation activities.
Comment Period: August 10, 2012 thru September 24, 2012
Submit Comments to: Ohio EPA Division of Materials and Waste Management Engineering, Remediation and Authorizations Section P.O. Box 1049 Columbus, Ohio 43216-1049 (614) 644-2621 dmwmcomments@epa.state.oh.us

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

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

After the close of the public comment period, Ohio EPA will consider all public comments received. Without further prior

hearing, a modified permit, in accordance with Chapter 3734 of the Ohio Revised Code, may be issued with terms and conditions as are necessary to ensure compliance with hazardous waste rules.

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

BP Products North America/ Lima Refining Company located at 1150 South Metcalf Street, Lima, Ohio, was originally constructed in 1886 and occupies approximately 649 acres of land on the southwestern side of Lima in Shawnee Township, Allen County, Ohio. The refinery produced gasoline, diesel fuel, jet fuel, kerosene, coke and heavy fuels and benzene. Hazardous sludge, heavy metals, reactive wastes, ignitable waste and leaded wastes were some of the wastes generated from facility operations.

BP Products North America/ Lima Refining Company (fka BP Oil Company) was issued a hazardous waste permit by U.S. EPA on June 28, 1989. As a condition of the 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). Several SWMUs and Areas of Concern (AOCs) were identified as requiring corrective measures. Investigation and corrective measures were conducted under the direction of U.S. EPA and Ohio EPA. Operations and maintenance activities remain at select SWMUs and AOCs. Remedies were constructed where appropriate.

**Description of Requested Permit Modification
OAC Rule 3745-50-22
(B)(2)**

Ohio EPA is implementing this director-initiated permit modification to remove units that have completed all corrective action activities from the joint permit.

The following units have completed their corrective measures remedy and do not require on-going/future operations and maintenance activities:

- SWMU 41 – Miscellaneous Sump
- SWMU 49 – D-Pond
- SWMU 50 – A-Pond
- SWMU 51 – B-Pond
- SWMUs 52 & 53 – North and South Sewer Systems
- SWMU 61 – Trolumen Pile
- SWMU 63 – Buckeye Road Landfill
- SWMU 64 – Old Fire Training Area
- SWMU 68 – Former Lube Plant
- SWMU 69 – Aromatics Closed Drain System
- SWMU 70 – Tank 214
- SWMU 71 – Tank 207
- SWMU 72 – Tank 209

The following units 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

**Regulatory Basis to Support the Decision to Modify the Permit Application
OAC Rule 3745-50-22
(B)(3)**

In accordance with OAC rule 3745-50-51(J), the director may initiate a permit modification of a hazardous waste facility installation and operation permit. Ohio EPA has reviewed the application and has determined that the proposal complies with Ohio EPA rules.

Accordingly, Ohio EPA is issuing a draft action indicating the Director's intention with respect to the issuance of a modified permit to BP Products North America/Lima Refining Company.

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

For additional information, please contact Dawn Pleiman, Ohio EPA, Northwest District Office, at (419) 352-8461.

OHIO ENVIRONMENTAL PROTECTION AGENCY

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

Date of Issuance:

Effective Date:

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.

Scott J. Nally
Director

MODULE E – CORRECTIVE ACTION REQUIREMENTS

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. After several rounds of review and comment between the facility and U.S. EPA, 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. By a letter dated November 30, 1999, 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. U.S. EPA conditionally approved the RFI report on June 18, 2001. On October 24, 2001, U.S. EPA determined that BP had met the conditions in the RFI approval. On the same date, U.S. EPA issued a conditional approval of a Corrective Measures Study (CMS) that had been submitted on August 17, 2001. A Final CMS prepared in accordance with U.S. EPA's conditional approval was submitted on November 16, 2001. U.S. EPA 2001 and approved the Final CMS 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. The Trolumen Product Management Plan was submitted to the Agency on June 20, 2002. U.S. EPA approved the final CMICWP/PBGWMP on August 16, 2002. On September 3, 2002, BP submitted the E-Pond Corrective Measures Completion Report to U.S. EPA. Subsequently, BP also submitted the following reports on completion A table listing all of corrective measures

construction:the SWMUs, Areas of Concern (AOCs), remedies and dates approved can be found in Attachment 3.

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

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

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

The transition of the corrective action program from the U.S. EPA to Ohio EPA will occur on the effective date of this renewal permit. occurred on June 20, 2003. Ohio EPA will then assumehas 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 3745-55-01154-101

In accordance with OAC Rule 3745-50-10 "waste management unit" means any discernable unit at which wastes have been placed at any time, irrespective of whether the unit was intended for the management of waste or hazardous waste.

Such units include any area at a Facility at which wastes have been routinely and systematically released. As used in this permit, the term "waste management unit" shall be consistent with and equivalent to the term "solid waste management unit" as that term is defined in Section 3004(u) of RCRA. The terms Interim Measure (IM), RCRA Facility Investigation (RFI), Corrective Measures Study (CMS) and Corrective Measures Implementation (CMI) are defined in Attachment 1, Ohio EPA's Corrective Action Plan (OCAP).

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

E.2. Corrective Action Beyond the Facility Boundary
OAC Rule 3745-55-01154-101

The Permittee must implement Corrective Action(s) beyond the Facility property boundary, where necessary to protect human health and the environment, unless the Permittee demonstrates to the satisfaction of Ohio EPA that, despite the Permittee's best efforts, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of any responsibility to clean up a release that has migrated beyond the Facility boundary where off-site access is denied. On-site measures to address such releases will be addressed under the RFI, CMS, and CMI phases, as determined to be necessary on a case-by-case basis.

