



State of Ohio Environmental Protection Agency

STREET ADDRESS:

Lazarus Government Center  
122 S. Front Street  
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184

MAILING ADDRESS:

P.O. Box 1049  
Columbus, OH 43216-1049

June 20, 2003

**Re: Ohio Hazardous Waste Permit Renewal**  
BP Products North America,  
Premcor Refining Group, Inc.  
U.S. EPA ID No.: OHD 005 051 826  
Ohio ID No.: 03-02-0390

**CERTIFIED MAIL**

Mr. Joseph Sontchi  
BP Products North America,  
Premcor Refining Group, Inc.  
1150 South Metcalf Street  
Lima, Ohio 45804

Dear Mr. Sontchi:

Here is the renewed Ohio Hazardous Waste Facility Installation and Operation Permit (Permit) for BP Products North America, Premcor Refining Group, Inc. I have enclosed a copy of the responsiveness summary Ohio EPA prepared in response to verbal and written comments the Agency received concerning the Part B permit application. The Permit is effective today, June 20, 2003. The date-stamped, page-numbered copy of the Part B permit application is also enclosed.

As a party to this permit proceeding, you may appeal this Permit to the Environmental Review Appeals Commission (ERAC) no later than 30 days after the public notice (See Ohio Revised Code § 3745.04). You may file your appeal with ERAC at the following address: Environmental Review Appeals Commission, 309 South Fourth Street, Room 222, Columbus, Ohio 43215.

If you file an appeal, you must put it in writing. Your appeal must explain why you are appealing the action and the grounds you are using for your appeal. You must send a copy of the appeal to the director of the Ohio Environmental Protection Agency no later than three (3) days after you file it with ERAC.

Bob Taft, Governor  
Jennette Bradley, Lieutenant Governor  
Christopher Jones, Director

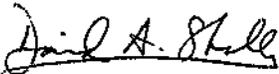
Ohio EPA is an Equal Opportunity Employer

Mr. Joseph Sontchi  
BP Products North America,  
Premcor Refining Group, Inc.  
June 20, 2003  
Page Two

---

If you have any questions concerning compliance, do not hesitate to call Michael  
Terpinski of the Northwest District Office at (419) 373-3075.

Sincerely,



*for* Pamela S. Allen, Manager  
Regulatory Information Services  
Division of Hazardous Waste Management

Attachments

cc: Edwin Lim, Mgr., ERAS, DHWM  
Jeremy Carroll/Marisa Martinez, ERAS, DHWM  
Harriet Croke, US EPA, Region V  
Michael Terpinski, DHWM, NWDO  
Carol Hester, Public Interest Center, Ohio EPA

g:\users\dsharpe\bp.products.premcor.refining.finalrenewal.wpd

## PUBLIC NOTICE

Allen County

### OHIO EPA ISSUES FINAL RENEWAL HAZARDOUS WASTE PERMIT

On June 20, 2003, Ohio EPA issued a final renewal hazardous waste facility installation and operation permit (Permit) to BP Products North America/Premcor Refining Group Inc, (BP Premcor, Inc.) for its facility at 1150 South Metcalf Street, Lima, Ohio 45804. The EPA Identification Number for this facility is OHD005051826.

#### **Why does BP Premcor, Inc., need a Permit?**

BP Premcor, Inc., is a petroleum refinery which produces petroleum distillates, gasoline, diesel fuels, jet fuels, lubricating oils, fuel oils, light ends, benzene, toluene, asphalt, coke and trolumen. From this refinery process, hazardous waste was managed in the site's land treatment unit waste pile building and a container storage building. The hazardous waste management units are no longer operating. There are no greater than 90-day active treatment, storage, or disposal activities at the site. However, BP Premcor, Inc. is involved in corrective action and closure activities, and must renew their permit for this purpose. The final renewal Permit contains the conditions under which the facility must operate. To issue this final renewal Permit, Ohio EPA determined that the Permit application is complete and meets appropriate standards. It will allow BP Premcor, Inc. to conduct corrective action and closure activities. It will also require the company to investigate and, if necessary, clean up any contamination from hazardous wastes or constituents from the waste management units that may be at the facility.

#### **Can I appeal this permit?**

Yes, if you are an officer of an agency of the state or of a political subdivision, acting in a representative capacity, or any person who would be aggrieved or adversely affected by this renewal Permit, you have the right to appeal this permit decision to the Environmental Review Appeals Commission (ERAC).

#### **If I decide to appeal this final renewal Permit, how and when must I make the appeal?**

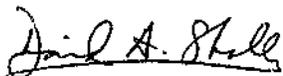
If you file an appeal, you must put it in writing no later than July 20, 2003. Your appeal must explain why you are appealing the action and the grounds you are using for your appeal. You must file your appeal with ERAC at the following address: **Environmental Review Appeals Commission**, 309 South Fourth Street, Room 222, Columbus, Ohio 43215. You must send a copy of the appeal to the director of Ohio EPA at the following address no later than three (3) days after you file it with ERAC: **Christopher Jones, Director of Ohio EPA**, P.O. Box 1049, Columbus, Ohio 43216-1049.

Mr. Joseph Sontchi  
BP Products North America,  
Premcor Refining Group, Inc.  
June 20, 2003  
Page Two

---

If you have any questions concerning compliance, do not hesitate to call Michael  
Terpinski of the Northwest District Office at (419) 373-3075.

Sincerely,



*for* Pamela S. Allen, Manager  
Regulatory Information Services  
Division of Hazardous Waste Management

#### Attachments

cc: Edwin Lim, Mgr., ERAS, DHWM  
Jeremy Carroll/Marisa Martinez, ERAS, DHWM  
Harriet Croke, US EPA, Region V  
Michael Terpinski, DHWM, NWDO  
Carol Hester, Public Interest Center, Ohio EPA

g:\users\dsharp\bp.products.premcor.refining.finalrenewal.wpd

## PUBLIC NOTICE

Allen County

### OHIO EPA ISSUES FINAL RENEWAL HAZARDOUS WASTE PERMIT

On June 20, 2003, Ohio EPA issued a final renewal hazardous waste facility installation and operation permit (Permit) to BP Products North America/Premcor Refining Group Inc, (BP Premcor, Inc.) for its facility at 1150 South Metcalf Street, Lima, Ohio 45804. The EPA Identification Number for this facility is OHD005051826.

#### **Why does BP Premcor, Inc., need a Permit?**

BP Premcor, Inc., is a petroleum refinery which produces petroleum distillates, gasoline, diesel fuels, jet fuels, lubricating oils, fuel oils, light ends, benzene, toluene, asphalt, coke and trolumen. From this refinery process, hazardous waste was managed in the site's land treatment unit waste pile building and a container storage building. The hazardous waste management units are no longer operating. There are no greater than 90-day active treatment, storage, or disposal activities at the site. However, BP Premcor, Inc. is involved in corrective action and closure activities, and must renew their permit for this purpose. The final renewal Permit contains the conditions under which the facility must operate. To issue this final renewal Permit, Ohio EPA determined that the Permit application is complete and meets appropriate standards. It will allow BP Premcor, Inc. to conduct corrective action and closure activities. It will also require the company to investigate and, if necessary, clean up any contamination from hazardous wastes or constituents from the waste management units that may be at the facility.

#### **Can I appeal this permit?**

Yes, if you are an officer of an agency of the state or of a political subdivision, acting in a representative capacity, or any person who would be aggrieved or adversely affected by this renewal Permit, you have the right to appeal this permit decision to the Environmental Review Appeals Commission (ERAC).

#### **If I decide to appeal this final renewal Permit, how and when must I make the appeal?**

If you file an appeal, you must put it in writing no later than July 20, 2003. Your appeal must explain why you are appealing the action and the grounds you are using for your appeal. You must file your appeal with ERAC at the following address: *Environmental Review Appeals Commission*, 309 South Fourth Street, Room 222, Columbus, Ohio 43215. You must send a copy of the appeal to the director of Ohio EPA at the following address no later than three (3) days after you file it with ERAC: *Christopher Jones, Director of Ohio EPA*, P.O. Box 1049, Columbus, Ohio 43216-1049.

**Responsiveness Summary**  
**Premcor Refining Group, Inc./BP Products North America, Inc.**  
**Lima Refinery**  
**Ohio Permit No. 03-02-0390**  
**U.S. EPA ID# OHD 005 051 826**

Ohio EPA issued a draft Part B Renewal Permit to BP Products North America, Inc. (BP)/Premcor Refining Group, Inc. (Premcor) on August 21, 2002. BP Chemical, Inc. is also considered an owner and operator on this permit for the purposes of meeting corrective action requirements for SWMU 68, Old Lube Plant. In 1998 BP sold the Lima Refinery to Premcor Refining Group, Inc. (f.k.a. Clark). The sale included property and the refining operations within the fence line where manufacturing operations are ongoing. BP retained the surrounding property that contains both RCRA units and solid waste management units (SWMUs). Based upon the sales arrangement at the facility, remedial activities (i.e. corrective action and RCRA closure) are conducted by BP, while Premcor owns and operates the active refinery portion of the facility.

An original public comment period began on August 22, 2002, and was to be concluded on October 5, 2002. At BP's request, the public comment period was extended until November 17, 2002. BP submitted comments on the draft permit dated November 14, 2002, received by Ohio EPA on November 15, 2002. In addition, Premcor submitted comments dated November 13, 2002, received by Ohio EPA, November 19, 2002. There were no other comments.

Ohio EPA has reviewed and considered all comments relating to the draft Part B Renewal Permit and at this time is issuing a final permit. This responsive summary addresses these comments. Where necessary, the final permit has been revised accordingly in response to comments received.

Comment received from BP

General Comment

"Corrective action at the Lima refinery is currently authorized under a Resource Conservation and Recovery Act (RCRA) permit issued by U.S. EPA in 1989 and modified on April 24, 2002, following the approval of the RCRA Facility Investigation (RFI) and Corrective Measure Study (CMS). This permit requires the facility to identify and take corrective action for releases of hazardous waste and hazardous waste constituents from various areas of the refinery and identifies the remedial measures deemed necessary by U.S. EPA to protect human health and the environment. BP is currently implementing corrective measures specified in U.S. EPA's permit based upon the U.S. EPA approved Corrective Measure Implementation Conceptual Workplan and Performance Based Groundwater Monitoring Plan. BP believes that Ohio EPA permit and remedial measures contained therein should be consistent with the federal permit issued by U.S. EPA.

In 1998 BP sold the Lima Refinery to Premcor Refining Group, Inc. (f.k.a. Clark). The sale included only the real property and the refining operations within the fence line where manufacturing operations are ongoing. BP retained the surrounding "off-site" property that had been historically owned and operated by the refinery and contained both RCRA units and solid waste management units (SWMUs). Based upon the sales arrangement at the facility, remedial activities (i.e. corrective action and RCRA closure) are conducted by BP, while Premcor owns and operates the active refinery portion of the facility. Premcor does not operate any treatment, storage or disposal units at the facility nor does Premcor use the EPA identification number associated with this permit for its waste management activities. Premcor is subject only to the generator requirements of OAC 3745-52. The EPA identification number associated with this permit is used only for remedial activities and potentially any remediation waste that might be generated. Based on this division of interest and the fact that the permit is being issued to address only RCRA closure, post-closure and corrective action activities, references to Premcor's ongoing manufacturing operations or waste handling activities should be removed from the permit and the conditions of the permit should be revised to cover only those activities associated with closure, post-closure and corrective action. Based upon discussions with Ohio EPA personnel during the comment period, it is BP's understanding that the provisions of this permit do not apply to the ongoing Premcor refinery operations, but rather are limited to the RCRA closure and corrective action activities of BP.

The permit should be modified to reflect that the facility consists of two parcels owned by two separate entities, and to delineate the portions of the facility owned by each. Similarly, both BP and Premcor operate some portions of the facility, and that too should be acknowledged and specifically delineated. Attached as Attachment A is a map of the facility showing the areas separately owned and separately operated by BP and Premcor, respectively. The legal descriptions of the distinct parcels owned by each owner are lengthy and were previously submitted in the Response to Notice of Deficiency – RCRA Part B Permit Renewal Application (August 6, 1999). These are incorporated by reference into these comments, and the permit should set forth the different ownership of the different parts of the facility to provide a clear delineation of the party responsible for carrying out the obligations of the respective owner and operator of each parcel that makes up the facility."

### **Ohio EPA Response**

Ohio EPA acknowledges that BP has been working closely with U.S. EPA in the implementation of corrective action at the facility as outlined in its Federal RCRA permit. Ohio EPA is making every effort to make a smooth transition between the corrective action program under BP's Federal permit to BP's Ohio EPA issued renewal permit.

Ohio EPA does not agree with BP that the permit should be revised in response to BP's comment. Under Ohio law, no person shall establish or operate a hazardous waste facility without a hazardous waste facility installation and operation permit. The term facility is defined to include the land used for hazardous waste management activities. To the extent that Premcor owns land upon which a treatment, storage or disposal unit exists, it is either an owner or operator (or both) of a hazardous waste facility. On October 30, 1998, BP and Premcor (in a modification request) notified Ohio EPA of a change in ownership described in the above comment. Ohio EPA acted upon the modification (Class 3 modification approved June 1, 2000) and both Premcor and BP were identified as Permittees, owners, and operators of the facility. The duties of the parties identified as owners or operators arise from the permitted hazardous waste management activities. These are explicitly defined in the cover page of every permit under the heading "AUTHORIZED ACTIVITIES"; in this case those activities are "Closure/Post-Closure" and "Corrective Action". This permit condition provides that "any management of hazardous waste not authorized by this permit is prohibited, unless expressly authorized ... by law". Generator activities are not mentioned and are not authorized by this permit; all generators are subject to the requirements of OAC Chapter 3745-52. Ohio EPA sees no need to modify the permit in response to this comment.

Ohio EPA notes that Attachment G found in Volume I in the August 1999 RCRA Part B Renewal Application contained a map of the facility delineating the areas owned/operated by each Permittee. In addition, as BP points out, legal descriptions of the distinct parcels are also found in Attachment G of the renewal application. Updates or changes to this information can be submitted in accordance with OAC 3745-50-51 after permit renewal.

**Comment 1 A.5. Duty to Comply**

"This condition should be revised to reflect the priority of the permit. Specifically, the permit should reflect that if there are inconsistencies between the permit and the rules, the permit will be the controlling document."

**Ohio EPA Response**

Inconsistencies described in the comment are specifically addressed in Condition A.1. The permit provides that in the instance of inconsistent language or discrepancies between, among other things, the permit or the rules, the more stringent provision governs. Ohio EPA sees no need to revise or remove this condition.

**Comment 2 A.9. Operation and Maintenance**

"As written, the broad nature of the condition is applicable to generators who treat, store, or dispose of hazardous waste on-site, which is not consistent with the operations at the Lima Refinery. This condition should be revised to address specific operations and

maintenance activities associated with corrective action, closure and post-closure. Specifically, the condition should be revised to indicate that operation and maintenance will be conducted in accordance the measures described in the Primary and "C" Pond Closure Plan (September 2001) and in the Corrective Measures Implementation Conceptual Plan (July 2002), both of which have been approved by U.S. EPA. Additionally, Premcor's manufacturing operations are subject to the generator requirements (OAC 3745-52) and as such do not need to be specifically referenced in permit language."

#### **Ohio EPA Response**

The duties of the parties identified as owners or operators arise from the permitted hazardous waste management activities. These are explicitly defined in the cover page of every permit under the heading "AUTHORIZED ACTIVITIES"; in this case those activities are "Closure/Post-Closure" and "Corrective Action". Generator activities are not mentioned and are not authorized by this permit; all generators are subject to the requirements of OAC Chapter 3745-52. The broadness of this condition is limited by the scope of the permit and its authorized activities. Ohio EPA sees no need to revise this condition.

#### **Comment 3 A.11. Inspection and Entry**

"Ohio EPA states in condition A.1. "the renewal of the surface impoundments and land treatment unit are for the purposes of accomplishing closure and post closure activities. The units are currently inactive...". Considering this, the terms of this condition should be revised to reflect inspection and entry activities necessary to accomplish closure, post closure and corrective action. The broad nature of the condition is applicable to generators who treat, store, or dispose of hazardous waste on-site, which is not the case at Lima Refinery. Premcor's manufacturing operations are subject to the generator requirements (OAC 3745-52) and as such do not need to be specifically referenced in permit language."

#### **Ohio EPA Response**

The issuance of this permit is for the purpose of post closure and corrective action. Premcor's manufacturing operations are not subject to these conditions set out in this permit. But the facility is subject to the generator requirements as stated in the response to BP's General Comment.

The suggested changes are unnecessary; as indicated in previous responses, the permit authorizes specific hazardous waste management activities to be conducted at the facility and, the permit holders' responsibilities or duties stem from these authorized activities. Ohio EPA sees no need to revise this condition.

**Comment 4 A.14. Retention of Records**

- "(a) This condition should be revised to specifically address activities associated with corrective action, closure and post closure. The broad nature of the condition is applicable to generators who treat, store or dispose of hazardous waste on-site, which is not the case at Lima Refinery. Additionally, Premcor's manufacturing operations are subject to the generator requirements (OAC 3745-52) and as such do not need to be specifically referenced in permit language.
- (d) The reference to records from "all" groundwater monitoring wells and associated groundwater surface elevations is inappropriate. The refinery has wells that are not part of the groundwater-monitoring network required by OAC Rule 3745-54-98. The paragraph should be revised to indicate only the records and associated groundwater surface elevations from the wells required by OAC 3745-54-98 need be retained."

**Ohio EPA Response**

The issuance of this permit is for the purpose of post closure and corrective action. Premcor's manufacturing operations are not subject to the conditions set out in this permit. But the facility is subject to the generator requirements as stated in the response to BP's General Comment.

The suggested changes in item (d) are unnecessary; as indicated in previous responses, the permit authorizes specific hazardous waste management activities to be conducted at the facility and, the permit holders' responsibilities or duties stem from these authorized activities. Records must be kept for all hazardous waste ground water monitoring wells specified by the permit or the approved Part B application. Ohio EPA sees no need to revise this condition.

**Comment 5 A.15. Planned Changes**

"Since the permit is being issued to address closure, post-closure and corrective action, this condition should be revised to specifically indicate that it applies to physical alteration and changes to the remedial measures implemented at regulated units and solid waste management units."