E.3. Identification of SWMUs
OAC Rules 3745-50-44(d) and 3745-55-01154-101

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

The units or groups of units which were identified during the Corrective Action are listed in Attachment 3.

E.4. Reserved.

E.5. RFI

OAC Rule 3745-55-01154-101

The Permittee has conducted an RFI to thoroughly evaluate the nature and extent of the release of hazardous waste(s) wastes and hazardous constituent(s) 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 the development and implementation of an interim measure (this may include an IM Workplan) at any time during the life of the permit to mitigate or eliminate a threat to human health or the environment.

E.7. Determination of No Further Action

a) SWMUs Identified as No Further Action

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

~~SWMU 41 - Miscellaneous Sump~~

~~SWMU 64 - Old Fire Training Area~~

~~SWMU 68 - Former Lube Plant~~

~~SWMU 69 - Aromatics Closed Drain System~~

~~SWMU 70 - Tank 214~~

~~SWMU 71 - Tank 207~~

~~SWMU 72 - Tank 209~~

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

b)a) Permit Modification

Based on the results of the completed RFI and other relevant information, the Permittee may submit an application to Ohio EPA for a Class 3 permit modification under OAC Rule 3745-50-51 to terminate the Corrective Action tasks of the Schedule of Compliance. Other tasks identified in the Schedule of Compliance shall remain in effect. This permit modification application must conclusively demonstrate that there are no releases of hazardous waste or constituents from SWMUs at the Facility that pose ~~a threat~~ 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 ~~a threat~~ an unacceptable risk to human health and the environment, Ohio EPA will approve the requested modification.

e)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 releases of hazardous waste or constituents are likely to occur~~ exists.

e)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 ~~likelihood of a potential release from a WMU at the Facility is likely to~~ may pose a threat an unacceptable risk to human health or the environment. In such a case, Ohio EPA shall initiate a modification to the terms of the permit to rescind the determination made in accordance with ~~Permit Condition E.7.a 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 ~~perform~~ develop a Work Plan and upon Ohio EPA approval of that Work Plan, perform additional investigations as needed.

E.8. Corrective Measures Study (CMS)

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

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

a) CMS Workplan

In the case of a newly discovered waste management unit, the Permittee shall ~~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 shall must submit either an amended or new CMS Workplan that incorporates Ohio EPA's comments.~~
- 3) Ohio EPA shall ~~will~~ approve or modify and approve, in writing, the amended or new CMS Workplan. The CMS Workplan, as approved or as modified and approved, shall ~~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 shall ~~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 shall must submit a CMS Final Report to Ohio EPA. The CMS Final report shall 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 shall must submit either an amended or new CMS Report that incorporates Ohio EPA's comments.
- 3) Ohio EPA shall 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, shall 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)

The Permittee shall implement the Corrective Measures Implementation Conceptual Work Plan (CMICWP) ~~approved by U.S. EPA and the Performance Based Groundwater Monitoring Plan (PBGWMP) approved by U.S. EPA on August 16, 2002~~. The Permittee also shall implement any additional Corrective Measures ~~authorized by Ohio EPA for SWMU 42 (AFU/Oily Sludge Pond) once the CMS for this SWMU is approved by Ohio EPA.~~

Based on the results of the CMS for a newly discovered waste management unit, the Permittee shall must implement one or more of the Corrective Measures authorized by Ohio EPA. Ohio EPA shall will authorize one or more of the Corrective Measures in the CMS, and shall 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 of the RCRA Facility Investigation (RFI), Human Health Risk Assessment (HHRA), and Detailed Ecological Risk Assessment (DERA), action levels were developed during the CMS to help determine the specific areas of the facility that require corrective measures. For a CMS, an action level is defined as a medium-specific, health- and environment-based contaminant concentration determined to be protective of human health and the environment. Table 1 presents the criteria upon which the action levels for each

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 1.0.

- 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 1.0, 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 1.0, then further corrective measures will be implemented.

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b) Reserved Selected Remedies

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

~~SWMU 41 — Miscellaneous Sump~~

~~SWMU 64 — Old Fire Training Area~~

~~SWMU 68 — Former Lube Plant~~

~~SWMU 69 — Aromatics Closed Drain System~~

~~SWMU 70 — Tank 214~~

~~SWMU 71 — Tank 207~~

~~SWMU 72 — Tank 209~~

~~Partial SWMU Group G — SWMU 49 — D Pond; SWMU 50 — A Pond; SWMU 51 — B Pond.~~

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

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c) Specific Remedies

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

1) ~~Reserved~~

2) ~~SWMU 7 L 5 Landfill~~

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

3) ~~SWMU 8 L 6 Landfill~~

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

4) ~~SWMU 46 Old Primary Pond~~

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

5) ~~SWMU 52 South Plant Sewer System and SWMU 53 North Plant Sewer System~~

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

~~6) SWMU 57 North Ditch~~

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

~~7) SWMU 58 Tank 231~~

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

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

~~8) SWMU 61 Trolumen Pile~~

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

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

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

~~9) SWMU 62 "E" Pond~~

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

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

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

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

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

~~SWMU Group B consists of:~~

- ~~Old Container Storage Area (SWMU 42)~~
- ~~South Container Drying Pit (SWMU 32)~~
- ~~North Container Drying Pit (SWMU 34)~~
- ~~North Impounding Pond (SWMU 45)~~

~~SWMU Group E consists of:~~

- ~~Tank 77 (SWMU 30)~~
- ~~Tank 77A (SWMU 31)~~
- ~~Tank 78 (SWMU 35)~~
- ~~Tank 79 (SWMU 36)~~