**Ohio EPA Response**

The issuance of this permit is for the purpose of post closure and corrective action. Premcor's manufacturing operations are not subject to the conditions set out in this permit. But the facility is subject to the generator requirements as stated in the response to BP's General Comment.

The suggested changes are unnecessary; as indicated in previous responses, the permit authorizes specific hazardous waste management activities to be conducted at the facility and, the permit holders' responsibilities or duties stem from these authorized activities. Physical changes to non-regulated units are not covered by this permit condition. Ohio EPA sees no need to revise this condition.

**Comment 6 A.17. Anticipated Non-Compliance**

- "(a) The broad nature of the condition is applicable to generators who treat, store, or dispose of hazardous waste on-site, which is not the case at Lima Refinery. Consequently, this condition should be revised to indicate that the requirement for advance notice to the Director is specific to operations and maintenance activities associated with corrective action, closure and post closure as referenced in the Primary and "C" Ponds Closure Plan (September 2001) and in the Corrective Measures Implementation Conceptual Plan (July 2002). Based upon discussions with Ohio EPA personnel during the comment period, it is BP's understanding that these provisions do not apply to the Premcor operations,
- (b) OEPA indicates that the permit renewal is for the purpose of accomplishing closure and post closure activities. Scheduled plant turnarounds are unrelated plant operational maintenance activities and thus the condition for District notification in advance of a turnaround is unnecessary. Premcor's manufacturing operations are subject to the generator requirements (OAC 3745-52) and as such do not need to be specifically referenced in permit language. Moreover, Premcor maintains a separate waste identification number for process waste generation activities undertaken by the refinery. The EPA identification number associated with this permit is utilized only for corrective and closure activities undertaken by BP. This condition should be removed."

**Ohio EPA Response**

The duties of the parties identified as owners or operators arise from the permitted hazardous waste management activities. These are explicitly defined in the cover page of every permit under the heading "AUTHORIZED ACTIVITIES"; in this case those activities are "Closure/Post-Closure" and "Corrective Action". Generator activities are not mentioned and are not authorized by this permit; all generators are subject to the requirements of OAC Chapter 3745-52. The broadness of this condition is limited by the scope of the permit and its authorized activities.

The suggested changes for Item a) are unnecessary; as indicated in previous responses, the permit authorizes specific hazardous waste management activities to be conducted at the facility and, the permit holders' responsibilities or duties stem from these authorized activities.

Ohio EPA agrees with the removal of references to scheduled plant turnarounds. Item b) of this condition has been removed.

**Comment 7 A.20. Immediate Reporting of Non-Compliance**

"Premcor operations are subject to the generator requirements (OAC 3745-52) and, as such, do not need to be specifically referenced in permit language. Based upon discussions with Ohio EPA personnel during the comment period, it is BP's understanding that these provisions do not apply to the Premcor operations."

**Ohio EPA Response**

The duties of the parties identified as owners or operators arise from the permitted hazardous waste management activities. These are explicitly defined in the cover page of every permit under the heading "AUTHORIZED ACTIVITIES"; in this case those activities are "Closure/Post-Closure" and "Corrective Action". Generator activities are not mentioned and are not authorized by this permit; all generators are subject to the requirements of OAC Chapter 3745-52. The broadness of this condition is limited by the scope of the permit and its authorized activities. Ohio EPA sees no need to revise this condition.

**Comment 8 A.22. Other Noncompliance**

"Premcor's operations are subject to the generator requirements (OAC 3745-52) and as such do not need to be specifically referenced in permit language. Based upon discussions with Ohio EPA personnel during the comment period, it is BP's understanding that these provisions do not apply to the Premcor operations."

**Ohio EPA Response**

The duties of the parties identified as owners or operators arise from the permitted hazardous waste management activities. These are explicitly defined in the cover page of every permit under the heading "AUTHORIZED ACTIVITIES"; in this case those activities are "Closure/Post-Closure" and "Corrective Action". Generator activities are not mentioned and are not authorized by this permit; all generators are subject to the requirements of OAC Chapter 3745-52. The broadness of this condition is limited by the scope of the permit and its authorized activities. Ohio EPA sees no need to remove or revise this condition.

**Comment 9 A.26. Ohio Annual Permit Fee**

"This section should be revised to acknowledge that there are no "units" as defined in OAC Rule 3745-50-32, existing at the site that would subject the refinery to annual permit fee. Based upon discussions with Ohio EPA personnel during the comment period, it is BP's understanding that no permit fees are required for the activities permitted under this permit."

**Ohio EPA Response**

Ohio EPA agrees that there are no "units" as defined in OAC Rule 3745-50-32 at the facility. This condition has been designated Reserved.

**Comment 10 A.28. Information to be Maintained at the Facility**

"The facility has completed closure and submitted a certification at Primary and "C" Ponds and is proposing that the other two remaining unclosed RCRA units be addressed through the corrective action program. As a result numerous conditions listed in this section are no longer applicable. Specifically, conditions i) – contingency plan maintenance, iv) personnel training plan and training records and vi) inspection schedules should be removed."

**Ohio EPA Response**

While Ohio EPA agrees that the Primary and "C" Ponds were certified closed by letter dated December 12, 2002, and that the AFU, Oily Sludge Pond and the Land Treatment Unit (LTU) are being addressed under the corrective action program, Ohio EPA does not agree that the items listed above need to be removed. These items are still necessary since corrective action and post-closure activities are being conducted at the facility.

**Comment 11 A.29. Waste Minimization Report**

"Waste Minimization Report requirements do not seem to be appropriate in this case since the permit is being issued for the purpose of completing closure, post-closure and corrective action. Considering that no ongoing waste generation activities are associated with this permit this condition is not applicable and may actually be counter-productive for closure and remediation activities, which is what this permit addresses.

Waste minimization requirements are applicable to currently generated wastes from day-to-day operations, and Lima Refinery (Premcor) addresses the issue under applicable generator requirements. OAC Rules 3745-54-75(H), (I), and (J) refer to "generators who treat, store, or dispose of hazardous waste on-site . . .", which is not the case. OAC Rule 3745-54-73(B)(9) refers to treatment, storage, and disposal (TSD) facilities, which is inapplicable. OAC Rule 3745-52-20(B) is part of the generator requirements which are

applicable in any event and do not need to be specifically referenced in permit language. Based upon discussions with Ohio EPA personnel during the comment period, it is BP's understanding that these provisions do not apply to the Premcor operations. Also, there is potential for significant confusion in that some of these reports are required to be submitted "annually" and some "every two years". The condition should be removed and redesignated Reserved."

**Ohio EPA Response**

This condition has been removed and redesignated Reserved.

**Comment 12 B.4. Security**

"Based upon discussions with Ohio EPA personnel during the comment period, it is BP's understanding that these provisions do not apply to the Premcor operations."

**Ohio EPA Response**

The duties of the parties identified as owners or operators arise from the permitted hazardous waste management activities. These are explicitly defined in the cover page of every permit under the heading "AUTHORIZED ACTIVITIES"; in this case those activities are "Closure/Post-Closure" and "Corrective Action". Generator activities are not mentioned and are not authorized by this permit; all generators are subject to the requirements of OAC Chapter 3745-52. The broadness of this condition is limited by the scope of the permit and its authorized activities. Ohio EPA sees no need to revise this condition.

**Comment 13 B.5. General Inspection Requirements**

"Section F-2 of the permit application states that "once the closure plans for these units are approved the inspection schedule in the closure plan will be followed." Since the closure plan for Primary and "C" Ponds has been approved and since Primary Pond is the only regulated unit subject to post-closure care, this section should be revised to indicate that the inspection schedule in the Primary Pond Post-Closure plan will be followed. Additionally, Premcor's operations are subject to the generator requirements (OAC 3745-52) and, as such, do not need to be specifically referenced in permit language. Based upon discussions with Ohio EPA personnel during the comment period, it is BP's understanding that these provisions do not apply to the Premcor operations."

**Ohio EPA Response**

The duties of the parties identified as owners or operators arises from the permitted hazardous waste management activities. These are explicitly defined in the cover page of every permit under the heading "AUTHORIZED ACTIVITIES"; in this case those

activities are "Closure/Post-Closure" and "Corrective Action". Generator activities are not mentioned and are not authorized by this permit; all generators are subject to the requirements of OAC Chapter 3745-52. The broadness of this condition is limited by the scope of the permit and its authorized activities.

The draft permit was based on the permit application as submitted on March 26, 1997, and last updated August 13, 1999. While the Primary and "C" Pond Closure Plan was incorporated into the draft permit, the referenced section of the application should be modified to reflect the new information. BP should submit a modification in accordance with OAC Rule 3745-50-51 to update the application. As such, Ohio EPA sees no need to revise this condition at this time.

#### **Comment 14 B.6. Personnel Training**

"The requirement for personnel training should be revised to reflect the specific training required for closure, post-closure and corrective action. Necessary elements of personnel training are addressed in specific closure/post-closure plans and corrective action documents. The Lima Refinery (Premcor) does not treat store or dispose of hazardous waste in any HWMU nor does it plan to do so in the future. The provisions of OAC Rule 3745-54-16 are intended for facilities with active treatment, storage or disposal operations, which is not the case for Lima Refinery. Although the facility does not treat, store or dispose of hazardous waste they do manage hazardous waste therefore only the generator requirements (OAC 3745-52) should apply. Based upon discussions with Ohio EPA personnel during the comment period, it is BP's understanding that these provisions do not apply to the Premcor operations. This section should be revised to indicate that training will be conducted in accordance with the specifications in the closure/post-closure plans (Primary and "C" Pond Closure Plan dated September 12, 2001) and Corrective Measures Implementation Conceptual Workplan dated July 26, 2002."

#### **Ohio EPA Response**

The duties of the parties identified as owners or operators arise from the permitted hazardous waste management activities. These are explicitly defined in the cover page of every permit under the heading "AUTHORIZED ACTIVITIES"; in this case those activities are "Closure/Post-Closure" and "Corrective Action". Generator activities are not mentioned and are not authorized by this permit; all generators are subject to the requirements of OAC Chapter 3745-52. The broadness of this condition is limited by the scope of the permit and its authorized activities.

The draft permit was based on the permit application as submitted on March 26, 1997, and last updated August 13, 1999. While the Primary and "C" Pond Closure Plan was incorporated into the draft permit, the referenced section of the application should be

modified to reflect the new information. BP should submit a modification in accordance with OAC Rule 3745-50-51 to update the application. As such, Ohio EPA sees no need to revise this condition at this time.

**Comment 15 B.9. Required Equipment**

"While Lima Refinery maintains emergency response equipment, the inclusion of this information in the permit is unnecessary. The necessary elements on this topic are addressed in specific closure/post-closure plans (Primary and "C" Pond Closure Plan dated September 12, 2001) and Corrective Measures Implementation Conceptual Workplan dated July 26, 2002. This condition should be revised to indicate that only emergency equipment referenced in the closure/post-closure plans (Primary and "C" Pond Closure Plan dated September 12, 2001) and Corrective Measures Implementation Conceptual Workplan dated July 26, 2002 will be required. Based upon discussions with Ohio EPA personnel during the comment period, it is BP's understanding that these provisions do not apply to the Premcor operations."

**Ohio EPA Response**

The duties of the parties identified as owners or operators arise from the permitted hazardous waste management activities. These are explicitly defined in the cover page of every permit under the heading "AUTHORIZED ACTIVITIES"; in this case those activities are "Closure/Post-Closure" and "Corrective Action". Generator activities are not mentioned and are not authorized by this permit; all generators are subject to the requirements of OAC Chapter 3745-52. The broadness of this condition is limited by the scope of the permit and its authorized activities.

The draft permit was based on the permit application as submitted on March 26, 1997, and last updated August 13, 1999. While the Primary and "C" Pond Closure Plan was incorporated into the draft permit, the referenced section of the application should be modified to reflect the new information. BP should submit a modification in accordance with OAC Rule 3745-50-51 to update the application. As such, Ohio EPA sees no need to revise this condition at this time.

**Comment 16 B.10. Testing and Maintenance of Equipment**

"As indicated in the response to condition B.9., the requirement for a specific information regarding equipment should reference the Primary and "C" Pond Closure Plan dated September 12, 2001 and Corrective Measures Implementation Conceptual Workplan dated July 26, 2002. "

### **Ohio EPA Response**

The duties of the parties identified as owners or operators arise from the permitted hazardous waste management activities. These are explicitly defined in the cover page of every permit under the heading "AUTHORIZED ACTIVITIES"; in this case those activities are "Closure/Post-Closure" and "Corrective Action". Generator activities are not mentioned and are not authorized by this permit; all generators are subject to the requirements of OAC Chapter 3745-52. The broadness of this condition is limited by the scope of the permit and its authorized activities.

The draft permit was based on the permit application as submitted on March 26, 1997, and last updated August 13, 1999. While the Primary and "C" Pond Closure Plan was incorporated into the draft permit, the referenced section of the application should be modified to reflect the new information. BP should submit a modification in accordance with OAC Rule 3745-50-51 to update the application. As such, Ohio EPA sees no need to revise this condition at this time.

### **Comment 17 B.11. Access to Communication or Alarm System**

"While Lima Refinery maintains access to emergency communication devices and an alarm system to serve the needs of the refinery, OAC Rule 3745-54-34 is intended for facilities with active treatment, storage or disposal operations, which is not the case for Lima Refinery. The necessary elements on this topic are addressed in specific closure/post-closure plans and (Primary and "C" Pond Closure Plan dated September 12, 2001) and Corrective Measures Implementation Conceptual Workplan dated July 26, 2002. This section should be revised to reflect that only the emergency communication procedures outlined in the aforementioned documents are applicable."

### **Ohio EPA Response**

The duties of the parties identified as owners or operators arise from the permitted hazardous waste management activities. These are explicitly defined in the cover page of every permit under the heading "AUTHORIZED ACTIVITIES"; in this case those activities are "Closure/Post-Closure" and "Corrective Action". Generator activities are not mentioned and are not authorized by this permit; all generators are subject to the requirements of OAC Chapter 3745-52. The broadness of this condition is limited by the scope of the permit and its authorized activities.

The draft permit was based on the permit application as submitted on March 26, 1997, and last updated August 13, 1999. While the Primary and "C" Pond Closure Plan was incorporated into the draft permit, the referenced section of the application should be modified to reflect the new information. BP should submit a modification in accordance

with OAC Rule 3745-50-51 to update the application. As such, Ohio EPA sees no need to revise this condition at this time.

**Comment 18 B.12. Required Aisle Space**

"Two requirements of this section on required aisle space simply do not apply to the facility. The paragraph should be removed and redesignated Reserved."

**Ohio EPA Response**

Ohio EPA agrees that this condition does not apply as the only permitted activity at the facility is corrective action. The condition as requested has been removed and redesignated Reserved.

**Comment 19 B.13. Arrangement with Local Authorities**

"OAC Rule 3745-54-37 is intended for facilities with active treatment, storage or disposal operations, which is not the case for Lima Refinery. Premcor's operations are subject to the generator requirements (OAC 3745-52) and as such, do not need to be specifically referenced in permit language. Based upon discussions with Ohio EPA personnel during the comment period, it is BP's understanding that these provisions do not apply to the Premcor operations. The paragraph should be removed and redesignated Reserved."

**Ohio EPA Response**

The duties of the parties identified as owners or operators arise from the permitted hazardous waste management activities. These are explicitly defined in the cover page of every permit under the heading "AUTHORIZED ACTIVITIES"; in this case those activities are "Closure/Post-Closure" and "Corrective Action". Generator activities are not mentioned and are not authorized by this permit; all generators are subject to the requirements of OAC Chapter 3745-52. The broadness of this condition is limited by the scope of the permit and its authorized activities.

The draft permit was based on the permit application as submitted on March 26, 1997, and last updated August 13, 1999. While the Primary and "C" Pond Closure Plan was incorporated into the draft permit, the referenced section of the application should be modified to reflect the new information. BP should submit a modification in accordance with OAC Rule 3745-50-51 to update the application. As such, Ohio EPA sees no need to revise this condition at this time.

**Comment 20 B.14. Implementation of Contingency Plan**

"While Lima Refinery maintains a well-trained and experienced emergency response team and has emergency plans in place to serve the needs of the refinery, OAC Rules 3745-54-

51 and 3745-54-56 are intended for facilities with active treatment, storage or disposal operations, which is not the case for Lima Refinery. Premcor's operations are subject to the generator requirements (OAC 3745-52) and, as such, do not need to be specifically referenced in permit language. Based upon discussions with Ohio EPA personnel during the comment period, it is BP's understanding that these provisions do not apply to the Premcor operations. Sufficient elements of emergency response are addressed in specific closure/post-closure plans and corrective action documents. As a result, this section should be revised to indicate that activities associated with the post-closure of Primary Pond will be addressed in accordance with the Primary and "C" Ponds Closure Plan dated September 12, 2001 and issues relating to corrective action will be addressed per Corrective Measures Implementation Conceptual Workplan dated July 26, 2002."

#### **Ohio EPA Response**

The duties of the parties identified as owners or operators arise from the permitted hazardous waste management activities. These are explicitly defined in the cover page of every permit under the heading "AUTHORIZED ACTIVITIES"; in this case those activities are "Closure/Post-Closure" and "Corrective Action". Generator activities are not mentioned and are not authorized by this permit; all generators are subject to the requirements of OAC Chapter 3745-52. The broadness of this condition is limited by the scope of the permit and its authorized activities.

The draft permit was based on the permit application as submitted on March 26, 1997, and last updated August 13, 1999. While the Primary and "C" Pond Closure Plan was incorporated into the draft permit, the referenced section of the application should be modified to reflect the new information. BP should submit a modification in accordance with OAC Rule 3745-50-51 to update the application. As such, Ohio EPA sees no need to revise this condition at this time.

#### **Comment 21 B.15. Content of the Contingency Plan**

"As indicated in the response to condition B.14., the Primary and "C" Ponds Closure Plan and CMICP contain the necessary information. Therefore, this section should be revised to reference the Primary and "C" Ponds Closure Plan dated September 12, 2001 and Corrective Measures Implementation Conceptual Workplan dated July 26, 2002."

#### **Ohio EPA Response**

The duties of the parties identified as owners or operators arise from the permitted hazardous waste management activities. These are explicitly defined in the cover page of every permit under the heading "AUTHORIZED ACTIVITIES"; in this case those activities are "Closure/Post-Closure" and "Corrective Action". Generator activities are not

mentioned and are not authorized by this permit; all generators are subject to the requirements of OAC Chapter 3745-52. The broadness of this condition is limited by the scope of the permit and its authorized activities.

The draft permit was based on the permit application as submitted on March 26, 1997, and last updated August 13, 1999. While the Primary and "C" Pond Closure Plan was incorporated into the draft permit, the referenced section of the application should be modified to reflect the new information. BP should submit a modification in accordance with OAC Rule 3745-50-51 to update the application. As such, Ohio EPA sees no need to revise this condition at this time.

**Comment 22 B.17. Amendments to Plan**

"As indicated in the response to condition B.14., since the purpose of the permit is to complete closure, post-closure and corrective action, this condition should be revised to reference the Primary and "C" Ponds Closure Plan dated September 12, 2001 and Corrective Measures Implementation Conceptual Workplan dated July 26, 2002."

**Ohio EPA Response**

The duties of the parties identified as owners or operators arise from the permitted hazardous waste management activities. These are explicitly defined in the cover page of every permit under the heading "AUTHORIZED ACTIVITIES"; in this case those activities are "Closure/Post-Closure" and "Corrective Action". Generator activities are not mentioned and are not authorized by this permit; all generators are subject to the requirements of OAC Chapter 3745-52. The broadness of this condition is limited by the scope of the permit and its authorized activities.

The draft permit was based on the permit application as submitted on March 26, 1997, and last updated August 13, 1999. While the Primary and "C" Pond Closure Plan was incorporated into the draft permit, the referenced section of the application should be modified to reflect the new information. BP should submit a modification in accordance with OAC Rule 3745-50-51 to update the application. As such, Ohio EPA sees no need to revise this condition at this time.

**Comment 23 B.18. Copies of the Plan**

"As indicated in the response to condition B.14., the requirement for a contingency plan is unnecessary. This condition should be modified to indicate that copies of the contingency plan shall be distributed as required by the Primary Pond Post Closure Plan and the Corrective Measure Implementation Conceptual Work Plan."

### **Ohio EPA Response**

The duties of the parties identified as owners or operators arise from the permitted hazardous waste management activities. These are explicitly defined in the cover page of every permit under the heading "AUTHORIZED ACTIVITIES"; in this case those activities are "Closure/Post-Closure" and "Corrective Action". Generator activities are not mentioned and are not authorized by this permit; all generators are subject to the requirements of OAC Chapter 3745-52. The broadness of this condition is limited by the scope of the permit and its authorized activities.

The draft permit was based on the permit application as submitted on March 26, 1997, and last updated August 13, 1999. While the Primary and "C" Pond Closure Plan was incorporated into the draft permit, the referenced section of the application should be modified to reflect the new information. BP should submit a modification in accordance with OAC Rule 3745-50-51 to update the application. As such, Ohio EPA sees no need to revise this condition at this time.

### **Comment 24 B.19. Emergency Coordinator**

"This condition should be modified to indicate that with regard to the emergency coordinator the Permittee shall comply with the Primary Pond Post Closure Plan and the Corrective Measure Implementation Conceptual Work Plan."

### **Ohio EPA Response**

The duties of the parties identified as owners or operators arise from the permitted hazardous waste management activities. These are explicitly defined in the cover page of every permit under the heading "AUTHORIZED ACTIVITIES"; in this case those activities are "Closure/Post-Closure" and "Corrective Action". Generator activities are not mentioned and are not authorized by this permit; all generators are subject to the requirements of OAC Chapter 3745-52. The broadness of this condition is limited by the scope of the permit and its authorized activities.

The draft permit was based on the permit application as submitted on March 26, 1997, and last updated August 13, 1999. While the Primary and "C" Pond Closure Plan was incorporated into the draft permit, the referenced section of the application should be modified to reflect the new information. BP should submit a modification in accordance with OAC Rule 3745-50-51 to update the application. As such, Ohio EPA sees no need to revise this condition at this time.

**Comment 25 B.20. Emergency Procedures**

"This condition should be modified to indicate that with regard to emergency procedures the Permittee shall comply with the Primary Pond Post Closure Plan and the Corrective Measure Implementation Conceptual Work Plan."

**Ohio EPA Response**

The duties of the parties identified as owners or operators arise from the permitted hazardous waste management activities. These are explicitly defined in the cover page of every permit under the heading "AUTHORIZED ACTIVITIES"; in this case those activities are "Closure/Post-Closure" and "Corrective Action". Generator activities are not mentioned and are not authorized by this permit; all generators are subject to the requirements of OAC Chapter 3745-52. The broadness of this condition is limited by the scope of the permit and its authorized activities.

The draft permit was based on the permit application as submitted on March 26, 1997, and last updated August 13, 1999. While the Primary and "C" Pond Closure Plan was incorporated into the draft permit, the referenced section of the application should be modified to reflect the new information. BP should submit a modification in accordance with OAC Rule 3745-50-51 to update the application. As such, Ohio EPA sees no need to revise this condition at this time.

**Comment 26 B.26 Closure Performance Standard**

"Since closure of all units at the facility has been completed (see comment on B.27), this provision should be removed."

**Ohio EPA Response**

Ohio EPA confirms that closure of all units at the facility have been completed. This condition has been removed and designated Reserved.

**Comment 27 B.27. Closure of Remaining Units**

"The status table presents out of date information for Primary and "C" Ponds. This condition should be should be revised to reflect the most recent information. A Class II permit modification to add the Primary and "C" Ponds Closure plan to the RCRA permit was submitted on May 17, 2002. The permit was subsequently modified on July 17, 2002. A certification report was submitted for the closure on September 13, 2002. Primary Pond was a "waste in place" closure that is subject to Post-Closure care. "C" Pond was "clean" closed.

The status table recognizes the submission of a revised closure plan for AFU, Oily Sludge Pond and Drying Pit Ponds with the Part B renewal application, dated March 26, 1997. The revised closure plan stated *"that due to the proximity of solid waste management units to the ponds complete closure of the unit would not be possible until the area was characterized in the RFI"*. Data subsequently obtained in the RFI indicated that a release of similar materials had occurred at some of the SWMUs adjacent to the regulated units. As a result of the historic overlapping releases, the SWMUs were consolidated into a common group (SWMU Area 3) for purposes of the RFI, CMS and CMI. Area 3 contains SWMU Group F, which is comprised of AFU Pond (SWMU 42), Oily Sludge Pond (SWMU 43) and the Drying Pits (SWMU 60), as noted in OEPA permit condition E.13. Consequently, BP is concerned that performing cleanup of similar releases where boundaries are indistinct or overlap using different regulatory programs (i.e. closure and corrective action) could unnecessarily impede cleanup. As a result, OEPA should adopt an approach for AFU, Oily Sludge Pond and Drying Pits similar that proposed for the Land Treatment Unit; that is the unit should be addressed under corrective action."

#### **Ohio EPA Response**

Ohio EPA agrees that the Primary and "C" Ponds were certified closed by letter dated December 12, 2002. Post closure care is only being required for Primary Pond, while the AFU, Oily Sludge Pond and the Land Treatment Unit (LTU) are being addressed under the corrective action program. This condition has been removed and designated Reserved.

#### **Comment 28 B.28 Amendment of Closure Plan**

"Since there will be no units subject to closure, this section should be removed and Reserved."

#### **Ohio EPA Response**

Ohio EPA agrees that the Primary and "C" Ponds were certified closed by letter dated December 12, 2002. Post closure care is only being required for Primary Pond, while the AFU, Oily Sludge Pond and the Land Treatment Unit (LTU) are being addressed under the corrective action program. This condition has been removed and designated Reserved.

#### **Comment 29 B.31. Time Allowed for Closure**

"Since there will be no units subject to closure, this section should be removed and Reserved."

#### **Ohio EPA Response**

Ohio EPA agrees that the Primary and "C" Ponds were certified closed by letter dated December 12, 2002. Post closure care is only being required for Primary Pond, while the

AFU, Oily Sludge Pond and the Land Treatment Unit (LTU) are being addressed under the corrective action program. This condition is no longer applicable. The condition has been removed and designated Reserved.

**Comment 30 B.32. Disposal or Decontamination of Equipment, Structures and Soils**

"The only unit for which this condition was formerly applicable was Primary and "C" Ponds. However, since the closure for Primary and "C" Ponds has been completed there is no longer a need for this condition to be included in the permit. Consequently, this condition should be removed from the permit and designated Reserved."

**Ohio EPA Response**

Ohio EPA agrees that the Primary and "C" Ponds were certified closed by letter dated December 12, 2002. Post closure care is only being required for Primary Pond, while the AFU, Oily Sludge Pond and the Land Treatment Unit (LTU) are being addressed under the corrective action program. This condition is no longer applicable, as so, the condition has been removed and designated Reserved.

**Comment 31 B.33. Certification of Closure**

"The only unit for which this condition was formerly applicable was Primary and "C" Ponds. However, since the closure for Primary and "C" Ponds has been completed there is no longer a need for this condition to be included in the permit. Consequently, this condition should be removed from the permit and a designated Reserved."

**Ohio EPA Response**

Ohio EPA agrees that the Primary and "C" Ponds were certified closed by letter dated December 12, 2002. Post closure care is only being required for Primary Pond, while the AFU, Oily Sludge Pond and the Land Treatment Unit (LTU) are being addressed under the corrective action program. This condition is no longer applicable, as so, the condition has been removed and designated Reserved.

**Comment 32 B.34. Survey Plat**

"The only unit for which this condition was formerly applicable was Primary and "C" Ponds. However, since the closure for Primary and "C" Ponds has been completed there is no longer a need for this condition to be included in the permit. Consequently, this condition should be removed from the permit and designated Reserved."

**Ohio EPA Response**

Ohio EPA agrees that the Primary and "C" Ponds were certified closed by letter dated December 12, 2002. Post closure care is only being required for Primary Pond, while the

AFU, Oily Sludge Pond and the Land Treatment Unit (LTU) are being addressed under the corrective action program. This condition is no longer applicable, the condition has been removed and designated Reserved.

**Comment 33 B.35. General Post-Closure Requirements**

"This condition assumes that all of the closing units will be closed as landfills and therefore will require 30 years of post-closure care. This condition should be revised to address the actual conditions at the site. Specifically, paragraph (a) should be reworded to indicate that post-closure care should continue for 30 years at Primary Pond. Since it is proposed to address LTU and AFU/Oily Sludge Pond under the corrective action program those units will not be subject to the Post Closure provisions of this section. The specific conditions of long term care for those SWMU's requiring long term care are discussed in the Corrective Measures Implementation Conceptual Workplan and Performance Based Groundwater Monitoring Plan dated July 26, 2002. This section should be revised to indicate that long term care for the SWMUs will be performed in accordance with the Corrective Measures Implementation Conceptual Workplan and Performance Based Groundwater Monitoring Plan.

Post Closure Care is also addressed in Module G. This condition and Module G contain some overlap. All post-closure requirements should be consolidated in one place."

**Ohio EPA Response**

Ohio EPA agrees that the Primary and "C" Ponds were certified closed by letter dated December 12, 2002. Post closure care is only being required for Primary Pond, while the AFU, Oily Sludge Pond and the Land Treatment Unit (LTU) are being addressed under the corrective action program. This condition is no longer applicable, the condition has been removed and designated Reserved.

**Comment 34 B.36. Cost Estimate For Facility Closure and Post-Closure**

"This condition should be revised to indicate that the most recent closure cost and post-closure estimates were submitted pursuant to the conditions of U.S. EPA's permit. The most recent financial assurance estimates are dated October 10, 2002."

**Ohio EPA Response**

Ohio EPA confirms that financial assurance estimates dated October 10, 2002, were submitted to the Agency. However, the permit was issued draft on August 21, 2002. As so, in order to incorporate this information into the Part B application, the Permittee must resubmit the updated cost estimates in accordance with OAC 3745-50-51 following final issuance of the permit. In addition, the Permittee should also include financial assurance documentation to comply with Permit Condition E.9.14)h).

**Comment 35 Corrective Action Summary**

"This condition does not contain the most up to date information regarding the status of Corrective Action at the facility. The following information regarding BP submittals and U.S. EPA approvals should be added to the permit:

Corrective Measures Study (CMS) was approved by U.S. EPA on December 12, 2001

Corrective Measures Implementation Conceptual Workplan / Performance Based Groundwater Monitoring Plans were approved by U.S. EPA on August 16, 2002.

E-Pond Corrective Measures Completion Report , dated September 3, 2002 submitted to U.S. EPA

Deed Restrictions implemented on June 7, 2002 and submitted to U.S. EPA.

Trolumen product management plan submitted to U.S. EPA on June 19, 2002

SWMU 8 (L-6 Landfill) – Corrective Measures Implementation Construction Completion Report dated October 25, 2002 submitted to U.S. EPA

SWMU 58 (Tank 231) – Corrective Measures Implementation Construction Completion Report dated October 25, 2002 submitted to U.S. EPA

SWMU Group A (L-3 Waste Pile and Old Drum Storage Area) – Corrective Measures Implementation Construction Completion Report dated October 25, 2002 submitted to U.S. EPA

Technical Impracticability Demonstration for the Area 3 LNAPL submitted to U.S. EPA October 30, 2002

This section should be revised to indicate that the CMI Conceptual Workplan and Performance Based Groundwater Monitoring plan have both been approved by U.S. EPA and subsequently implemented. Consequently, the reference to Ohio EPA's impending approval of the Corrective Measures Implementation Conceptual Plan should be removed."

**Ohio EPA Response**

Ohio EPA has revised the Corrective Action Summary to incorporate the information in the above comment. In addition, Ohio EPA has included language regarding the submittal and/or approval of several documents during the time the responsiveness summary and final permit were being finalized. The following is a list of these submittals:

SWMU Group A (L-3 Waste Pile and Old Drum Storage Area Construction Report)  
Construction Completion Report  
SWMU 58 Corrective Measure Completion Report  
SWMU 8 Corrective Measure Completion Report  
SWMU 46 (Old Primary Pond) Construction Completion Report  
Technical Impracticability Demonstration for Area 3 LNAPL

**Comment 36 E.1. Corrective Action at the Facility**

"This condition states that *"for the purposes of SWMU 68, Old Lube Plant, the Permittee is defined as BP North America, Premcor Refining Group, Inc., and BP Chemicals, Inc. As a result of the sale of the piece of property on August 9, 1998, BP Chemicals, Inc. is now considered to be the owner and must maintain compliance with this module."* Additional detail on this condition was presented in prior correspondence from OEPA dated March 22, 2000. In that correspondence OEPA stated *"BP Chemicals is being considered an owner and operator for the purpose of meeting corrective action requirements for Solid waste Management Unit 68"*. While OEPA correctly references the fact that BP Chemicals Inc. is the owner of the parcel of property that was the former location of Old Lube Plant (SWMU 68), the draft permit fails to recognize that corrective action activities have been concluded at SWMU 68. Corrective action activities at SWMU 68 were concluded with U.S. EPA's determination of "No Further Action" in the April 24, 2002 U.S. EPA permit. The no further action determination was based upon the results of the RFI and Human Health Risk Assessment. Considering that corrective action obligations have been fulfilled, the reference to BP Chemicals as owner and operator should be removed from the permit. Moreover, as discussed with OEPA on August 6, 2002 the parcel should be removed from the permit."

**Ohio EPA Response**

While it is true that SWMU 68 along with a number of other SWMUs have been identified in the U.S. EPA April 24, 2002 permit as requiring no further action, the federal permit also clearly requires imposition of facility-wide institutional controls. In its April 24, 2002 Response to Comments, U.S. EPA clearly stated that SWMU 68 as well as the other "No Further Action" SWMUs were included in the facility-wide institutional control requirement (see page 13 the April 2002 Response to Comments). The U.S. EPA's April 24, 2002 permit was issued to BP Products North America, BP Chemicals, Inc. and Premcor Refining Group and specifically requires "facility-wide" institutional controls be implemented to restrict ground water use as a drinking water source and to restrict land use to industrial purposes (see condition F2b(13)). Ohio EPA sees no reason to depart from the obligations imposed by the federal permit condition. BP Chemicals, Inc. will remain on the permit as

an owner/operator until the facility-wide institutional control requirements of this permit have been fulfilled. Ohio EPA sees no need to revise this condition.

**Comment 37 E.7. Determination of No Further Action**

"(a) This condition should be revised to identify the SWMUs that were designated "No Further Action" by U.S. EPA in their Permit dated April 24, 2002. U.S. EPA evaluated the SWMUs during the RFI, and they reevaluated the SWMUs during the Human Health Risk Assessment. U.S. EPA concluded that, based upon an unrestricted use scenario, the SWMUs did not pose a threat to human health and the environment. The SWMUs identified as "No Further Action" in the U.S. EPA permit are:

- 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

Alternate language to achieve this change is submitted as an exhibit.

During the comment period on U.S. EPA's permit, Ohio EPA commented that the SWMUs were evaluated in the RFI risk assessment using an industrial worker scenario. While it is true that industrial worker scenarios were used in the RFI, the above referenced SWMUs were also evaluated on a residential basis (*Addendum to Appendix E of the Phase II RFI Report – Residential Human Health Risk Assessment*, dated December 12, 2001). U.S. EPA's Response Comments dated April 24, 2002 stated; "...these SWMUs were reevaluated during the residential human health risk assessment ..." thus confirming the use of the residential scenario in the decision making process on these SWMUs. Each of these units should be identified in this permit as "No Further Action."

**Ohio EPA Response**

Ohio EPA has revised this condition to recognize the units that U.S. EPA identified in Premcor's April 24, 2002 federal permit (condition VII. F. 1(a)) as requiring no further action because the U.S. EPA also imposed facility-wide institutional controls (condition VII F. 2(b)(13)) for the facility providing the necessary measure of protection. Consistent with the

federal permit, the requirement for facility-wide institutional control also appears in the Ohio permit; the requirement of such a restriction to meet the requirements of Ohio law is discussed in greater detail elsewhere in this responsiveness summary.

**Comment 38 E.8. Corrective Measures Study**

"This provision should specify that a CMS will be performed for the AFU Sludge Pond."

**Ohio EPA Response**

Ohio EPA has revised this condition to state that a CMS will be performed for the AFU/Oily Sludge Pond (SWMU 42).