~~SWMU Group F consists of:~~

- ~~AFU Pond (SWMU 42)~~
- ~~Oily Sludge Pond (SWMU 43)~~
- ~~Sludge Drying Pit (SWMU 60)~~

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

~~ii) Reassess the technical impracticability of light non-aqueous phase liquid (LNAPL) remediation at five-year intervals to determine if advances in technology would allow removal of LNAPL, and report the reassessment results to Ohio EPA. The first report shall be submitted by October 30, 2007.~~

~~iii) Reserved~~

~~iv) If ground water monitoring indicates that the LNAPL is migrating or that VOCs at concentrations posing unacceptable risk are present, implement remediation at the downgradient perimeter of the LNAPL as recommended in the October 2002 report titled "Technical Impracticability Area 3 LNAPL."~~

- ~~14) Ottawa River Area of Concern~~

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

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

~~15) Zurmehly Creek Area of Concern~~

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

~~ii) Implement deed restriction on the Permittee's property restricting the use of Zurmehly Creek from Permittee's property.~~

d) Ground Water Monitoring

Reserved

e) Progress Reports

The Permittee shall ~~must~~ submit ~~monthly progress inspection~~ reports to Ohio EPA ~~annually for the L-5 Landfill (SWMU 7) and SWMU Group F by the 12th of the month 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

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approved, shall be incorporated into this permit and become an enforceable condition of this permit. Subsequent changes to the approved CM Completion Report and O&M Plan must be authorized by Ohio EPA.

g) Permit Modification

In case of a newly discovered waste management unit that requires corrective measures, Ohio EPA will initiate a permit modification, as provided by OAC Rule 3745-50-51 to require implementation of the corrective measure(s) authorized.

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

h) Financial Assurance

~~OAC Rule 3745-55-01154-101~~

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

~~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 SWMUs or Releases

~~OAC Rule 3745-5554-011101~~

a) General Information

The Permittee shall ~~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~~ The location of the unit on the site topographic map;
- ii) ~~designation~~ Designation of the type of unit;

- iii) ~~general~~ General dimensions and structural description (supply any available drawings);

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- iv) ~~when~~ When the unit was operated; and
- v) ~~specification~~ Specification of all waste(s) that have been managed at the unit.

b) Release Information

The Permittee ~~shall~~ 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 SWMU.~~

E.11. Corrective Action for Newly Identified WMUs and Releases

OAC Rule 3745-5554-044101

~~If Ohio EPA determines that an RFI is required for newly identified WMUs, the Permittee shall 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, that further investigations or corrective measures are necessary.~~

Further investigations or corrective measures will be established by Ohio EPA.

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

~~The Permittee will provide Ohio EPA with the following items according to the schedule below:~~

<u>Facility Submission</u>	<u>Due Date</u>
Submit policies and procedures for notice of hazards to excavation workers and for protecting workers	45 days after effective date of permit
Ground water monitoring results	30 days after receipt from the laboratory
Progress reports	Monthly, by the 12th of each month
Corrective Measure Completion Report and O&M Plan	45 days after corrective measures completion
Corrective Measures Study Report for SWMU 42 - AFU/Oily Sludge Pond	90 days after effective date of permit

Facility Submission	Due Date
Plan and schedule for investigating potential releases at SWMU 61 – Trolumen Pile	60 days after ceasing current operations
Plan and schedule for determining if contaminated ground water has migrated off site at SWMU 62 (E Pond) and SWMU 63 (Buckeye Road Landfill)	60 days after effective date of permit

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.

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.

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

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

Primary and C Ponds (Surface Impoundment)

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

G.2. Unit Identification

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

ATTACHMENT 3

Lima Refinery

OHD 005 051 826

SWMU and AOC Table

Unit Name	SWMU or AOC	Dates of Operation	Constituents of Concern, ¹ Wastes	Remedy	Remedy Document	Remedy Approval Date
Land Treatment Unit	SWMU 1	Wastes received between 1981 and 1990.	Oil and greases, heavy metals, VOCs and SVOCs, wastes codes K048, K049, K051 & D003.	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	BEHP and 1,4-dioxane in GW	NFA	RFI DOCC Report (9/30/97)	
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 sign inspection)	CCR approved by U.S EPA 12/30/2002	
Tank 63	SWMU 4	Disassembled in 1991	RFA recommended no further action.	NFA	RFI DOCC Report	
L-3 Waste Pile	SWMU 5 (Part of SWMU Group)	Unknown per Phase II RFI	Benzene, ethylbenzene, toluene, total xylenes,	Soil excavation and confirmatory soil sampling,	CCR approved by U.S EPA	

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 Concern,¹ wastes</u>	<u>Remedy</u> (Annual sign inspection)	<u>Remedy Document</u> <u>Approval Date</u>
	A)	Page 4-71	benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene	MC (annual sign inspection)	12/30/2002
<u>L-4 Landfill</u>	SWMU 6	Not Described	benzo(a)pyrene, dibenz(a,h)anthracene, arsenic	Soil sampling, passed HHRA, NFA	Phase II RFI Report approved by U.S. EPA on 10/24/2001
<u>L-5 Landfill</u> <u>Old Refinery</u> <u>Dump</u>	SWMU 7	Mid-1940s until 1960s	Foam dry wastes, construction debris and refinery (petroleum) wastes Benzo(a)anthracene, Benzo(a)pyrene, benzo(b)fluoranthene, 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	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 trench, installation of low permeability landfill cover and wetland cell. Semi-annual performance- based ground water monitoring was required. On-going landfill water level elevation monitoring, annual report, annual inspection and cover maintenance,	CCR approved by Ohio EPA on September 1, 2004. Ohio EPA permit modification to remove performance- based GW monitoring 8/12/08.