**Comment 39 E.9. CMI**

"A Corrective Measures Implementation Conceptual Workplan / Performance Based Groundwater Monitoring Plan has been approved by U.S. EPA for all units to be addressed in corrective action, other than the AFU/Oily Sludge Pond, which was not addressed in the approved CMI. The permit should specify that BP will implement the approved CMICW/PBGWMP, and implement additional Corrective Measures for the AFU/Oily Sludge Pond once the CMS for AFU/Oily Sludge pond has been approved by OEPA."

**Ohio EPA Response**

Ohio EPA has revised this condition to state that the Permittee will implement the Corrective Measures Implementation Conceptual Workplan (CMICW) approved by U.S. EPA and the Performance Based Groundwater Monitoring Plan (PBGWMP). However, the Permittee should note that Ohio EPA has conducted a review of the PBGWMP and has concluded that modifications to the PBGWMP are necessary to meet State requirements. Upon final permit issuance, it is the intent of the Ohio EPA to provide the Permittee with a letter stating the Agency is prepared to issue an Agency-initiated permit modification to incorporate these changes to the PBGWMP in accordance with Ohio Administrative Code (OAC) Rule 3745-50-51(J). These changes will be initiated by Ohio EPA and detailed in the letter to be sent to the Permittee as stated earlier. The letter will also give due notice to the Permittee of the forthcoming Ohio EPA-initiated permit modification and accordingly comply with the requirements of Ohio Revised Code (ORC) §3734.09. Ohio EPA will be preparing to move forward with a draft Agency-initiated permit modification within sixty (60) days from the issuance of the letter unless the Permittee opts to incorporate the changes outlined by Ohio EPA by submitting to Ohio EPA a permit modification in accordance with OAC Rule 3745-50-51.

Ohio EPA is providing the Permittee with the changes in advance of the forthcoming letter as a part of this responsiveness summary. The following outlines the changes Ohio EPA deems necessary to comply with State requirements for the PBGWMP:

- 1) *Ground water monitoring must be performed for thirty (30) years at each of the solid waste management units (SWMUs) to which the Performance Based Groundwater Monitoring Plan (PBGWMP) pertains unless the equivalent of clean closure is achievable at a SWMU(s).*
- 2) *All analytical results must be reported and the raw data sheets must be included with the appropriate accompanying quality assurance and quality control (QA/QC) documentation for sampling conducted per the PBGWMP.*
- 3) *The Permittee shall use the analytical methods and reporting limits stated in Table 1 as attached to this responsiveness summary for all sample analyses performed per the PBGWMP for the applicable sampling parameters. All portions of the PBGWMP that are affected by this comment must be modified appropriately (i.e., Table 2, "Groundwater COCs with Media Clean Up Standards Less than Reporting Limits, Modified U.S. EPA RCRA Permit, BP Products North America, Lima, OH", pg. 1 of 1).*

*In addition, the Permittee shall address the current use of the SW 846 7841 analytical method for the analysis of ground water samples for thallium where a 5.0 ug/l MDL and PQL are used in light of the following information: The STL North Canton LQM, Table Section, Revision No.: 1.0, Date Revised: September 15, 2000, Page 132 of 346 displays Table 8.2-4-2, Metals - ICP, CVAA, GFAA (6000, 7000, 200 Series), Reporting Limits (RL), Method Detection Limits (MDL) and Control Limits (LCS, MS/MSD, and RPD) and subsequently the table displays this entry: CAS #2477 for Water Compound: thallium, RL=0.01mg/l and MDL=1.7 ug/l. In addition, the STL Denver LQM, Table Section, Revision No.: 0.0, Date Revised: September 27, 2000, Page 125 of 312 displays Table 8.2-4-5, Metals - ICP/ MS Metals - Methods 6020/200.8, Method Detection limits (MDL) and Reporting Limits (RL) which displays a MDL of 0.020 ug/l and a RL of 1.0 ug/l for thallium. The federal website: <http://www.epa.gov/epaoswer/hazwaste/test/pdfs/7841.pdf> states that the SW 846 analytical method 7841 is capable of providing a RL of 5.0 ug/l and a MDL of 1.0 ug/l. The Ohio EPA Division of Environmental Services (DES) laboratory attains a RL of 2.0 ug/l using the U.S. EPA SW 846 analytical method 7841 and the MDL is lower than 2.0 ug/l, but varies from run to run.*

4) SWMU - 7 - L-5 Landfill

*The company shall describe the role of monitoring well RW-2 at the L-5 Landfill. This monitoring well must be sampled in order to assess the effectiveness of the interim measure. In addition, monitoring well FW-03S(A) must be included in the monitoring system in order to provide additional coverage to the west side of the landfill.*

5) SWMU 46 - Old Primary Pond

*The text of the PBGWMP states that very little water is observed in the Middle Sand at SWMU 46. However, even with low water levels a potentiometric map should be able to be drawn. Ohio EPA could find no such map in the PBGWMP or in the Phase I and II RFI reports. Therefore, it is unknown as to how flow direction was determined for locating the monitoring wells. The Permittee shall supply a potentiometric map and/or the basis for locating the monitoring wells at SWMU 46.*

6) SWMU 62 - E-Pond

*The text states that the Middle Sand pinches out toward the northwest portion of the SWMU as the floodplain alluvial deposits thin and are replaced with clay tills. The approximate extent of the Middle Sand in SWMU 62 is shown in Figure 3 of the section of the PBGWMP pertaining to SWMU 62 - E pond.*

*The boring logs indicate that the Middle Sand is becoming less prevalent at the elevations above 820 feet above mean sea level (amsl) as the borings progress northwestward away from the Ottawa River. However, the Middle Sand is still appearing in borings immediately east of the extent line (Middle Sand observed) depicted in Figure 3 at a depth of approximately 818 to 822 feet amsl. The boring logs of SB-02 and SB-26 indicate that the sand was found at the bottom footage of these borings and that the borings were terminated without defining the thickness of the sand. In addition, the boring log of SB-15, that is terminated at a depth of 823 feet amsl, displays a 0.5 foot of sand at this depth, but is located on the west side of the extent line (Middle Sand not observed). The other boring logs on the west side of the extent line do not display the Middle Sand, but are all terminated above the 822 foot amsl depth where at and below this depth the Middle Sand was still being observed in the borings on the east side of the extent line as referenced above. The range of total depths for these borings is from 823 to 835 feet amsl with*

*the majority of the borings being short 10 or 15 foot depth borings that terminate above 825 feet amsl or 830 feet amsl.*

*The company shall perform at least three borings appropriately spaced and positioned to the west of the extent line that extend below the 818 foot amsl elevation to accurately depict the lateral and vertical extent of the Middle Sand. If the Middle Sand is present and observed to be wet, then the appropriate number of monitoring wells must be installed so that ground water samples can be collected from the Middle Sand at these locations as part of the performance based ground water monitoring program.*

**7) Area 3 - SWMU Groups B, E and F**

*Two additional Upper Sand monitoring wells must be added to the presently proposed ground water monitoring system at Area 3. Monitoring well RFI-13, as displayed in Figure 4-16-2, "Area 3 Cross Section Location" of the document entitled: "Phase II, RCRA Facility Investigation Report", Lima Refinery, Lima, Ohio, OHD 005 051 826, URS, 04/01 must be included as a point of compliance (POC) well. The POC will be set at the plant facility fence line. In addition, a monitoring well must be installed directly downgradient (southwest) of monitoring well RFI-13 and the southwest extent of the light non-aqueous phase liquid (LNAPL) plume. This monitoring well, if installed beyond the plant facility fence line, as well as monitoring well RFI-28, shall monitor for the potential migration of hazardous waste constituents beyond the POC. Otherwise, if it can be installed within the plant facility fence line, the additional monitoring well will be considered a POC monitoring well.*

*There is no mention of Middle Sand ground water monitoring in the plan for these SWMUs. At the present time, the Middle Sand has not been impacted by activities at the site. Middle Sand ground water monitoring must be performed in order to assure that downward vertical migration of contaminants is not occurring from the Upper Sand or the SWMUs themselves. The Middle Sand is considered the uppermost aquifer at the site and displays the capability of providing sufficient amounts of potable water for residential use at several SWMUs. The Middle Sand ground water monitoring system shall include but not be limited to monitoring wells 115, 116, 125A, 142, 143, 144 and 145 and at least one monitoring well installed near or at the 61-GP-06 location or directly southeast of the plume boundary and 2AL-3GP-18.*

- 8) *The Permittee shall remove or replace any monitoring well in accordance with the Appendix to OAC Rule 3745-50-51 permit modification process. Each change must be accompanied by a revised monitoring well location map for the pertinent SWMU.*
- 9) *All wells removed or replaced in accordance with comment 8 above must be plugged and abandoned. Compliance may be facilitated by referring to the document entitled "State of Ohio Technical Guidance for Sealing Unused Wells" (State Coordinating Committee on Ground Water, 1996). Well plugging and abandonment methods, certification and justification must be submitted to the Director within thirty (30) days from the date the wells are removed from the monitoring program.*
- 10) *Whenever any of the wells are replaced, the Permittee must demonstrate to the Ohio EPA that the ground water quality at the replacement well either represents the quality of background water that has not been affected by leakage from a SWMU when replacing an upgradient (background) well, or represents the quality of ground water passing the point of compliance when replacing a downgradient well within two years of the date of replacement using means appropriate to the reason for replacement.*
- 11) *Ohio EPA may request a copy of the full QA/QC report for a particular sampling event if circumstances warrant, but in general, QA/QC data will not be required except as described below. The Permittee shall enter all of the following information in the operating record as required by OAC Rule 3745-54-73(B)(5&6):*
  - i) *The laboratory results from each of the wells and their associated qualifiers, including the laboratory sheets for the full volatile and semi-volatile analyses (must include method codes, detection limits and units of measurement);*
  - ii) *The date each well was sampled (tabulated);*
  - iii) *The date, time, and identification of all blanks and duplicates;*
  - iv) *Any field log documentation of deviation from the procedures in the PBGWMP, including documentation of parameter omissions during the sampling event;*
  - v) *The date the Permittee received the results from the laboratory;*

- vi) *The date the owner or operator completed their review of the analytical laboratory's verification of the accuracy and precision of the analytical data and determined its quality. This review must be based upon the elements in Comment 11)(vii);*
  - vii) *The results of the data validation review including: report completeness, chain of custody, sample receipt form, signed statement of validity, technical holding time review, data qualifiers including their definitions, dilutions, blank data, spikes, spike recovery %, surrogate recovery, and an explanation of any rejected results consistent with the U.S. EPA and Ohio EPA guidelines for data review;*
  - viii) *Results of all blanks and duplicates (trip, field, equipment and method);*
  - ix) *Results of the field parameters;*
  - x) *All chains of custody;*
  - xi) *The date the statistical evaluation was completed;*
  - xii) *The statistical evaluation of the data according to the statistical tests(s) that the Director has specified (must include all computations and results of statistical tests);*
  - xiii) *Any changes in well status (i.e., going from unaffected to affected status and vice versa);*
  - xiv) *Ground water surface elevations taken at the time of sampling for each well;*
  - xv) *Data and results of the annual determination of the ground water flow rate and direction; and*
  - xvi) *The results of the last three years of all inspections required under OAC Rule 3745-54-15(D) related to ground water monitoring and equipment, as required under OAC Rule 3745-54-73(B)(5).*
- 12) *The Permittee must submit an annual report to the Director by March 1st or the first business day thereafter if this falls on a weekend. The annual reports must reference the titles and dates of any other periodic reports required by the Permit or any updates to those reports (for example, due to confirmation sampling,*

comments by Ohio EPA, etc.), but generally do not need to include duplicates of hard copies previously submitted. The annual reports must include, at a minimum, the analytical results required by the PBGWMP, the ground water elevation data required by the PBGWMP, the results of the initial statistical analyses required by the PBGWMP, and the results of the evaluations required by the PBGWMP. In addition, a copy on disk of all ground water and blank data must be submitted electronically in the format supplied by the Director. A hard copy of well-specific information [location (latitude and longitude), depth, construction, etc.] for any new/replacement wells, and any other information specified in the instructions for the annual report but not addressed in this comment, must be submitted in accordance with the schedule stated in Comment 13 as required by OAC Rule 3745-54-75 and OAC Rule 3745-55-011(B).

- 13) If any other required reporting dates fall on a weekend, the reports will be due no later than the next business day. Resampling reports must include the same types of information as the initial reports pertaining only to the resampled well(s).

The Permittee shall submit the analytical results in the appropriate monthly report in accordance with the following schedule:

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

- 14) The monthly reports and annual report shall include potentiometric maps displaying both flow direction and flow rate (velocity).
- 15) The Permittee shall assure the Director that the ground water monitoring program will ensure the earliest possible detection of contamination leakage from the regulated units, that any contamination leakage would be characterized, and that the need for further action will be determined.
- 16) The Permittee shall address the following deficiencies, recommendations and/or discrepancies:

- i) *The PBGWMP states that equipment blanks will be collected at a frequency of one (1) per 20 environmental samples collected. The "Technical Guidance Manual for Hydrogeologic Investigations and Ground Water Monitoring", Ohio EPA, February 1995 states that field/equipment blanks should be collected at a frequency of one per 10 samples collected. The company should modify the PBGWMP to state that equipment blanks will be collected at a frequency of one (1) per 10 environmental samples collected.*
  
  - ii) *The PBGWMP does not include the collector's name, chemical preservative or parameter to be analyzed on the sample label while the Corrective Measures Implementation Conceptual Plan, Quality Assurance Project plan (QAPP), Including Appendix A (Sampling Procedures), and Appendix B (Laboratory procedures), BP Products North America, Lima Refinery, Lima, Ohio, URS, July, 2002 states that these or similar items are included on the sample label (i.e., the sampler's initials are placed next to the Tag Identification number on the label). The company should modify the PBGWMP to state the equivalent items will be included on the sample label as indicated in the (QAPP).*
  
  - iii) *The PBGWMP indicates that a methanol or hexane rinse will be used in the decontamination process for non-metallic sampling equipment. It is recommended that methanol be used in preference to hexane due to hexane's toxicity.*
- 17) *The Point of Compliance (POC) for each SWMU shall remain at the current unit boundaries. Language referring to the reestablishment of the POC must be removed from the PBGWMP. All POCs will extend to the bottom of the Middle Sand. Ohio EPA's rationale for this position coincides with rationale provided in the U.S. EPA document entitled, "The Handbook of Groundwater Protection and Cleanup Policies for RCRA Corrective Action" (2002, pg 6.3) which states:*
- "For final cleanups selected to return ground water to its maximum beneficial use, EPA recommends regulators set the point of compliance throughout the area of contaminated groundwater, or when waste is left in place (U.S. EPA is not referring to contamination that has migrated from the original source(s) as waste in place), at and beyond the boundary of the waste management area encompassing the original source(s) of ground water contamination."*

*"In contrast, a facility boundary point of compliance would generally not be an appropriate component of an intermediate performance goal when a ground water contaminant plume has not yet reached a property boundary because:*

- (1) It would likely be inconsistent with EPA's general pollution prevention goals and with the EPA's short-term protection goal of preventing the spread of contaminated groundwater;*
- (2) monitoring uncontaminated wells at the facility boundary would not measure progress toward achieving the final cleanup goal; and,*
- (3) as a practical matter, preventing ground water contamination is usually much less costly than cleaning up the contamination after it has spread." (2002, pg. 6.4)"*

*The Permittee will be requested to modify the PBGWMP accordingly to address all above comments .*

The condition has also been revised to state that the Permittee will implement additional Corrective Measures for the AFU/Oily Sludge Pond once the CMS for this SWMU is approved by Ohio EPA.

**Comment 39 (a) E.9(a)(1)(i) Media Cleanup Standards**

"There are several MCS in Table 3 – *MCS for Groundwater* that are inconsistent with those approved by U.S. EPA. The MCS should be revised to be consistent with MCSs listed in U.S. EPA's permit. The table should be revised to following:

Indeno(1,2,3-cd)pyrene – 0.00072 mg/l  
Arsenic – 0.05 mg/l"

**Ohio EPA Response**

Ohio EPA has revised this condition by changing the MCS value for Arsenic to 0.05 mg/l, to be consistent with U.S. EPA. The Permit's MCS value for Indeno(1,2,3-cd)pyrene (0.000092 mg/l) is U.S. EPA Region 9's Preliminary Remediation Goal (PRG) for the compound in drinking water. Hence, Ohio EPA sees no need to change the MCS value for Indeno(1,2,3-cd)pyrene.

**Comment 39(b) E.9.(a)(3)**

"This condition should be revised to indicate that groundwater monitoring will be performed in accordance with the U.S. EPA approved Performance Based Groundwater Monitoring Plan, dated July 26, 2002."

**Ohio EPA Response**

Ohio EPA has revised this condition to state that ground water monitoring will be performed in accordance with the PBGWMP. Also, see Ohio EPA Response to BP's Comment 39 E.9. CMI.

**Comment 39(c) E.9(b) Selected Remedies**

"The human health risk assessment was also performed to assess unrestricted use at several SWMUs. This condition should be revised to acknowledge that an unrestricted use scenario was evaluated at SWMUs 49, 50, 51, 68, 69, 70, 71 and 72. Furthermore, based upon the unrestricted use scenario, several SWMU were identified as "No Further Action" by U.S. EPA. The SWMUs that were identified, as "No Further Action" should be listed the permit."

**Ohio EPA Response**

See response to BP Comment 37. Ohio EPA points out that the units designated as "No Further Action" in BP's federal RCRA permit were done so with the condition that a site-wide land use restriction be imposed.

**Comment 39(d) E.9(b)(1)**

"Deed restrictions were established on the property on June 7, 2002 in accordance with the requirements of the U.S. EPA permit, dated April 24, 2002. In compliance with the terms and conditions of the modified Federal Permit, Permittees instituted a comprehensive set of site-wide use restrictions generally prohibiting the consumptive use of groundwater at the site and further limiting the use of land to industrial and recreational purposes, as appropriate to the risk values established for the property. The terms and conditions of these restrictive covenants were modeled after relevant OEPA land use restriction forms and embody, in all material respects, each of the required elements set forth in the draft permit requirements concerning institutional controls. These land use restrictive covenant declarations have been properly adopted by the Permittees, filed with and recorded by the Recorder of Deeds Office in the appropriate county, as reflected as an Exhibit attached hereto. Rather than creating new obligations on the property, specific reference to the deed restriction that are already in-place should be made."