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 Approval Date</u>
<u>L-6 Landfill and Tank 231</u>	<u>SWMU 8 (Part of Area 1) and SWMU 58</u>	<u>1939 or 1951 until 1954</u>	<u>Benzene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, total xylenes and lead in SWMU 8 soil</u>	<u>Sign inspection, IC</u>	
			<u>benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, total xylenes and lead in SWMU 8 soil</u>	<u>Limited excavation of soil</u>	
			<u>Assessing and benzene in Tank 231 soil.</u>	<u>Tank stored toluene (product spill). Tank (SWMU 58) passed U.S. EPA risk assessment.</u>	<u>CCR approved by U.S. EPA on January 2, 2003</u>
			<u>RFA recommended no further action.</u>	<u>Institutional control (annual sign inspection) at both units</u>	
<u>Container Storage Building</u>	<u>SWMU 9</u>	<u>Container Storage Facility issued RCRA hazardous waste permit in August 1989.</u>		<u>NFA</u>	<u>RFI DOCC Report</u>
<u>Container Storage Pad</u>	<u>SWMU 10</u>				
<u>Non-Hazardous Container Storage Area</u>	<u>SWMU 11</u>				
<u>Old Container Storage Area</u>	<u>SWMU 12 (Part of SWMU Group B and Area 3)</u>	<u>Closed (backfilled) 1990</u>	<u>benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, benzo(a)anthracene</u>	<u>SWMU Group B passed the U.S. EPA HHRA for industrial scenarios, IC, NFA.</u>	<u>Phase II RFI Report approved by U.S. EPA on</u>

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 Approval Date</u>
<u>C-3 Drum Collection Area</u>	SWMMU 13 (Part of SWMMU Group C)	Not Described	arsenic	SWMMU Group C passed U.S. EPA HHRA, NFA.	Phase II RFI Report approved by U.S. EPA on 10/24/2001
<u>Influent Sump</u>	SWMMU 14 Part of SWMMU 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
<u>WP-1 Spent Catalyst Pile</u>	SWMMU 15 (Part of Area 4)	Taken out of service in 1986	Benzene, benzof(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, U.S. EPA 10/24/2001
<u>Less-Than 90-Day Storage Area</u>	SWMMU 16	1985/1986	RFA recommended no further action.	NFA	RFI DOCC Report
<u>API Wastewater Separator</u>	SWMMU 17 Part of SWMMU Group D	Constructed in the early 1950s covers installed on the unit in	K051 hazardous waste sludge	No visible signs of a release, NFA	Phase I RFI Report approved by U.S. EPA on 11/24/1999

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, SWMMU 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 Approval Date</u>
<u>Air Flotation Unit</u>	<u>SWMU 18</u>	1981.	RFA recommended no further action.	NFA	RFI DOCC Report
<u>AFU Sump</u>	<u>SWMU 19</u> <u>Part of SWMU Group D</u>	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 11/24/1999
<u>Vacuum Filter</u>	<u>SWMU 20</u>	1951-1991	RFA recommended no further action.	NFA	RFI DOCC Report
<u>Belt Filter Press</u>	<u>SWMU 21</u>	1983-1991	RFA recommended no further action.	NFA	RFI DOCC Report
<u>Equalization Tank</u>	<u>SWMU 22</u>	October 1983 - Present	RFA recommended no further action.	NFA	RFI DOCC Report
<u>Aeration Basins A & B</u>	<u>SWMU 23</u>				
<u>Clarifiers A & B</u>	<u>SWMU 24</u>				
<u>Rapid Sand Filter</u>	<u>SWMU 25</u>				
<u>Effluent Sump</u>	<u>SWMU 26</u>				

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 Approval Date</u>
<u>Sludge Thickener</u>	<u>SWMU 27</u>				
<u>Aerobic Digester</u>	<u>SWMU 28</u>	<u>Not Described</u>	<u>RFA recommended no further action.</u>	<u>NFA</u>	<u>RFI DOCC Report</u>
<u>Sanitary Package Treatment Plant</u>	<u>SWMU 29</u>	<u>Not Described</u>	<u>RFA recommended no further action.</u>	<u>NFA</u>	<u>RFI DOCC Report</u>
<u>Tank 77, Tank 77A, Tank 78, Tank 79</u>	<u>SWMU 30</u> <u>SWMU 31</u> <u>SWMU 35</u> <u>SWMU 36</u> <u>SWMU Group E</u> <u>(Part of Area 3)</u>	<u>Part of Operating Refinery WWTP</u>	<u>Used to store slop emulsion and WWTP sludges prior to dewatering.</u> <u>Benzo(a)pyrene</u>	<u>SWMU Grps. B, E and F combined into Area 3 for further evaluation. Poses a risk for high frequency workers</u> <u>IC (annual sign inspections)</u>	<u>Phase II RFI Report approved by U.S. EPA on 10/24/2001</u>
<u>South Container Drying Pit</u>	<u>SWMU 32 (Part of SWMU Group B and Area 3)</u>	<u>Taken out of service in 1989</u>	<u>dibenz(a,h)anthracene,</u>	<u>SWMU Group B passed the U.S. EPA HHRA for industrial scenarios, IC, NFA.</u>	<u>Phase II RFI Report approved by U.S. EPA on 10/24/2001</u>
<u>New Lime Pit</u>	<u>SWMU 33</u>	<u>Closed in 1986</u>	<u>Stored boiler house waste lime sludge.</u>	<u>During closure, pit area excavated, cleaned.</u>	<u>RFI DOCC Report</u>