### **Ohio EPA Response**

Ohio EPA disagrees with BP. An enforceable land use restriction must be based upon the creation of an equitable servitude upon the property limiting use of the land as required by BP's modified U.S. EPA RCRA permit.

### **Comment 39(e) E.9(b)(2)(vi)**

"The condition for maintenance of a gravel layer was not deemed necessary by U.S. EPA based upon its not being included in the U.S. EPA permit modification dated April 24, 2002. The condition should be removed from the OEPA permit."

### **Ohio EPA Response**

Sections 5.1.3.2 and 5.5.1.2 of the CMS report approved by U.S. EPA state that the institutional controls for this unit will include a provision to maintain the existing 2-foot thick gravel layer overlying the historic surface soil. Ohio EPA sees no need to remove or revise this condition.

### **Comment 39(f) E.9(c) Specific Remedies**

"U.S. EPA has approved the Corrective Measures Implementation Conceptual Workplan (CMICWP), dated July 26, 2002. This section should be revised to indicate that the specific remedies will be performed in accordance with the approved CMICWP. Since the CMICWP has been approved by U.S. EPA, the reference to "any conditions in Ohio EPA's approval of that document" should be removed."

### **Ohio EPA Response**

Ohio EPA has revised this condition to state that the specific remedies will be performed in accordance with the CMICWP approved by U.S. EPA and the terms and conditions as outlined by Ohio EPA throughout Module E. Also, see Ohio EPA's response to BP's Comment 39 E.9. CMI.

### **Comment 39(g) E.9(c)(1) SWMU 1 – Land Treatment Unit**

- i) This condition should be revised to indicate that the corrective measures will be implemented in accordance with the U.S. EPA approved Correctives Measures Implementation Conceptual Workplan, dated July 26, 2002.
- ii) This condition should be revised to indicate that groundwater monitoring will be performed in accordance with the U.S. EPA approved Performance Based Groundwater Monitoring Plan dated July 26, 2002."

### **Ohio EPA Response**

Ohio EPA revised the condition to state that the corrective measures for SWMU 1 will be performed in accordance with the CMICWP approved by U.S. EPA. The condition has also been revised to state that ground water monitoring will be performed in accordance with the PBGWMP. Also, see Ohio EPA Response to BP's Comment 39 E.9. CMI.

### **Comment 39(h) E.9(c)(2) SWMU 7 – L-5 Landfill**

"(i), (ii) & (iv) These conditions should be revised to indicate that the corrective measures will be implemented in accordance with the U.S. EPA approved Correctives Measures Implementation Conceptual Workplan, dated July 26, 2002.

(iii) This condition should be revised to indicate that groundwater monitoring will be performed in accordance with the U.S. EPA approved Performance Based Groundwater Monitoring Plan dated July 26, 2002."

### **Ohio EPA Response**

Ohio EPA has revised the condition to state that the corrective measures for SWMU 7 will be performed in accordance with the CMICWP approved by U.S. EPA. The condition has also been revised to state that ground water monitoring will be performed in accordance with the PBGWMP. Also, see Ohio EPA's Response to BP's Comment 39 E.9.CMI.

### **Comment 39(i) E. 9(c)(3) SWMU 8 –L-6 Landfill**

"(i) & (ii) These conditions should be revised to indicate that the corrective measures will be implemented in accordance with the U.S. EPA approved Correctives Measures Implementation Conceptual Workplan, dated July 26, 2002."

### **Ohio EPA Response**

Ohio EPA has revised the condition to state that the corrective measures for SWMU 8 will be performed in accordance with the CMICWP approved by U.S. EPA.

### **Comment 39(j) E.9(c)(4) SWMU 46 – Old Primary Pond**

"(i) & (iii) These conditions should be revised to indicate that the corrective measures will be implemented in accordance with the U.S. EPA approved Correctives Measures Implementation Conceptual Workplan, dated July 26, 2002.

(ii) This condition should be revised to indicate that groundwater monitoring will be performed in accordance with the U.S. EPA approved Performance Based Groundwater Monitoring Plan dated July 26, 2002."

**Ohio EPA Response**

Ohio EPA has revised the condition to state that the corrective measures for SWMU 46 will be performed in accordance with the CMICWP approved by U.S. EPA. The condition was also revised to state that ground water monitoring will be performed in accordance with the PBGWMP. Also, see Ohio EPA's Response to BP's Comment 39 E.9. CMI.

**Comment 39(k) E.9(c)(5) SWMUs 52 and 53 –Sewer System**

"This condition should be revised to reflect the correct name of the SWMUs. The correct names are SWMU 52- South Plant Sewer System and SWMU 53 North Plant Sewer System.

- (i) & (ii) These conditions should be revised to indicate that the corrective measures will be implemented in accordance with the U.S. EPA approved Correctives Measures Implementation Conceptual Workplan, dated July 26, 2002."

**Ohio EPA Response**

Ohio EPA has revised the condition to correct the names for SWMUs 52 and 53. The condition has also been revised to state that the corrective measures for these SWMUs will be performed in accordance with the CMICWP approved by U.S. EPA.

**Comment 39(l) E.9(c)(6) SWMU 57 - North Ditch**

"This condition should be revised to indicate that the corrective measures will be implemented in accordance with the U.S. EPA approved Correctives Measures Implementation Conceptual Workplan, dated July 26, 2002."

**Ohio EPA Response**

Ohio EPA has revised the condition to state that the corrective measures for SWMU 57 will be performed in accordance with the CMICWP approved by U.S. EPA.

**Comment 39(m) E.9(c)(7) SWMU 58 - Tank 231**

"This condition should be revised to indicate that the corrective measures will be implemented in accordance with the U.S. EPA approved Correctives Measures Implementation Conceptual Workplan, dated July 26, 2002."

**Ohio EPA Response**

Ohio EPA has revised this condition to state that the corrective measures for SWMU 58 will be performed in accordance with the CMICWP approved by U.S. EPA. However, Ohio EPA maintains that if contaminated soils are left in place due to the inability to excavate near utilities, Ohio EPA will require the Permittee to implement policies and procedures to

provide a notice of hazards to those performing future excavation work and to protect excavation workers from the hazards.

**Comment 39(n) E.9(c)(8) SWMU 61 -Trolumen Pile**

"The Trolumen Pile (SWMU 61) is a historic feature that no longer exists. The pile was removed from service and replaced by a concrete storage bin in 1991. Ohio EPA has included conditions (iii & iv) that appear to be addressing the Trolumen Unit. The Trolumen Unit is an active process unit at the Lima refinery not a SWMU. Consequently, conditions (iii) and (iv) should be removed from the permit.

Furthermore, as indicated in the U.S. EPA approved RCRA Facility Investigation Report dated August 17, 2001 the majority of risk was contributed by two chemicals, benzo(a)pyrene and dibenz(a,h)anthracene both of which are constituents of Trolumen. The investigation further concluded that the highest risks were associated with surface soil. Trolumen is an insoluble solid and thus unlikely to migrate to deeper soil. It was therefore concluded that the elevated risk levels were a result of Trolumen product on the ground surface and not a risk associated from contaminated surface soil. Trolumen is still actively managed at the unit and therefore represents an ongoing source of PAHs. Refinery workers in the area are exposed to trolumen from the storage pile. However, since the unit is within the operating refinery only trained, qualified employees are permitted in the area. The training that the workers receive from Premcor is adequate to protect human health while handling the Trolumen product.

U.S. EPA evaluated the risks associated with SWMU 61 and developed permit conditions that they deemed sufficient to address the risks. Those permit conditions included the requirement for the preparation of a product management plan as well as the requirement to address any residual contamination from the product that poses a risk to human health and the environment after the unit ceases operation. The product management plan has been prepared by Premcor, submitted to U.S. EPA, and is presently being implemented by Premcor.

This condition should be revised to indicate that the corrective measures will be implemented in accordance with the U.S. EPA approved Correctives Measures Implementation Conceptual Workplan, dated July 26, 2002 and the U.S. EPA Permit dated April 24, 2002."

**Ohio EPA Response**

Ohio EPA has revised the condition to state that the corrective measures for SWMU 61 will be performed in accordance with the CMICWP approved by U.S. EPA and the Permittee's

June 20, 2002, Product Management Plan, Trolumen Pile - SWMU 61. The condition has also been revised to require the Permittee to investigate potential releases when current operations at the unit cease, and to remediate any contamination that poses unacceptable risk to human health or the environment.

**Comment 39(o) E.9(c)(9) SWMU 62 – E-Pond**

"Conditions (i), (ii) and (iii) indicate that additional investigation should be performed to determine if groundwater contaminated above unrestricted use standards has migrated beyond the facility boundary and if it is determined that groundwater contaminated above unrestricted use standards has moved beyond the facility boundary then additional corrective measures should be implemented. BP objects to these conditions as inappropriate and not necessary to protect human health or the environment. The RFI conducted at SWMU 62 identified the presence of COCs above action levels in groundwater at the SWMU. This fact was taken into consideration by U.S. EPA in the determination of the corrective measures for the SWMU. As noted in U.S. EPA's *Response to Comments Regarding the Issuance of the Modified Resource Conservation and Recovery Act (RCRA) Hazardous Waste Management Facility Permit the Lima Refinery*, dated April 24, 2002, U.S. EPA recognized that COCs were detected at SWMU 62 at concentrations above action levels. However, in their responses U.S. EPA stated that although COCs exceeded action levels, groundwater at the SWMU was evaluated in the human health risk assessment and no unacceptable health impacts are expected to be associated with exposure to groundwater at this SWMU. The shallow water bearing sand unit at this SWMU is very limited in its horizontal extent and not capable of producing significant quantities of water and thus it is not used as a drinking water source. Accordingly, no purpose would be served by additional corrective measures. Based upon the fact that waste was left in-place at the SWMU, U.S. EPA's permit also requires groundwater monitoring. Subsequent to the issuance of the permit, U.S. EPA approved the Performance Based Groundwater Monitoring Plan, which provides specific detail on the required sampling and evaluation. The plan also provides for ongoing risk evaluations, when necessary.

Considering the determinations made by U.S. EPA, conditions (i), (ii), (iii) and (iv) should be revised to indicate that groundwater monitoring will be performed in accordance with the U.S. EPA approved Performance Based Groundwater Monitoring Plan dated July 26, 2002."

**Ohio EPA Response**

If ground water contaminated above unrestricted use standards is migrating off site near SWMU 62, there is a potential for future human exposure due to construction activity or

ground water consumption. Ohio EPA is requiring that the Permittee determine if impacted ground water has migrated beyond the facility property boundary and take appropriate action if it has. Hence, Ohio EPA sees no need to remove or revise Conditions E.9(c)(9)(i), (ii), and (iii). Ohio EPA has revised Condition E.9(c)(9)(iv) to state that the corrective measures for SWMU 62 will be performed in accordance with the CMICWP approved by U.S. EPA. Condition E.9(c)(9)(iv) was also revised to state that ground water monitoring will be performed in accordance with the PBGWMP. Also, see Ohio EPA's Response to BP's Comment 39 E.9. CMI.

**Comment 39(p) E.9(c)(10) SWMU 63 - Buckeye Road Landfill**

"Conditions (i), (ii) and (iii) indicate that additional investigation should be performed to determine if groundwater contaminated above unrestricted use standards has migrated beyond the facility boundary and if it is determined that groundwater contaminated above unrestricted use standards has moved beyond the facility boundary then additional corrective measures should be implemented. BP objects to these conditions as inappropriate and not necessary to protect human health or the environment. The RFI conducted at SWMU 63 identified the presence of COCs above action levels in groundwater at the SWMU. This fact was taken into consideration by U.S. EPA in the determination of the corrective measures for the SWMU. As noted in U.S. EPA's *Response to Comments Regarding the Issuance of the Modified Resource Conservation and Recovery Act (RCRA) Hazardous Waste Management Facility Permit for the Lima Refinery*, dated April 24, 2002, U.S. EPA recognized that COCs were detected at SWMU 63 at concentrations above action levels. However in their responses U.S. EPA stated that although COCs exceeded action levels, groundwater at the SWMU was evaluated in the human health risk assessment and no unacceptable health impacts are expected to be associated with exposure to groundwater at this SWMU. The shallow water bearing sand unit at this SWMU is very limited in its horizontal extent and not capable of producing significant quantities of water and thus it is not used as a drinking water source. Accordingly, no purpose would be served by additional corrective measures. Based upon the fact that waste was left in-place at the SWMU, U.S. EPA's permit also requires groundwater monitoring. Subsequent to the issuance of the permit, U.S. EPA approved the Performance Based Groundwater Monitoring Plan, which provides specific detail on the required sampling and evaluation. The plan also provides for ongoing risk evaluations, when necessary.

Considering the determinations made by U.S. EPA, conditions (i), (ii), (iii) and (iv) should be revised to indicate that groundwater monitoring will be performed in accordance with the U.S. EPA approved Performance Based Groundwater Monitoring Plan dated July 26, 2002."

### **Ohio EPA Response**

If ground water contaminated above unrestricted use standards is migrating off site near SWMU 63, there is a potential for future human exposure due to construction activity or ground water consumption. Ohio EPA is requiring that the Permittee determine if impacted ground water has migrated beyond the facility property boundary and take appropriate action if it has. Hence, Ohio EPA sees no need to remove or revise Conditions E.9(c)(10)(i), (ii), and (iii). Condition E.9(c)(10)(iv) was revised to state that ground water monitoring will be performed in accordance with the PBGWMP. Also, see Ohio EPA's Response to BP's Comment 39 E.9. CMI.

### **Comment 39(q) E.9(c)(11) SWMU 67 – Former Coke Pile**

"This condition should be revised to indicate that the corrective measures will be implemented in accordance with the U.S. EPA approved Correctives Measures Implementation Conceptual Workplan, dated July 26, 2002."

### **Ohio EPA Response**

Ohio EPA has revised the condition to state that the corrective measures for SWMU 67 will be performed in accordance with the CMICWP.

Although no comments were received about Condition E.9(c)(12) regarding SWMU Group A - Old Drum Storage Area (SWMU 3) and L-3 Waste Pile (SWMU5), Ohio EPA has revised the condition to state that the corrective measures for SWMU Group A will be performed in accordance with the CMICWP. This revision makes Condition E.9(c)(12) consistent with the conditions for the other specific SWMUs and SWMU Groups.

### **Condition 39(r) E.9(c)(13) Area -3-SWMU Groups B, E and F**

"OEPA has incorrectly identified SWMU 42 as "AFU Fire Pond". The permit should be corrected to reference the correct name of the SWMU 42 as AFU Pond.

- (i), (ii), (iii), (v) & (vi)      These conditions should be revised to indicate that the corrective measures will be implemented in accordance with the U.S. EPA approved Correctives Measures Implementation Conceptual Workplan, dated July 26, 2002 and the U.S. EPA Permit dated April 24, 2002.
  
- (iv)      This condition should be revised to indicate that groundwater monitoring will be performed in accordance with the U.S. EPA approved Performance Based Groundwater Monitoring Plan dated July 26, 2002."

### **Ohio EPA Response**

Ohio EPA has revised this condition to correctly identify SWMU 42 as "AFU Pond". The condition was also revised to state that the corrective measures will be performed in accordance with the CMICWP approved by U.S. EPA. Consistent with U.S. EPA's modified RCRA permit, Ohio EPA's Permit requires the Permittee to implement LNAPL remediation if Ohio EPA determines that it is technically practicable. The condition was also revised to state that ground water monitoring will be performed in accordance with the PBGWMP. Also, see Ohio EPA's Response to BP's Comment 39 E.9. CMI.

In addition, Ohio EPA points out that items i) through vi) in the draft permit have been revised and reduced to items i) through iii) in the final permit. These items were addressed and resolved through various documents submitted and approved while the permit was being finalized.

### **Condition 39(s) E.9(c)(14) Ottawa River Area of Concern**

- "(i) This condition should be revised to indicate that the corrective measures will be implemented in accordance with the U.S. EPA approved Correctives Measures Implementation Conceptual Workplan, dated July 26, 2002.
- (ii) While the Permittees can impose deed restrictions on property under their ownership, the Permittees cannot restrict the use of the Ottawa River since the Permittees do not own the streambed of the Ottawa River. The permit should be revised to indicate that the Permittees will restrict access to the river from their property. This condition should also be revised to indicate that deed restrictions have been imposed on the property (June 7, 2002) per the requirements of the modified U.S. EPA RCRA permit."

### **Ohio EPA's Response**

Ohio EPA has revised the condition to state that the corrective measures will be performed in accordance with the CMICWP approved by U.S. EPA. Ohio EPA agrees that the Permittee cannot restrict use of the Ottawa River. As such, the condition has been revised to state that the Permittee will restrict use of the river from its property. Also, See Ohio EPA Response to BP's Comment 39(d) regarding deed restrictions.

### **Condition 39(t) E.9(c)(15) Zurmehly Creek Area of Concern**

- "(i) & (ii) This condition should be revised to indicate that the corrective measures will be implemented in accordance with the U.S. EPA approved Corrective Measures Implementation Conceptual Workplan, dated July 26, 2002.

- (iii) While the Permittees can impose deed restrictions on property under their ownership, the Permittees cannot restrict the use of the Zurmehly Creek since the Permittees do not own the streambed of Zurmehly Creek. The permit should be revised to indicate that the Permittees will restrict us of the creek from their property. This condition should also be revised to indicate that deed restrictions have been imposed on the property (June 7, 2002) per the requirements of the modified U.S. EPA RCRA permit."

**Ohio EPA's Response**

Ohio EPA has revised the condition to state that the corrective measures will be performed in accordance with the CMICWP approved by U.S. EPA. Ohio EPA agrees that the Permittee cannot restrict use of Zurmehly Creek. As such, the condition has been revised to state that the Permittee will restrict access to the creek from its property. Also, see Ohio EPA Response to BP's Comment 39(d) regarding deed restrictions.

**Comment 39(u) E.9(d) Groundwater Monitoring**

"This condition should be revised to indicate that groundwater monitoring will be performed in accordance with the U.S. EPA approved Performance Based Groundwater Monitoring Plan dated July 26, 2002. As a Result of U.S. EPA approval of the document the reference to "any conditions in Ohio EPA's approval of that document" should be removed."

**Ohio EPA Response**

See Ohio EPA's Response to BP's Comment 39 E.9. CMI.

**Comment 39(v) E.9(e) Progress Reports**

"This condition indicates that "bi-monthly reports should be submitted by the 12<sup>th</sup> of each month". The reference to "bi-monthly" appears to be a typographical error. The wording should be modified such that "bi-monthly" is replaced by "monthly"."

**Ohio EPA Response**

Ohio EPA has revised the condition to state that progress reports will be submitted monthly.

**Comment 40 E.11. Corrective Action for Newly Identified WMUs and Releases**

"The compliance schedule indicates that Corrective Measure Completion reports and O&M plans are to be submitted 45 days after implementation of the corrective measure; however, such a time frame is not practical. In many cases the actual implementation activities will require more than 45 days to complete. This condition should be revised to

indicate that the completion reports and O&M plans will be submitted 45 days after the completion of the corrective measure implementation.”

### **Ohio EPA Response**

Ohio EPA has revised this condition to require submittal of the specified documents within 45 days after the completion of the corrective measures

### **Comment 41 F.1. Module Highlights**

“In accordance with Ohio EPA’s July 17, 2002 approval of the Closure Plan for the Primary Pond Waste Consolidation Area (PPWCA), which included the May 1, 2002 “Post-Closure Ground-Water Detection Monitoring Plan for the Primary Pond Waste Consolidation Area” (May 29, 2002 revision), C-Pond is a unit requiring post-closure ground-water detection monitoring. Consequently, there are presently only 15 monitoring wells in place across the facility for the remaining units referenced in F.1, one downgradient monitoring well to be installed at the PPWCA (FW-18S), and one piezometer (FW-15S). Former interim status downgradient monitoring well FW-17S is no longer monitored and references to that well should be removed. The reference to C-Pond also should be removed.

The statement “...seventeen (17) monitoring wells...” should be revised to read “sixteen (16) monitoring wells and one piezometer...” (Please note that monitoring well FW-18S at the PPWCA is scheduled to be installed during the week of October 7, 2002). The reference to “twelve downgradient wells” should be revised to read “eleven downgradient wells” and the statement “and one piezometer: FW-15S” should be added to the last sentence of F.1, para. 2. FW-15S should be stricken from the list of downgradient monitoring wells.”

### **Ohio EPA Response**

Ohio EPA agrees that the Primary and “C” Ponds were certified closed by letter dated December 12, 2002. Ohio EPA points out that BP has incorrectly noted “C” Pond as requiring post-closure ground water monitoring. “C” Pond was clean closed. Primary Pond was closed with waste in place. Post-closure care is required only for the Primary Pond Waste Consolidation Area. The AFU, Oily Sludge Pond and the Land Treatment Unit (LTU) are being addressed under the corrective action program in Module E of this permit. Ohio EPA has revised Module F to reflect these changes, including removing references to all wells not in the Primary Pond Waste Consolidation Area, updating references to Figures, Tables, and Sections per the approved Post Closure Plan for the Primary Pond Waste Consolidation Area. Changes relative to these issues were made to Permit Conditions F.1, F.2 (a, b, & c), F.4 (a through i), F.7(b), F.8(a)(iv), F. 10 (b through d), and F.12. See Ohio EPA’s Response to BP’s Comment 27.

**Comment 42 F.2. Well Location, Installation and Construction**

- "(a) Wells FW-15S and FW-17S should be stricken from the list of Compliance Wells for PPWCA and new well FW-18S should be added (see the above comment for F.1). Figure 1 should be revised to reflect Figure 2 of the May 2002 monitoring plan for the PPWCA. The last sentence of F.2.a) is not in the regulations, and is inappropriate for inclusion in the permit. The number and location of monitoring wells are specified in the approved groundwater monitoring plans. In the event that the OEPA determines that the monitoring wells are not adequately located, that provides a basis for the OEPA to seek a modification of the approved plans; but does not give rise to a violation of the permit. The last sentence should be removed.
- (b) The referenced monitoring plan is outdated with respect to the PPWCA monitoring program and the May 2002 post-closure monitoring plan for that unit. The November 15, 1999 monitoring plan will be revised to exclude those items specific to the PPWCA. The May 2002 monitoring plan for the PPWCA also should be "...incorporated into the approved permit application." "

**Ohio EPA Response**

In response to item a), the Compliance Well list and Figure 1 have been revised to address the clean closure of C Pond and the movement of the AFU, Oily Sludge Pond and the Land Treatment Unit (LTU) to the corrective action program in Module E of this permit. The inclusion of the sentence at the end of F.2a) is based on OAC 3745-54-97(A)(3) and on the Closure Performance Standard stated in OAC 3745-55-11. Therefore, the sentence will be retained in the permit.

In response to item b), Ohio EPA agrees with the requested changes. Ohio EPA has revised this condition accordingly.

**Comment 43 F.3. Indicator Parameters and Monitoring Constituents**

- "(a) The parameter/constituent "7-Methyl chrysene" is incorrect and should be replaced with "6-Methyl chrysene." "

**Ohio EPA Response**

Ohio EPA has revised this condition accordingly.

**Comment 44 F.4. Sampling and Analysis Procedures**

"(d) The phrase "...most version..." should be revised to read "...most recent version..."

(h) "3.3.6.2 Laboratory" should be revised to read "3.3.6.2 Laboratory QA/QC."

**Ohio EPA Response**

Ohio EPA has revised item (d) to reference the approved PCGWDMF rather than the "most recent version of the GWDMP approved by Ohio EPA". Item (h) has been revised according to the Permittee's response.

**Comment 45 F.7. Monitoring Program and Data Evaluation**

"(b) F.7.b See the comment for F.2.a relative to the accuracy of Figure 1."

**Ohio EPA Response**

Ohio EPA has revised this condition accordingly.

**Comment 46 F.8. Record Keeping and Reporting**

"(a)(vi) & (vii). It is the Permittee's understanding that there is no regulatory requirement for third-party data validation dictated by these two permit conditions. Instead, it is the Permittee's understanding that this requirement is presently required of the Ohio EPA, DDAGW by the Ohio EPA. These conditions should be removed.

(d) The table should be revised to read: "*Samples to be Collected During the Preceding Months of: March-June and September-December*". Due to circumstances that are often beyond the Permittee's control, semiannual sampling events may not always fall within the two-month periods listed in the condition. Expanding the semiannual sampling "window" will have no effect on data quality and will not hinder compliance with the applicable ground-water monitoring regulations, while still providing the needed scheduling flexibility."

**Ohio EPA Response**

In regards to item a), the condition has been revised to include only the first sentence of F.8(a)(vi). Per discussions between Mike Gibson of Eagon and Associates for the Permittee (BP) and Katie Crowell, Ohio EPA, Division of Drinking and Groundwater, Central Office, agreement was reached to clarify the language in F.8(a)(vi) and to retain the language in Permit Condition F.8(a)(vii). The intent of Permit condition F.8(a)(vi) is to include in the operating record the date that the owner/operator completed his/her review of the lab's submittal and accepted it. That requirement is encompassed in the first

sentence of the condition. Therefore, that sentence will be retained. The remainder of the condition pertained to how the owner/operator should perform the review. The regulations do not specify how this review should be performed. Therefore, the remainder of Permit Condition F.8(a)(vi), has been removed.

Permit Condition F.8(a)(vii) specifies the laboratory information that must be submitted as part of the operating record in the annual report such that Ohio EPA may perform a check on the validity of the data. The Permittee agreed to this language during the previously mentioned discussion. Ohio EPA sees no need to revise this condition in response to this item.

In regards to item (d), Ohio EPA maintains that the current timetable provides adequate time for performing the required sampling. Ohio EPA sees no need to revise this in response to this item.

#### **Comment 47 F.9 Assurance of Compliance**

"This provision is not consistent with the requirements of the Ohio Hazardous Waste Rules. The ongoing obligations of the Permittee with regard to the adequacy of the groundwater monitoring program is set forth in F.11 and OAC Rule 3745-54-98(H). That rule requires that upon a determination that the monitoring program no longer satisfies the requirements of the regulations, the Permittee must submit an appropriate permit modification. This language in F.9 is not in the Rules, and should be removed."

#### **Ohio EPA Response**

The inclusion of the condition is based on OAC Rule 3745-54-98. This is the same basis accepted for the inclusion of the same language in the post-closure ground water detection monitoring plan for the PPWCA. Ohio EPA sees no need to revise this condition.

#### **Comment 48 F.10. Special Requirements if Significant Increase Occur in Values for Parameters or Constituents**

(b) This condition should be revised to read: "*Within 30 days sample the ground water in the nearest background well and the affected well and determine the concentration of all constituents identified in Tables 5 & 6 of the Ground-water Detection Monitoring Plan not analyzed during the most recent event at which the statistically significant increase occurred. [OAC Rule 3745-54-98(G)(2)]*"

(c) This condition should be revised to read: "*For any additional compounds detected under Permit Condition F.10(b), the Permittee may resample within one month and repeat the analysis for those compounds detected. If the results of the second*

*analysis confirm the initial results, then these constituents, in addition to those noted in Permit Condition F.10(a), will form the basis for compliance monitoring. If the Permittee does not resample, or if the Permittee analyzed for all Table 5 and 6 site-specific indicator parameters during the most recent event at which the statistically significant increase occurred, then those detected constituents will form the basis for compliance monitoring. [OAC Rule 3745-54-98(G)(3)] [Note: Per Permit Condition F.3(a), the facility has replaced the ground-water hazardous constituent list included in the appendix to OAC 3745-54-98 with a site-specific indicator parameter list (Skinner List) of refinery-related constituents, which will be analyzed annually. In addition, all site-specific parameters, except semi-volatile organic compounds included on Tables 5 and 6 of the monitoring plan, will be analyzed semiannually.]”*

#### **Ohio EPA Response**

Ohio EPA agrees with BP's proposed language. This condition has been revised to reflect this language.

#### **Comment 49 G.1. Module Highlights**

"This condition should be revised to reflect the most-recent closure activities for the units. BP suggests the section be revised as follows:

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

An above and below-grade surface impoundment used to store liquid/sludge waste. Waste disposed in this 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. The unit will require thirty (30) years of post-closure groundwater monitoring. No post closure care will be required for this unit because it will be addressed in corrective action as specified in Condition B.27 of this permit.

##### **Primary and C Ponds**

An above and below-grade surface impoundment used to store liquid wastes. Waste disposed in this unit included storm and process water. The unit was taken out of service in 1994, and in 2001 the wastes were stabilized. The stabilized wastes were removed from C-Pond and consolidated in Primary Pond. C Pond was "clean" closed and a final cover system was constructed over Primary Pond. The permit was modified on July 17, 2002 to incorporate the C and Primary Pond Closure Plan and Certification of Closure was submitted on September 13, 2002. Primary Pond will require thirty (30) years of post-closure ground water monitoring.

### LTU (Land Treatment Unit)

An above and below-grade surface impoundment used for the land application of hazardous wastewater treatment unit sludge. The unit will require thirty (30) years of post-closure groundwater monitoring. No post-closure care will be required for this unit because it will be addressed in corrective action as specified in Condition B.27 of this permit."

### Ohio EPA Response

Ohio EPA agrees that the Primary and "C" Ponds were certified closed by letter dated December 12, 2002, with post closure care only being required for Primary Pond. The AFU, Oily Sludge Pond and the Land Treatment Unit (LTU) are being addressed under the corrective action program. This condition has been revised to be reflective of these updated activities.

### Comment 50 G.2. Unit Identification

"This condition should be revised it recognize that "C" Pond was clean closed and, as a result, is not subject to post-closure care."

### Ohio EPA Response

Ohio EPA agrees that the Primary and "C" Ponds were certified closed by letter dated December 12, 2002, with post closure care only being required for Primary Pond and that the AFU, Oily Sludge Pond and the Land Treatment Unit (LTU) are being addressed under the corrective action program. This condition has been revised to be reflective of these updated activities.

### Comment 51 G.3 Post Closure Procedures and Use of the Property

"(a) This condition should be revised to indicate that post-closure care will not be required at "C" Pond.

In addition, provisions in Module G appear to overlap and, in some cases, be redundant with provisions in Condition B.35. For example:

- p. 75, paragraph G.3(e) - Security is the same as B.35(b).
- p. 76, paragraph G.5(a) - Notices and Certification is the same as paragraph B.35(d)

The redundancies should be removed and all Post-Closure requirements summarized in one condition of the permit."

### Ohio EPA Response

Ohio EPA agrees that the Primary and "C" Ponds were certified closed by letter dated December 12, 2002, with post closure care only being required for Primary Pond and that

the AFU, Oily Sludge Pond and the Land Treatment Unit (LTU) are being addressed under the corrective action program. This condition has been revised to be reflective of these updated activities.

Also, see response to BP's Comment 33. All post-closure requirements are summarized in Module G.

Comment received from Premcor Refining Group, Inc.

**General Comment**

"In general, Premcor Lima Refinery operations fall under OAC 3745-52-34, a generator of hazardous waste with accumulation of less than 90 days. The provisions in the draft permit appear to apply to a TSD facility, which does not describe Premcor Lima Refinery operations. Premcor Lima Refinery believes that no permit is necessary for the operations of the refinery, as stated in the draft permit public notice. Only items related to RCRA closure or remediation appear to be applicable. We are hoping OEPA can find a path to ensure completion of the corrective actions at the Lima site without the need for a TSD operating permit."

**Ohio EPA Response**

See Ohio EPA Response to BP's General Comment.

**Comment 1 A.5 through A.15**

"As stated in the draft permit public notice, Premcor does not have any greater than 90-day active treatment, storage, or disposal activities at the site. As such, the conditions mentioned in these sections that apply to all TSD facility permits should be removed from this permit."

**Ohio EPA Response**

See Ohio EPA Response to BP's General Comment. Also see Ohio EPA Response to BP's Comments 1, 2, 3, 4, and 5.

**Comment 2 A.17**

"As stated in the draft permit public notice, Premcor does not have any greater than 90-day active treatment, storage, or disposal activities at the site. As such, the conditions mentioned in this section that apply to all TSD facility permits should be removed from this permit."

**Ohio EPA Response**

See Ohio EPA Response to BP's Comment 6.

Ohio EPA agrees with the removal of references to scheduled plant turnarounds. Item b) of this condition has been removed.

**Comment 3 A.20**

"As stated in the draft permit public notice, Premcor does not have any greater than 90-day active treatment, storage, or disposal activities at the site. As such, the conditions mentioned in this section that apply to all TSD facility permits should be removed from this permit."

**Ohio EPA Response**

See Ohio EPA Response to BP's Comment 7.

**Comment 4 A.21**

"As stated in the draft permit public notice, Premcor does not have any greater than 90-day active treatment, storage, or disposal activities at the site. As such, the conditions mentioned in this section that apply to all TSD facility permits should be removed from this permit."

**Ohio EPA Response**

The duties of the parties identified as owners or operators arises from the permitted hazardous waste management activities. These are explicitly defined in the cover page of every permit under the heading "AUTHORIZED ACTIVITIES"; in this case those activities are "Closure/Post-Closure" and "Corrective Action". Generator activities are not mentioned and are not authorized by this permit; all generators are subject to the requirements of OAC Chapter 3745-52. The broadness of this condition is limited by the scope of the permit and its authorized activities.

**Comment 5 A.22**

"As stated in the draft permit public notice, Premcor does not have any greater than 90-day active treatment, storage, or disposal activities at the site. As such, the conditions mentioned in this section that apply to all TSD facility permits should be removed from this permit."

**Ohio EPA Response**

See Ohio EPA's Response to BP's Comment 8.

**Comment 6 A.24**

"As stated in the draft permit public notice, Premcor does not have any greater than 90-day active treatment, storage, or disposal activities at the site. As such, the conditions mentioned in this section that apply to all TSD facility permits should be removed from this permit."

**Ohio EPA Response**

See Ohio EPA's Response to BP's General Comment.

**Comment 7 A.26**

"As stated in the draft permit public notice, Premcor does not have any greater than 90-day active treatment, storage, or disposal activities at the site. As such, the conditions mentioned in this section including the turnaround notification that apply to all TSD facility permits should be removed from this permit."

**Ohio EPA Response**

See Ohio EPA's Response to BP's Comment 9.

**Comment 8 A.28 a)**

"As stated in the draft permit public notice, Premcor does not have any greater than 90-day active treatment, storage, or disposal activities at the site. As such, the following conditions should be removed from the permit, as they do not apply to a facility that is not a TSD facility.

- i) Contingency plan per 3745-54-53
- iv) Personnel training plan and training records per 3745-54-16
- v) Operating record per 3745-54-73
- vi) Inspection schedules per 3745-54-15, 3745-55-74, and 3745-55-95"

**Ohio EPA Response**

See Ohio EPA's Response to BP's Comment 4.

**Comment 9 A.29**

"As stated in the draft permit public notice, Premcor does not have any greater than 90-day active treatment, storage, or disposal activities at the site. As such, the Waste Minimization Report requirements should be removed from the permit, as they do not apply to a facility that is not a TSD facility."

**Ohio EPA Response**

See Ohio EPA Response to BP's Comment 11.

**Comment 10 B.1**

"As stated in the draft permit public notice, Premcor does not have any greater than 90-day active treatment, storage, or disposal activities at the site. As such, the design, maintenance, and operation of the facility requirements should be removed from the permit, as they do not apply to a facility that is not a TSD facility."

**Ohio EPA Response**

See Ohio EPA Response to BP's General Comment.

**Comment 11 B.4**

"As stated in the draft permit public notice, Premcor does not have any greater than 90-day active treatment, storage, or disposal activities at the site. As such, the security requirements should be removed from the permit, as they do not apply to a facility that is not a TSD facility."

**Ohio EPA Response**

See response to BP's Comment 12.

**Comment 12 B.5**

"As stated in the draft permit public notice, Premcor does not have any greater than 90-day active treatment, storage, or disposal activities at the site. As such, the general inspection requirements should be removed from the permit, as they do not apply to a facility that is not a TSD facility."

**Ohio EPA Response**

See response to BP's Comment 13.

**Comment 13 B.6**

"As stated in the draft permit public notice, Premcor does not have any greater than 90-day active treatment, storage, or disposal activities at the site. As such, the personnel training requirements should be removed from the permit, as they do not apply to a facility that is not a TSD facility."

**Ohio EPA Response**

See response to BP's Comment 14.