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>
<u>North Container Drying Pit</u>	<u>SWMU 34 (Part of SWMU Group B and Area 3)</u>	<u>Taken out of service in 1989</u>	<u>benzo(a)pyrene</u> RFA recommended no further action.	<u>SWMU Group B passed the U.S. EPA HHRA for industrial scenarios, IC (annual site inspection), NFA.</u>	<u>Phase II RFI Report approved by U.S. EPA on 10/24/2001</u>	
<u>Tank 84</u>	<u>SWMU 37</u>	<u>1951-present</u>	<u>Components of the refinery's slop oil emulsion treatment plant. RFA recommended no further action.</u>	<u>NFA</u>	<u>RFI DOCC Report</u>	
<u>Tank 85</u>	<u>SWMU 38</u>	<u>November 1985-present</u>	<u>RFA recommended no further action.</u>	<u>NFA</u>	<u>RFI DOCC Report</u>	
<u>Sludge Storage Tank 72</u>	<u>SWMU 39</u>	<u>1984-present</u>	<u>RFA recommended no further action.</u>	<u>NFA</u>	<u>RFI DOCC Report</u>	
<u>API Bottoms Thickener</u>	<u>SWMU 40</u>	<u>1984-present</u>	<u>RFA recommended no further action.</u>	<u>NFA</u>	<u>RFI DOCC Report</u>	
<u>Miscellaneous Sump</u>	<u>SWMU 41</u>	<u>Not Described</u>	<u>No Phase II criteria exceedances - SWMU 41 eliminated during Phase I</u>	<u>NFA</u>	<u>Phase I RFI Report approved by U.S. EPA on 11/24/1999</u>	
<u>AFU Sludge Pond, Oily Sludge Pond, and Sludge</u>	<u>SWMUs 42, 43 & 60</u> <u>SWMU Group F</u>	<u>AFU and Oily Sludge Pond were in service from</u>	<u>Benzene, benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, dibenz(a,h)anthracene and</u>	<u>Removal of stabilized hazardous waste, in-situ stabilization of oily sand, area covered with gravel</u>	<u>CCR approved by Ohio EPA on November</u>	

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 Approval Date</u>
<u>Drying Pit</u>		<u>~1950 until 1985</u>	<u>Indeno(1,2,3-cd)pyrene</u> <u>Lead in GW</u>	<u>and concrete, cover system construction, passed HHRA for industrial scenarios, IC, annual inspection of cover system and submit report to Ohio EPA</u>	<u>9, 2006</u>
<u>Acid Pond / Impounding Pond</u>	<u>SWMU 44</u>	<u>Sludge removed in the 1970's</u>	<u>Arsenic and benzene</u> <u>Contained corrosive sludges</u>	<u>passed HHRA, NFA</u>	<u>Phase II RFI Report approved by U.S. EPA on 10/24/2001</u>
<u>North Impounding Pond</u>	<u>SWMU 45 (Part of SWMU Group B and Area 3)</u>	<u>1973 until 1986 and backfilled in 1990</u>	<u>Benzo(a)pyrene, benzo(a,h)fluoranthene, benzo(b)fluoranthene, dibenz(a,h)anthracene, Indeno(1,2,3-cd)pyrene and arsenic</u>	<u>SWMU Group B passed the U.S. EPA HHRA for industrial scenarios, IC, NFA.</u>	<u>Phase II RFI Report approved by U.S. EPA on 10/24/2001</u>
<u>Old Primary Pond</u>	<u>SWMU 46 (Part of Area 4)</u>	<u>1960s until 1984 closed in 1985</u>	<u>Sludge and contaminated soils were stabilized and disposed off-site after testing non-hazardous</u> <u>Groundwater: lead, benzene and 1-4-Dioxane</u>	<u>Material within SWMU boundary (including the sand immediately underneath the sludge) was</u>	<u>CMI CCR from U.S. EPA on Jan. 4, 2003.</u>

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 Concern,¹ wastes</u>	<u>Remedy</u>	<u>Remedy Document Approval Date</u>
<u>Primary Pond</u>	<u>SWMU 47 (Part of SWMU Group G)</u>	<u>1972 to 1984 (secondary containment) 1984 to 1984 (primary containment)</u>	<u>No Phase II criteria exceedances - SWMU Group G eliminated during Phase I</u>	<u>Addressed under RCRA Closure program: landfill closure: sludge stabilized and consolidated/RCRA cover constructed over mass. Void space clean closed and backfilled. Semi-annual post-closure GW monitoring ongoing.</u>	<u>Phase I RFI Report (1/2000), approved by U.S EPA on 11/24/1999</u>
<u>C-Pond</u>	<u>SWMU 48 (Part of SWMU Group G)</u>	<u>1970 until replaced by storm water impoundment</u>	<u>No Phase II criteria exceedances - SWMU Group G eliminated during Phase I.</u>	<u>Addressed under RCRA Closure program: sludge stabilized/consolidated into Primary Pond along with</u>	<u>Phase I RFI Report approved by U.S EPA on 12/12/02</u>

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.