**Comment 14 B.9 through B.25**

"As stated in the draft permit public notice, Premcor does not have any greater than 90-day active treatment, storage, or disposal activities at the site. As such, the requirements of these sections should be removed from the permit, as they do not apply to a facility that is not a TSD facility."

**Ohio EPA Response**

See Ohio EPA's Response to BP's Comments 15-25.

**Comment 15 E.1**

"For SWMU 68 owned by BP Chemicals, the definition of facility is used to name Premcor as liable for the BP Chemicals property should BP Chemicals fail to maintain compliance under corrective action. As BP Products is conducting the corrective action for the site, it would be better suited to have BP Products as the liable partner for a failure of BP Chemicals on corrective action."

**Ohio EPA Response**

See Ohio EPA's Response to BP's Comment 36. Due to the requirement of a facility-wide deed restriction, all of the facility must be named on the permit to accomplish this. Ohio EPA sees no need to remove or revise this condition.

**Comment 16 E.9 c) 8) iii)**

"For SWMU 61 (Trolumen pile), a proposed operational plan was submitted to the U.S. EPA for approval and copied to the OEPA – NWDO. As the SWMU has been removed and a concrete storage pad installed, the management of the Trolumen pile has been dramatically improved. The comments pertaining to selective excavation and structural improvements do not appear to be germane to the SWMU. Please consider the operational plan previously sent to the U.S. EPA and copied to the OEPA as the required submittal."

**Ohio EPA Response**

See Ohio EPA's response to BP's Comment 39 (n).

**End of Responsiveness Summary**

**Table 1  
 Ground Water Analytical Methods and Reporting Limits to be Used at the  
 BP Products North America Lima Facility**

Parameters	SW-84 Analytical Method	Laboratory Reporting Limits	MCL
<b>Metals (dissolved)</b>			
Antimony	6010B	0.006 mg/L	0.006 mg/L
Arsenic	6010B	0.01 mg/L	0.05 mg/L
Barium	6010B	0.02 mg/L	2.0 mg/L
Beryllium	6010B	0.003 mg/L	0.004 mg/L
Cadmium	6010B	<del>0.002</del> 0.005 mg/L	0.005 mg/L
Chromium	6010B	0.005 mg/L	0.1 mg/L
Cobalt	6010B	<del>0.007</del> 0.01 mg/L	—
Lead	6010B	<del>0.003</del> 0.005 mg/L	0.015 <sup>1</sup> mg/L
Mercury	7470A	0.0002 mg/L	0.002 mg/L
Nickel	6010B	<del>0.04</del> 0.02 mg/L	0.1 mg/L
Selenium	6010B	<del>0.005</del> 0.04 mg/L	0.05 mg/L
Vanadium	6010B	<del>0.007</del> 0.04 mg/L	—
<b>Volatile Organic Compounds</b>			
Benzene	8260B	1 <sup>4</sup> ug/L	5 ug/L
Carbon disulfide	8260B	1 <sup>6</sup> ug/L	—
Chlorobenzene	8260B	1 <sup>6</sup> ug/L	—
Chloroform	8260B	1 <sup>6</sup> ug/L	100 ug/L
1,2-Dichloroethane	8260B	1 <sup>6</sup> ug/L	5 ug/L
1,4-Dioxane	8260B	<del>50</del> 300 ug/L	—
Ethyl benzene	8260B	1 <sup>6</sup> ug/L	700 ug/L
Ethylene dibromide	8260B	<del>0.01</del> 1 <sup>6</sup> ug/L	0.05 ug/L
Methyl ethyl ketone (2-Butanone)	8260B	<del>10</del> 50 ug/L	—
Styrene	8260B	1 <sup>6</sup> ug/L	100 ug/L
Toluene	8260B	1 <sup>6</sup> ug/L	1000 ug/L
Xylene	8260B	1 <sup>6</sup> ug/L	10,000 ug/L
<b>Semivolatile Organic Compounds</b>			
Benzo(a)pyrene	8270C SIM	<del>0.2</del> 40 ug/L	0.2 ug/L
1-Methyl naphthalene	8270C	<del>10</del> 20 ug/L	—
Naphthalene	8270C	10 ug/L	—
Phenanthrene	8270C	10 ug/L	—
Pyrene	8270C	10 ug/L	—

<sup>1</sup> Constitutes an action level - value is not an MCL  
 — = No MCL established

**Table 1**  
**Ground Water Analytical Methods and Reporting Limits to be Used at the**  
**BP Products North America Lima Facility**

Parameters	Analytical Method	Laboratory Reporting Limits
<b><u>Inorganic Compounds</u></b>		
— Chloride	300.0A	2 mg/L
— Sulfate	300.0A	40 mg/L
<b><u>Semivolatile Base/Neutral Extractable Compounds</u></b>		
Anthracene	8270C	10 ug/L
Benzo(a)anthracene	8270C	10 ug/L
Benzo(b)fluoranthene	8270C	10 ug/L
Benzo(k)fluoranthene	8270C	10 ug/L
Bis (2-ethylhexyl) phthalate	8270C	10 ug/L
Butyl benzyl phthalate	8270C	10 ug/L
Chrysene	8270C	10 ug/L
Dibenz(a,j)acridine	8270C	50 ug/L
Dibenz(a,h)anthracene	8270C	10 ug/L
1,2-Dichlorobenzene	8270C	10 ug/L
1,3-Dichlorobenzene	8270C	10 ug/L
1,4-Dichlorobenzene	8270C	10 ug/L
Diethyl phthalate	8270C	10 ug/L
7,12-Dimethylbenz(a)anthracene	8270C	20 ug/L
Dimethyl phthalate	8270C	10 ug/L
Di(n)butyl phthalate	8270C	10 ug/L
Di(n)octyl phthalate	8270C	10 ug/L
Fluoranthene	8270C	10 ug/L
Indene	8270C	20 ug/L
6-Methyl chrysene	8270C	20 ug/L
Pyridine	8270C	20 ug/L
Quinoline	8270C	10 50 ug/L
<b><u>Semivolatile Acid-Extractable Compounds</u></b>		
Benzenethiol	8270C	10 20 ug/L
2-Methylphenol	8270C	10 ug/L
4-Methylphenol/3-Methylphenol	8270C	20 ug/L
2,4-Dimethylphenol	8270C	10 ug/L
2,4-Dinitrophenol	8270C	50 ug/L
4-Nitrophenol	8270C	50 ug/L
Phenol	8270C	10 ug/L

**OHIO ENVIRONMENTAL PROTECTION AGENCY**

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

Permittee: BP Products North America  
Lima Refining Company

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

Owner: BP Products North America  
Lima Refining Company  
1150 South Metcalf Street  
Lima, Ohio 45804-1199

Operator: BP Products North America  
Lima Refining Company  
1150 South Metcalf Street  
Lima, Ohio 45804-1199

Location: 1150 South Metcalf Street  
Lima, OH 45804-1199

Ohio Permit No.:	03-02-0390
US EPA ID:	OHD 005 051 826
Issue Date:	June 20, 2003
Effective Date:	June 20, 2003
Expiration Date:	June 20, 2013

**AUTHORIZED ACTIVITIES**

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

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

Keyword: jms; 070220-3a-1 permit cover page\_final.doc

OHIO EPA DHWM

OCT 25 2007

## MODULE A - GENERAL PERMIT CONDITIONS

### A.1. Effect of Permit

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

- a) The Permittee is authorized to conduct closure, post closure, and corrective action activities in accordance with the terms and conditions of this permit, ORC Chapter 3734, all applicable Ohio hazardous waste rules, all applicable regulations promulgated under the Resource Conservation and Recovery Act (RCRA), as amended, and the approved hazardous waste facility installation and operation permit renewal application, as such application has been revised and supplemented and as such application may be modified pursuant to the hazardous waste rules. The renewal of the surface impoundments and the landfarms is for the purposes of accomplishing closure and post closure activities. These units are currently inactive and undergoing closure. These units shall not be reactivated for management of hazardous waste. The approved Part B permit application as submitted to Ohio EPA on March 26, 1997 and any subsequent amendment thereto including the latest Part B Application revision submitted August 13, 1999, is hereby incorporated into this permit. In the instance of inconsistent language or discrepancies between the above, the language of the more stringent provision shall govern.
- b) Any management of hazardous waste not authorized by this permit is prohibited, unless otherwise expressly authorized or specifically exempted by law. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, or invasion of other private rights. Compliance with the terms and conditions of this permit does not obviate Permittee's obligation to comply with other applicable provisions of law governing protection of public health or the environment including but not limited to the Community Right to Know law under ORC Chapter 3750.

### A.2. Permit Actions

OAC Rule 3745-50-58(F)

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

OHIO EPA DHWM

JUN 20 2003

suspension, or renewal or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay the applicability or enforceability of any permit term or condition.

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

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

A.4. Severability

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

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

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

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

- a) If the Permittee wishes to continue an activity allowed by this permit after the expiration date of this permit, the Permittee must submit a completed application for a hazardous waste facility installation and operation permit renewal and any necessary accompanying general plans, detailed plans, specifications, and such information as the Director may require, to the

OHIO EPA DHWM

JUN 20 2003

Director no later than one hundred eighty (180) days before to the expiration date of this permit or upon approval of the Director a later date prior to the expiration date if the Permittee can demonstrate good cause for late submittal.

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

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

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

OHIO EPA DHWM

JUN 20 2003

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

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

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

The Permittee shall at all times properly operate and maintain the facility (and related appurtenances) to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes, but is not limited to, effective management practices, adequate funding, adequate operator staffing and training, and where appropriate, adequate laboratory and process controls, including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the terms and conditions of this permit.

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

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

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

- a) The Permittee shall allow the Director, or an authorized representative, upon stating the purpose and necessity of the inspection and upon proper identification to:
  - i) enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the terms and conditions of this permit;

OHIO EPA DHWM

JUN 20 2003

- ii) have access to and copy, at reasonable times, any records required to be kept under the terms and conditions of this permit;
  - iii) inspect and photograph at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the terms and condition of this permit; and
  - iv) sample, document (including but not limited to the use of videotape and camera equipment) or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by ORC Chapter 3734 and the rules adopted thereunder, any substances or parameter at any location.
- b) Any record, report or other information obtained under the hazardous waste rules or Chapter 3734 of the Revised Code shall not be available to the public upon the Permittee's satisfactory showing to Ohio EPA that all or part of the information would divulge methods or processes entitled to protection as trade secrets pursuant to Ohio Trade Secret Law and OAC Rule 3745-50-30.

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

- a) Any sample and measurement taken for the purpose of monitoring shall be a representative sample or measurement, as such term is defined and used in the Ohio hazardous waste rules. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I of OAC Rule 3745-51-20, Laboratory Methods. Laboratory methods must be those specified in Test Methods for the Evaluation of Solid Waste: Physical/Chemical Methods; SW-846:Third Edition, November 1992; and additional supplements or editions thereof; Standard Methods for the Examination of Water and Wastewater: Seventeenth Edition, 1989; or an equivalent method as specified in the approved waste analysis plan, or as such term is defined and used in the Ohio hazardous waste rules.
- b) Records of monitoring information shall specify the:
  - i) date(s), exact place(s), and time(s) of sampling or measurements;

OHIO EPA DHWM

JUN 20 2003

- ii) individual(s) who performed the sampling or measurements;
- iii) date(s) analyses were performed;
- iv) individual(s) who performed the analyses;
- v) sampling and monitoring equipment used, including calibration settings;
- vi) analytical technique(s) or method(s) used; and
- vii) results of such analyses.

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

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

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

- a) The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this permit, the certification required by paragraph B(9) of rule 3745-54-73 of the Administrative Code, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report, certification, or application.
- b) The record retention period may be extended by request of the Director at any time and are automatically extended during the course of any unresolved enforcement action regarding the facility. Once any enforcement action is resolved, the Permittee shall maintain relevant documentation for a period of one year beyond the date of final resolution or three years from the original date of sample measurement, report of record, whichever is greater.

OHIO EPA DHWM

JUN 20 2003

- c) The Permittee shall maintain, in accordance with the Ohio hazardous waste rules, records of all data used to complete the Part B permit application and any amendments, supplements, modifications or revisions, of such application and shall retain a complete copy of the application for the life of the facility.
- d) The Permittee shall maintain records from all ground water monitoring wells and associated ground water surface elevations for the active life of the facility, and for disposal facilities for the post-closure care period as well.
- e) Corrective action records must be maintained at least 3 years after all corrective action activities have been completed.

A.15. Planned Changes

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

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

A.16. Waste Shipments

OAC Rule 3745-52-12, ORC 3734.15(C)

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

A.17. Anticipated Noncompliance

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

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

A.18. Transfer of Permits

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

- a) This permit is not transferable to any person except after notice of the Director.

OHIO EPA DHHM

JUN 20 2003

- b) The permit may be transferred to a new owner or operator only if such transfer is conducted in accordance with ORC Chapter 3734 and the rules adopted thereunder. This permit may be transferred by the Permittee to a new owner or operator only if the permit has been modified under OAC Rule 3745-50-51. Before transferring ownership or operation of the facility the Permittee shall notify the new owner or operator in writing of the requirements of ORC Chapter 3734 and the rules adopted thereunder (including all applicable corrective action requirements).
- c) The Permittee's failure to notify the new owner or operator of the requirements of the applicable Ohio law or hazardous waste rules does not relieve the new owner or operator of its obligation to comply with all applicable requirements.

**A.19. Compliance Reports**

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

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

**A.20. Immediate Reporting of Noncompliance**

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

- a) The Permittee shall report orally to the Ohio Environmental Protection Agency's Division of Emergency and Remedial Response within two hours from the time the Permittee becomes aware of any noncompliance with this permit, ORC Chapter 3734 or the rules adopted thereunder, which endangers human health or the environment, including:
  - i) information concerning the release of any hazardous waste that may cause an endangerment to public drinking water supplies; and
  - ii) any information of a release or discharge of hazardous waste or a fire or explosion from the hazardous waste facility, which could threaten the environment or human health outside the facility.

OHIO EPA DHWM

JUN 20 2003

- b) The report required by OAC Rule 3745-50-58(L)(6)(c) shall consist of the following information (if such information is available at the time of the oral report):
- i) name, address, and telephone number of the owner or operator;
  - ii) name, address, and telephone number of the facility;
  - iii) name and quantity of material(s) involved, including waste codes;
  - iv) the extent of injuries, if any;
  - v) an assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and
  - vi) estimated quantity and disposition of recovered material that resulted from the incident.

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

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

OHIO EPA DHWM

JUN 20 2008

A.22. Other Noncompliance

OAC Rule 3745-50-58(L)(10) and 3745-50-58(L)(4)

The Permittee shall report to the Director and the Division of Hazardous Waste Management District Office all other instances of noncompliance not provided for in Condition A.20. These reports shall be submitted within 20 days of the time at which the Permittee is aware of such noncompliance. Such reports shall contain all information set forth within Condition A.20 of this permit and OAC Rule 3745-50-58(L)(6).

A.23. Reserved.

A.24. Other Information

OAC Rule 3745-50-58(L)(11)

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

A.25. Confidential Information

OAC Rule 3745-50-30

In accordance with ORC Chapter 3734 and the rules adopted thereunder, the Permittee may request confidentiality of any information (other than discharge or emission data) required to be submitted by the terms and conditions of this permit. This includes any information obtained by the Director, or an authorized representative, pursuant to the authority provided under condition A.11 of this permit.

A.26. Reserved.

A.27. Compliance Schedule - Documents

- a) Unless specified otherwise, Permittee shall submit the documents listed below to:

OHIO EPA/DHWM

JUN 20 2003

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

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

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

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

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

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

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

OHIO EPA DHWM

JUN 20 2003

iii) Updated Liability Requirements  
OAC Rule 3745-55-47

Section I of the application containing the financial assurance mechanism for closure shall be updated to include a copy of the current financial assurance mechanism as set forth in OAC Rule 3745-55-47 and as specified by the wording requirements of OAC Rule 3745-55-51.

During the life of the Part B permit the facility may change the mechanism used to demonstrate liability coverage as stated in OAC Rule 3745-55-47. The facility must submit the liability mechanism documentation to the Director of Ohio EPA in accordance with the parameters set forth in OAC Rule 3745-55-47. In addition, send copies of the mechanism to DHWM's CAS and ERAS.

A.28. Information to be Maintained at the Facility  
OAC Rule 3745-54-74

- a) The Permittee shall maintain at the facility, until closure is completed and certified by an independent, registered professional engineer, pursuant to OAC Rule 3745-55-15, and until the Director releases the Permittee from financial assurance requirements pursuant to OAC Rule 3745-55-47, the following documents (including amendments, revisions and modifications):
- i) contingency plan developed and maintained in accordance with OAC Rule 3745-54-53 and the terms and conditions of this permit;
  - ii) closure plans, developed and maintained in accordance with OAC Rule 3745-55-12 and the terms and conditions of this permit;
  - iii) cost estimate for facility closure developed and maintained in accordance with OAC Rule 3745-55-42 and the terms and conditions of this permit;
  - iv) personnel training plan and the training records, as developed and maintained in accordance with OAC Rule 3745-54-16 and the terms and conditions of this permit;

OHIO EPA DHWM

JUN 20 2003

- v) operating record required by OAC Rule 3745-54-73 and the terms and conditions of this permit;
  - vi) inspection schedules developed in accordance with OAC Rules 3745-54-15; 3745-55-74 and 3745-55-95; and the terms and conditions of this permit;
  - vii) Post-Closure Plans and Contingent Post-Closure Plans, as required by OAC Rule 3745-55-18(A) and this Permit;
  - viii) annually-adjusted cost estimate for facility closure and post-closure, as required by OAC Rules 3745-55-42 and 3745-55-44 and this Permit; and
  - ix) all other documents required by Module A, Permit Condition A.12.
- b) All amendments, revisions and modifications to any plan required by the terms and conditions of this permit or the Ohio hazardous waste rules shall be submitted to the Director. No such change shall be made unless the Permittee has received approval in accordance with the Ohio hazardous waste rules.
  - c) The Permittee shall maintain copies of all inspection logs at the facility for a period not less than three (3) years from the date of inspection.
  - d) Corrective Action reports and records as required by Module E of this permit. These reports and records must be maintained for at least 3 years after all Corrective Action Activities have been completed.

A.29. Reserved.