Unit Name	SWMU or AOC	Dates of Operation	Constituents of Concern ¹ , wastes	Remedy	Remedy Document Approval Date
<u>Pond</u> <u>*RCRA</u> <u>Closure*</u>		tank (G-tank) by March 29, 1994		contaminated soil. C Pond was "Clean Closed". No SWM monitoring required.	11/24/1999 Ohio EPA approved RCRA Closure certification on 12/12/02
<u>D-Pond</u>	<u>SWMU 49</u> <u>Part of SWMU Group G</u>	<u>1970-1983</u>	<u>Biological wastewater</u> <u>treatment polishing pond,</u> <u>wastewater effluent</u>	<u>Pond drained in 1988,</u> <u>sludge dewatered and</u> <u>stabilized, some stabilized</u> <u>sludge disposed off-site,</u> <u>other sludge stayed on-site</u>	<u>Phase I RFI</u> <u>Report</u> <u>approved by</u> <u>U S EPA on</u> <u>11/24/1999</u>
<u>A-Pond</u>	<u>SWMU 50</u> <u>Part of SWMU Group G</u>	<u>Still in service</u>	<u>Biological wastewater</u> <u>treatment polishing pond,</u> <u>wastewater effluent</u>	<u>NFA</u>	<u>Phase I RFI</u> <u>Report</u> <u>approved by</u> <u>U S EPA on</u> <u>11/24/1999</u>
<u>B-Pond</u>	<u>SWMU 51</u> <u>Part of SWMU Group G</u>	<u>Still in service</u>	<u>Biological wastewater</u> <u>treatment polishing pond,</u> <u>wastewater effluent</u>	<u>NFA</u>	<u>Phase I RFI</u> <u>Report</u> <u>approved by</u> <u>U S EPA on</u> <u>11/24/1999</u>

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Unit Name	SWMU or AOC	Dates of Operation	Constituents of Concern ¹ , wastes	Remedy	
				Remedy	Remedy Document Approval Date
North and South Sewer Systems	<u>SWMU 52 & 53</u>	<u>North Sewer constructed in the early 1950s</u>	<u>Materials handled by the Systems include: Cooling Tower Blowdown, Boiler Blowdown, Stormwater Runoff, BP Terminals Water Draws, BP Chemical V2 Water and Sanitary Wastewater.</u>	<u>An integrity study conducted at the North and South sewers involved Thecal Infrared Radiation (TIR) study was completed in May 2002 and roughly 29,000 linear feet of sewer were investigated.</u>	<u>U.S. EPA approved the TIR Summary Report on May 1, 2003.</u>
	<u>Part of SWMU Group D</u>				
Stop Pond	<u>SWMU 54</u>	<u>1930s or 1940s until 1956</u>	<u>Stormwater run-off, benzene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzofluoranthene, indeno(1,2,3-cd)pyrene, total volatile arsenic, lead, 1,1,2,2-PCE</u>	<u>Drained, filled and replaced w/tankage (AST 248 & 249) SWMU Group H passed the HHRA, NFA.</u>	<u>Phase II RFI Report approved by U.S. EPA on 10/24/2001</u>
	<u>Part of SWMU Group H, part of Area 1</u>				
Oil Pond No. 1	<u>SWMU 55</u>	<u>1980s or 1940s until 1956</u>	<u>Stormwater run-off, benzene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, total xylenes, arsenic, lead, 1,1,2,2-PCE</u>	<u>Drained, filled and replaced w/tankage (AST 248 & 249) SWMU Group H passed the HHRA, NFA.</u>	<u>Phase II RFI Report approved by U.S. EPA on 10/24/2001</u>
	<u>Part of SWMU Group H, part of Area 1</u>				

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<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>Remedy Document Approval Date</u>
<u>Oil Pond No. 2</u>	<u>SWMU 56</u>	<u>1930s or 1940s until 1956</u>	<u>Stormwater run-off</u> Benzene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, total xylenes, arsenic, lead, 1,1,2,2-PCE	<u>Drained, filled and replaced w/blankage (AST 248 & 249)</u> <u>SWMU Group H passed the HHRM NFA.</u>	<u>Phase II RFI Report approved by U.S EPA on 10/24/2001</u>
<u>North Ditch</u>	<u>SWMU 57</u>	<u>Replaced by plant sewer system, covered by RR tracks and embankment</u> <u>1970-1991</u>	<u>Stormwater convergence</u> <u>sluff and surface run-off</u> <u>arsenic, benz(a)pyrene</u>	<u>SWMU 57 passed the HHRM, IC, annual sign inspection.</u>	<u>Phase II RFI Report approved by U.S EPA on 10/24/2001</u>
<u>Trolumen Area</u>	<u>SWMU 61</u>	<u>1970-1991</u>	<u>benzo(a)anthracene, naphro(a)pyrene, benzo(b)fluoranthene, chrysene and dibenz(a,h)anthracene in soil</u>	<u>Excavation and disposal of the impacted soil and concrete debris. The affected areas were backfilled with soil from an on-site borrow area.</u>	<u>CCR approved by Ohio EPA on May 7, 2008</u>
<u>E-Pond</u>	<u>SWMU 62</u>	<u>1958-October 1977</u>	<u>benzo(a)pyrene, dibenz(a,h)anthracene, PCBs (Aroclor 1248), chromium,</u>	<u>October 1977 sludge was removed and covered w/a clay cap. The ecological remedy consisted of</u>	<u>CCR approved November 18, 2002 by U.S.</u>

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<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>Remedy Document</u>	<u>Approval Date</u>
			antimony and thallium in soil Benzene, 1,4-dioxane, antimony, arsenic, thallium and lead in GW	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.	Ohio EPA permit mod to remove GW monitoring 8/12/08.	
<u>Buckeye Road Landfill</u>	<u>SWMU 63</u>	<u>1972-1984,</u>	Refinery and municipal wastes BEHP, 1,1-dichloropropane, chloroethane, VC, arsenic, cadmium, lead and thallium in GW	Semi-annual GW monitoring until 8/12/08 permit mod.	Ohio EPA permit mod to remove GW monitoring 8/12/08	
<u>Old Fire Training Area</u>	<u>SWMU 64</u>	<u>1991</u>	18 inches of surface soils disposed off-site as non- hazardous in 1991. No Phase II criteria exceedances - SWMU 64 eliminated during Phase I.	<u>NFA</u>	Phase I RFI Report approved by U.S. EPA on 11/24/1999	
<u>Old Sludge Pond</u>	<u>SWMU 65</u> (Part of SWMU Group)	<u>Unknown, AS 11/14 (SWMU 70)</u>	<u>Benzene, total xylenes</u>	<u>SWMU 65 passed the Phase II RFI HHRA, NFA.</u>	Phase II RFI Report approved by	

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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>
	A and Area 2)	was/is currently at the location			U.S. EPA on 10/24/2001
<u>Leaded Waste Area</u>	SWMU 66	Spill in Feb. 1982	Tetraethyl lead soil, benzo(a)pyrene in soil	Passed Phase II HHRA and Eco Risk, NFA	Phase II RFI Report approved by U.S. EPA on 10/24/2001
<u>Former Coke Pile</u>	SWMU 67	2-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	Phase II RFI Report approved by U.S. EPA on 10/24/2001
<u>Former Lube Plant</u>	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
<u>Aromatics Closed Drain System</u>	SWMU 69	2 leaks detected on 7/28/96	Off-specification products collected, benzo(a)pyrene	single, low level exceedance, 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 Concern,¹ wastes</u>	<u>Remedy</u>	<u>Remedy Document Approval Date</u>
<u>AST 214</u>	<u>SWMU 70</u>	<u>Leak determined on 6/26/96</u>	<u>Gasoline storage, arsenic exceedance</u>	<u>Isolated, low level exceedance</u>	<u>Phase I RFI Report approved by U.S. EPA on 11/24/1999</u>
<u>AST 207</u>	<u>SWMU 71</u>	<u>Leak determined on 3/26/97</u>	<u>Used to store gasoline. No Phase II criteria exceedances - SWMU 71 eliminated during Phase I</u>	<u>NFA</u>	<u>Phase I RFI Report approved by U.S. EPA on 11/24/1999</u>
<u>AST 209</u>	<u>SWMU 72</u>	<u>Sewer manholes discovered in the floor of the tank on 7/8/97</u>	<u>Used to store gasoline. No Phase II criteria exceedances SWMU 72 eliminated during Phase I</u>	<u>NFA</u>	<u>Phase I RFI Report approved by U.S. EPA on 11/24/1999</u>
<u>Area 2</u>	<u>SWMU Group A (Old Drum Storage Area (SWMU 3) and L-3 Waste Pile (SWMU 5)) Old Sludge Pond (SWMU 65)</u>	<u>Old Drum Storage area closed in 1990</u>	<u>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</u>	<u>involved institutional controls, limited soil excavation activities and backfilling with clean soil.</u>	<u>U.S. EPA, 12/30/2002</u>
<u>Area 3</u>	<u>SWMU Groups B, E</u>	<u>See individual</u>	<u>Benzene,</u>	<u>Area covered with asphalt</u>	<u>CMI</u>

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Unit Name	SWMU or AOC	SWMU Groups	Dates of Operation	Constituents of Concern ¹ , wastes	Remedy	Remedy Document Approval Date
	and F			benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene & indeno(1,2,3-cd)pyrene in soil	and gravel, therefore no exposed surface soils. Semi-annual performance-based GW monitoring until 8/12/08 permit modification.	Conceptual Work Plan (7/2002) approved by U.S. EPA 8/16/02
				arsenic and lead in GW	Annual technical impracticability (TI) 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
					Annual sign inspection	Addendum to TID (10/07) approved by Ohio EPA 3/6/08

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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>
<u>Area 4</u>	<u>SWMMUs 15 (WP-1 Spent Catalyst Pile), 46 (Old Primary Pond) & 73 (Intermediate Tank Area)</u>	<u>SWMMU 15 - Storage of spent catalyst material until 1986</u>	<u>SWMMU 15 - Benzene, benzo(a)anthracene, benzo(a)pyrene, dibenz(a,h)anthracene & indeno(1,2,3-cd)pyrene, arsenic & chromium in soil</u>	<u>SWMMUs 15 & 73 passed U.S. EPA HHRA, IC, NFA</u>	<u>SWMMUs 15 & 73 - Phase II RFI Report, U.S. EPA 10/24/2001</u>	<u>SWMMUs 15 & 73 - Phase II RFI Report, U.S. EPA 10/24/2001</u>
		<u>SWMMU 46 - see "Old Primary Pond"</u>	<u>SWMMU 46 - Benzene, 1,1-dioxane and lead in GW</u>	<u>SWMMU 46 - In 2001, material within SWMMU boundary (including the sand immediately underneath the sludge) was stabilized. Semi-annual GW monitoring performed per PBGMP until 2008 permit modification.</u>	<u>SWMMU 46 - CMI CCR approved by U.S. EPA on 1/4/2003.</u>	<u>SWMMU 46 - CMI CCR approved by U.S. EPA on 1/4/2003.</u>
		<u>SWMMU 73 - 8,200 barrel Jet A spill.</u>	<u>SWMMU 73 - Oct 1996, Jet A" discovered in monitoring well FW-005</u>		<u>OEPA Permit Modification to remove PBGM 8/12/2008</u>	<u>OEPA Permit Modification to remove PBGM 8/12/2008</u>
<u>C-3 Drum Collection Area and WP-2 Spent Catalyst Pile</u>	<u>SWMMU 13 & SWMMU 59 SWMMU Group C</u>	<u>SWMMU was used in the 1980's</u>	<u>Arsenic in soil</u>	<u>Passed U.S. EPA HHRA, IC, NFA</u>	<u>Phase II RFI Report approved by U.S. EPA on 10/24/2001</u>	<u>Phase II RFI Report approved by U.S. EPA on 10/24/2001</u>
<u>Buckeye Road Landfill</u>	<u>SWMMU 63</u>	<u>1972-1987</u>	<u>Refinery and municipal wastes</u>	<u>Institutional Controls per CMS and CMI Work Plan</u>	<u>U.S. EPA 12/12/2001, 8/18/2002 (CMI & PBGMP)</u>	<u>U.S. EPA 12/12/2001, 8/18/2002 (CMI & PBGMP)</u>

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Unit Name	SWMU or AOC	Dates of Operation	Constituents of Concern ¹ wastes	Remedy	Remedy Document Approval Date
Ottawa River	AOC	NA	arsenic, cadmium, lead and thallium in GW Sediment: Acenaphthene, benzo(a)anthracene, benzo(b)fluoranthene, dibenzophthalate, fluoranthene, fluorene, naphthalene, phenanthrene, pyrene, carbon disulfide	until 8/12/08 permit modification. Institutional controls per CMS and CMI Work Plan Passed HHRA and ERA, NFA Annual sign inspection not turned in to Ohio EPA.	OEPA Permit Modification to remove PBGM 8/12/2008 U.S. EPA 12/12/2001, 8/18/2002
Zurmehty 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 not turned in to Ohio EPA.	U.S. EPA 12/12/2001, 8/18/2002

SWMU Group B consists of: Oil 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)

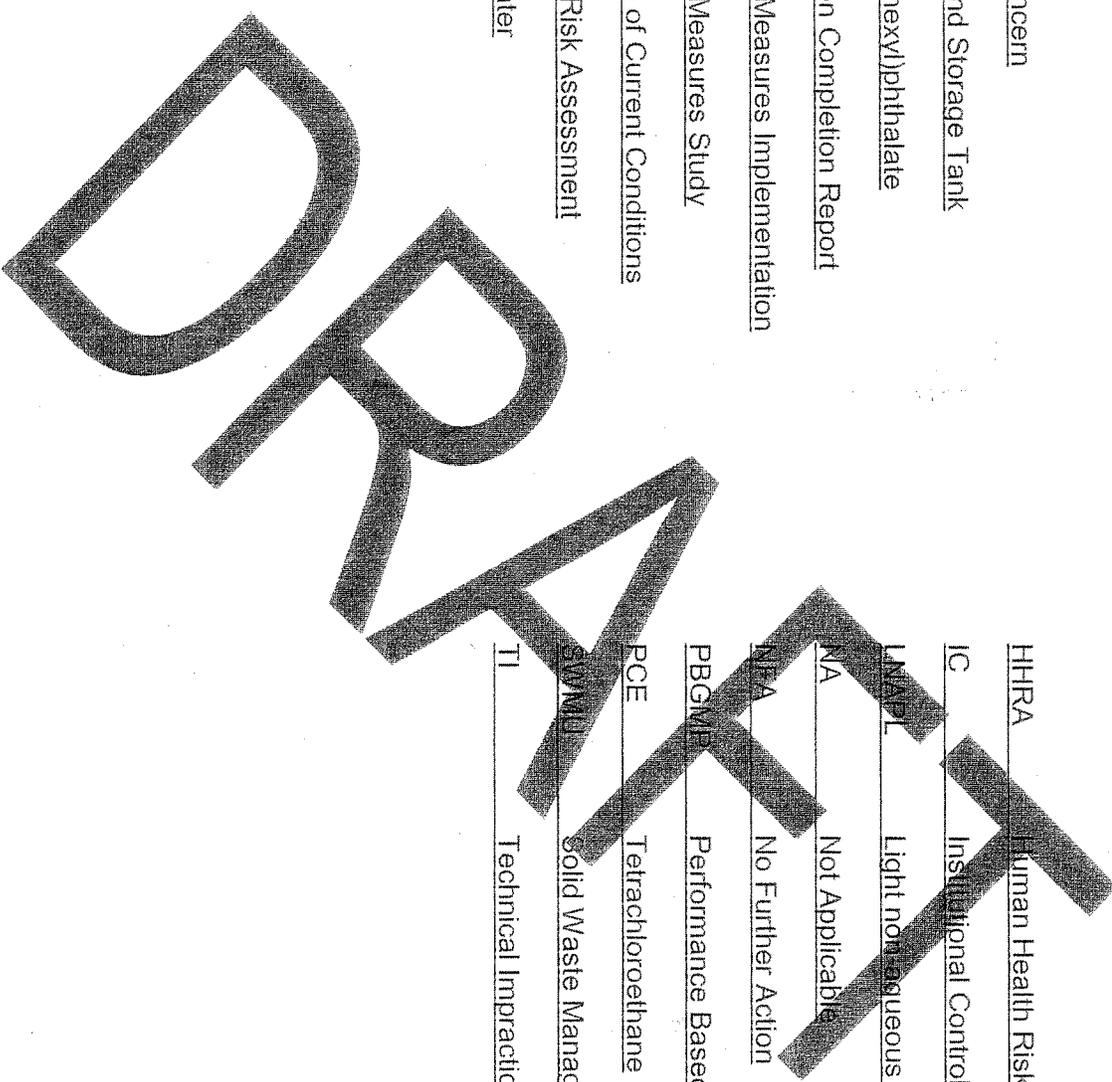
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Acronyms & Abbreviations

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

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