OHIO EPA DHWM

JUN 20 2003

## MODULE B - GENERAL FACILITY CONDITIONS

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

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

B.2. Reserved.

B.3. Reserved.

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

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

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

The Permittee shall follow the inspection schedule set out in Volume II, Section 5.0 of the approved Part B permit application. The Permittee shall remedy any deterioration or malfunction discovered by an inspection, as required by OAC Rule 3745-54-15(C). Records of inspection shall be kept as required by OAC Rule 3745-54-15.

B.6. Personnel Training  
OAC Rule 3745-54-16

The Permittee shall conduct personnel training, as required by OAC Rule 3745-54-16. This training program shall contain at least the elements set forth in the Section H of the approved Part B permit application. The Permittee shall maintain training documents and records as required by OAC Rule 3745-54-16(D) and (E).

B.7. Reserved.

OHIO EPA DHWM

JUN 20 2002

B.8. Reserved.

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

At a minimum, the Permittee shall maintain at the facility all the equipment required by OAC Rule 3745-54-32 and the equipment set forth in the approved contingency plan contained in Volume II, Section 7.0 of the approved Part B permit application. The Permittee shall not obstruct the hazardous waste management area.

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

The Permittee shall inspect, test and maintain the equipment required by Condition B.9. as necessary to assure its proper operation in time of emergency, as specified in OAC Rule 3745-54-33, Volume II, Section 5.0 of the approved Part B permit application, and the terms and conditions of this permit.

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

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

B.12. Reserved.

B.13. Arrangements with Local Authorities  
OAC Rule 3745-54-37

- a) The Permittee shall comply with the requirements of OAC Rule 3745-54-37 (A) by making a diligent effort to:
  - i) familiarize all emergency response agencies which are likely to respond in an emergency with the location and layout of the facility, properties of hazardous waste managed at the facility and associated hazards, places where facility personnel will normally be working,

OHIO EPA DHWM

JUN 20 2003

entrances to and roads inside the facility, and possible evacuation routes as depicted and explained in Attachment E of the approved Part B permit application;

- ii) inform such agencies of safety equipment, supplies, proper emergency safety procedures that are applicable to the facility, and any further requirements related to emergency response imposed by terms and conditions of this permit; and
  - iii) familiarize the local police and fire departments, hospitals and any other local emergency service, with the properties of hazardous waste managed at the facility and the types of injuries or illness which could result from fires, explosions, or releases at the facility.
- b) When a State or local agency declines to enter into the arrangements set forth in OAC Rule 3745-54-37(A), the Permittee shall document the refusal in the operating record as required by OAC Rule 3745-54-37(B).
  - c) The Permittee shall, in accordance with OAC Rule 3745-54-53, submit a copy of the approved contingency plan, and all revisions, amendments and modification to the Ohio EPA Emergency Response Section.

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

The Permittee shall immediately carry out the provisions of the approved contingency plan and follow the emergency procedures described in OAC Rule 3745-54-56, whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which threatens or could threaten human health or the environment.

In regard to spills and related toxic gas releases, the plan must describe the criteria to be used by the emergency coordinator to determine when the plan will be implemented. At a minimum, the plan must be implemented in the following situations:

- a) Any fire or explosion involving hazardous waste which threatens or could threaten human health or the environment;

OHIO EPA DHWM

JUN 20 2003

- b) Any uncontrolled hazardous waste reaction that produces or has the potential to produce hazardous conditions, including noxious, poisonous, flammable and/or explosive gases, fumes, or vapors; harmful dust; or explosive conditions; or
- c) Any fire or explosion that has an increased potential to threaten human health or the environment due to its proximity to a hazardous waste management unit; or
- d) Any hazardous waste release, outside of a secondary containment system, that causes or has the potential to cause off-site soil and/or surface water contamination; or
- e) Any hazardous waste release that produces or has a potential to produce hazardous conditions, including noxious, poisonous, flammable and/or explosive gases, fumes, or vapors; harmful dust; or explosive conditions.

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

The Permittee shall comply with OAC Rule 3745-54-52 and the contingency plan, as set forth in Volume II, Section 7.0 of the approved Part B permit application.

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

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

OHIO EPA DHWM

JUN 20 2003

**B.17. Amendments to Plan**  
OAC Rule 3745-54-54

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

**B.18. Copies of Plan**  
OAC Rule 3745-54-53

- a) The Permittee shall comply with the requirements set forth in OAC Rule 3745-54-53 regarding contingency plan distribution.
- b) The Permittee shall, in accordance with OAC Rule 3745-54-53, submit a copy of the approved contingency plan, to all local police departments, fire departments, hospitals, and local emergency response teams that may be called upon to provide emergency services. The Permittee shall notify such agencies and the local authorities, in writing, within ten (10) days of the effective date of any amendments of, revisions to, or modifications to the contingency plan.
- c) The Permittee shall, in accordance with OAC Rule 3745-54-53, submit a copy of the approved contingency plan, to the Ohio Environmental Protection Agency's Division of Emergency and Remedial Response. Any amendments, revisions, or modifications to the contingency plan shall be submitted to Ohio EPA, Division of Hazardous Waste Management, Northwest District Office.

**B.19. Emergency Coordinator**  
OAC Rule 3745-54-55

The Permittee shall comply with the requirements set forth in OAC Rule 3745-54-55 regarding the emergency coordinator.

**OHIO EPA DHWM**

**JUN 20 2003**

**B.20. Emergency Procedures**

OAC Rules 3745-54-56 and 3745-51-01

The Permittee shall comply with the requirements set forth in OAC Rule 3745-54-56, Volume II, Section 8.0 of the approved Part B permit application, and the conditions of this permit, regarding emergency procedures.

**B.21. Availability, Retention and Disposition of Records**

OAC Rule 3745-54-74

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

**B.22. Operating Record**

OAC Rule 3745-54-73

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

**B.23. Contingency Plan Records**

OAC Rule 3745-54-73 and OAC Rule 3745-54-56-(J)

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

**B.24. Manifest System**

OAC Rules 3745-54-70, 3745-54-71, 3745-54-72 and 3745-54-76

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

OHIO EPA DHWM

JUN 20 2003

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

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

B.26. Reserved.

B.27. Reserved.

B.28. Reserved.

B.29. Reserved.

B.30. Reserved.

B.31. Reserved.

B.32. Reserved.

B.33. Reserved.

B.34. Reserved.

B.35. Reserved.

**B.36. Cost Estimate for Facility Closure and Post-Closure**  
OAC Rule 3745-55-42 and 3745-55-44

- a) The Permittee's most recent closure cost and post-closure estimates, prepared in accordance with OAC Rules 3745-55-42, 3745-55-44, 3745-55-97(C)(3) & (5), 3745-56-28(C)(3) and 3745-56-58(C)(2) are specified in Volume I, Attachment A of the Part B permit application.
- b) The Permittee must adjust the closure and post-closure cost estimates for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with OAC Rule 3745-55-42(B),

OHIO EPA DHWM

JUN 20 2003

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

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

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

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

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

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

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

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

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

**B.40. Reserved.**

OHIO EPA DHWM

JUN 20 2003

**MODULE C - RESERVED**

OHIO EPA DHWM

JUN 20 2003

**MODULE D - RESERVED**

OHIO EPA D/HWM

JUN 20 2003

## 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, 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 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 US 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 of corrective measures construction:

OHIO EPA DHWM

JUN 20 2003

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

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

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

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

#### E.1. Corrective Action at the Facility

OAC Rules 3745-50-10 & 3745-55-011

In accordance with OAC Rule 3745-50-10 "waste management unit" means any discernible unit at which wastes have been placed at any time, irrespective of whether the unit was intended for the management of waste or hazardous waste. Such units include any area at a Facility at which wastes have been routinely and systematically released. As used in this permit, the term "waste management unit" shall be consistent with and equivalent to the term "solid waste management unit" as that term is defined in Section 3004(u) of RCRA. The terms Interim Measure (IM), RCRA Facility Investigation (RFI), Corrective Measures Study (CMS) and Corrective Measure Implementation (CMI) are defined in Attachment 1, Ohio EPA's Corrective Action Plan (OCAP).

OHIO EPA DHWM

JUN 20 2003

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.

For the purposes of SWMU 68, Old Lube Plant, the Permittee is defined as BP North America, Premcor Refining Group, Inc., and BP Chemicals, Inc. As a result of the sale of this piece of property on August 9, 1998, BP Chemicals, Inc. is now considered to be the owner and must maintain compliance with this module. However, as Premcor Refining Group, Inc. is the owner of the contiguous facility as defined in OAC Rule 3745-50-10 paragraph A(32), Premcor Refining Group, Inc. would have the ultimate responsibility for compliance with this module should BP Chemicals, Inc. fail to maintain compliance with this module.

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

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

E.3 Identification of SWMUs  
OAC Rules 3745-50-44(d) & 3745-55-011

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

E.4 Reserved.

OHIO EPA DHWM

JUN 20 2003

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.

For the purposes of SWMU 68, Old Lube Plant, the Permittee is defined as BP North America, Premcor Refining Group, Inc., and BP Chemicals, Inc. As a result of the sale of this piece of property on August 9, 1998, BP Chemicals, Inc. is now considered to be the owner and must maintain compliance with this module. However, as Premcor Refining Group, Inc is the owner of the contiguous facility as defined in OAC Rule 3745-50-10 paragraph A(32), Premcor Refining Group, Inc. would have the ultimate responsibility for compliance with this module should BP Chemicals, Inc. fail to maintain compliance with this module.

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

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

**E.3. Identification of SWMUs**  
OAC Rules 3745-50-44(d) & 3745-55-011

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

**E.4. Reserved.**

OHIO EPA DHWM

JUN 20 2003

E.5 RFI  
OAC Rule 3745-55-011

The Permittee has conducted a RFI to thoroughly evaluate the nature and extent of the release of hazardous waste(s) and hazardous constituent(s) 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.

OHIO EPA/DHWM

JUN 20 2003

- 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 SWMUs 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.

OHIO EPA DHWM

JUN 20 2003

b) 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 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 to human health and the environment, Ohio EPA will approve the requested modification.

c) 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 potential or actual releases of hazardous waste or constituents are likely to occur.

d) 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 release from a WMU at the Facility is likely to pose a threat to human health or the environment. In such a case, Ohio EPA shall initiate a modification to the terms of the permit to rescind the determination made in accordance with Permit Condition E.7.a. Additionally, in the event Ohio EPA determines that there is insufficient information on which to base a determination, the Permittee, upon notification, is required to perform additional investigations as needed.

OHIO EPA DHWM

JUN 20 2003

**E.8 Corrective Measures Study (CMS)**

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

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

a) **CMS Workplan**

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

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

b) **CMS Workplan Implementation**

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

OHIO EPA D/HWM

JUN 20 2003

c) CMS Final Report

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

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

E.9 CMI

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

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

OHIO EPA DHWM

JUN 20 2003

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 measures 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

OHIO EPA DHWM

JUN 20 2003

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

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

OHIO EPA DHWM

JUN 20 2003

Table 3 - MCSs for Ground Water

Table 3 - MCSs for Ground Water	
COC	MCS (milligram per liter)
<b>Volatile Organic Compounds</b>	
Benzene	0.005
Carbon disulfide	1.0
Chlorobenzene	0.1
Chloroethane <sup>a</sup>	0.0046
Chloroform	0.16
1,2-Dichloroethane	0.005
1,1-Dichloroethylene	0.007
1,2-Dichloropropane <sup>a</sup>	0.005
1,4-Dioxane	0.0061
Ethylbenzene	0.7
Ethylene dibromide	0.00005
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 <sup>a</sup>	0.002
Xylenes (total)	10.0
<b>Semivolatile Organic Compounds</b>	
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
<b>Metals</b>	
Antimony	0.006
Arsenic	0.05
Barium	2.0

OHIO EPA D/HWM

JUN 20 2003

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 <sup>b</sup>	0.002
Vanadium	0.26
Zinc	11.0

Notes: <sup>a</sup> COC for SWMU 63 only  
<sup>b</sup> 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. For ground water, the POC is identified in the following Table 6.

OHIO EPA/DHWM  
 JUN 20 2003

Table 6 - Point of Compliance

SWMU or Area	Sand Unit	POC
SWMU 1	Middle Sand	Unit Boundary
SWMU 7	Middle Sand	Unit Boundary
SWMU 46	Middle Sand	Unit Boundary
SWMU 62	Middle Sand	Facility Boundary
SWMU 63	Middle Sand	Facility Boundary
Area 3	Upper Sand	Initial POC - Area of the Plume Final POC - Area Boundary

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

OHIO EPA/DHWM

JUN 20 2003

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

Based on the results of the completed RFI and the establishment of facility-wide institutional controls (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.

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

The human health risk assessment assumed industrial land use for the active refinery and selected off-site SWMUs. Recreational exposures were assumed for the selected off-site SWMUs. These controls are required to

OHIO EPA DHWM

JUN 20 2003

ensure that site-wide land use remains industrial, or recreational as appropriate, until such time when risk values for unrestricted land use are achieved. Under this permit, the institutional controls will consist of measures that limit the future use of the property in a manner that is consistent with the risk values for the site. This will be accomplished through a deed restriction. The Permittee shall perform the following tasks:

- 1) Within thirty (30) days of Permit issuance, the Permittee shall contact Ohio EPA to facilitate imposition of the use restriction on the property. The restriction of the property will be effectuated pursuant to Director's Final Findings and Orders.

The Director's Final Findings and Orders, on consent, will be issued which 1) create an equitable servitude upon the property, or portion thereof, which limits the use of the land as required by the approved Corrective Action, and demonstrate the agreement between the landowner and Ohio EPA to create such an equitable servitude, 2) require the landowner to file notice of the equitable servitude with the County Recorder's Office, 3) require the landowner to place the deed restriction into the deed at the time of the next transaction on the property, and 4) contain, as an attachment or otherwise, the specific, agreed-upon language of the land use restriction itself.

- 2) The use restriction on the property shall be legally sufficient to provide notice to future owners of the property or any portion thereof, or transferees of any interest therein, of the following restrictions on future use of the property; and impose the following restrictions:
  - i) There shall be no consumptive, extractive, or other use of the ground water from the Upper or Middle Sand Units underlying the site;
  - ii) There shall be no residential, commercial (other than those associated with and incidental to industrial operations) or agricultural use of the property;
  - iii) The property (other than those areas restricted to only recreational use) may be used for industrial purposes, including manufacturing, production, treatment and processing

OHIO EPA/DHWM

JUN 20 2003

operations, warehouse use (excluding storage of food-chain products used for direct human consumption, to the extent storage is consistent with local, State, and Federal laws and regulations), and parking and driveway use;

- iv) The areas of the property designated for recreation shall be restricted to recreational uses that will not impact the effectiveness of other corrective measures in protecting human health and ecological receptors.
- v) Swimming and fishing in the Ottawa River and Zurmehly Creek shall be restricted from the property;
- vi) The property owner shall maintain the gravel layer covering SWMU Group E or provide an alternative cover that protects workers from exposure to contaminated soil, or demonstrate to Ohio EPA that risk values for unrestricted land use have been achieved for SWMU Group E;
- vii) The property owner shall perform long term ground water monitoring in accordance with Condition E.9.d of this permit to monitor constituent concentrations in ground water; and
- viii) The foregoing restrictions shall run with the land, inure to the benefit of the Ohio Environmental Protection Agency and be binding on the Permittee and its heirs, successors, assigns, transferees or any other owner of the property or any portion thereof or interest therein.

The instrument referenced above shall identify the areas of the property that pose an unacceptable risk to workers due to wastes left in place. The deed or instrument also shall identify the document(s) containing the assumptions and calculations for the estimated risks.

- 3) Within forty-five (45) 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.

OHIO EPA DHWM

JUN 20 2003

c) Specific Remedies

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

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

OHIO EPA DHWM

JUN 20 2003

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 sixty (60) 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.

OHIO EPA D/HWM

JUN 20 2003

- ii) Implement the plan to determine if contaminated ground water has migrated beyond the property boundary.
  - iii) If ground water contaminated above unrestricted use standards has migrated beyond the facility property boundary, implement Corrective Action(s) in accordance with Condition E.2.
  - iv) Implement corrective measures for SWMU 62 in accordance with the CMICWP approved by U.S. EPA.
  - v) Perform long-term ground water monitoring for contaminants of concern (COCs) in accordance with the PBGWMP.
- 10) SWMU 63 - Buckeye Road Landfill
- i) Within sixty (60) days of the effective date of the permit, submit to Ohio EPA a plan and schedule to determine if ground water contaminated above unrestricted use standards has migrated beyond the facility property boundary.
  - ii) Implement the plan to determine if contaminated ground water has migrated beyond the property boundary.
  - iii) If ground water contaminated above unrestricted use standards has migrated beyond the Facility property boundary, implement Corrective Action(s) in accordance with Condition E.2.
  - iv) Perform long-term ground water monitoring for contaminants of concern (COCs) in accordance with the PBGWMP.
- 11) SWMU 67 - Former Coke Pile
- Implement corrective measures in accordance with the CMICWP approved by U.S. EPA.

**OHIO EPA DHWM**

**JUN 20 2003**

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

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

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

SWMU Group B consists of:

- Old Container Storage Area (SWMU 12)
- South Container Drying Pit (SWMU 32)
- North Container Drying Pit (SWMU 34)
- North Impounding Pond (SWMU 45)

SWMU Group E consists of:

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

SWMU Group F consists of:

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

- i) Implement corrective measures in accordance with the CMICWP approved by U.S. EPA.
- ii) If Ohio EPA determines that LNAPL remediation is technically practicable, the Permittee shall implement LNAPL remediation.
- iii) Perform long-term ground water monitoring for contaminants of concern (COCs) in accordance with the PBGWMP.

- 14) Ottawa River Area of Concern

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

OHIO EPA DHWM

JUN 20 2003

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

15) Zurmehly Creek Area of Concern

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

d) Ground Water Monitoring

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

e) Progress Reports

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

f) Corrective Measures Completion Report

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

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

OHIO EPA DHWM

JUN 20 2003

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

g) Permit Modification

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

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

h) Financial Assurance  
OAC Rule 3745-55-011

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

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

a) General Information

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

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

OHIO EPA DHWM

JUN 20 2003

- 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 shall 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 3745-55-011

The Permittee shall submit a written RCRA Facility Investigation Workplan to Ohio EPA upon a time frame established in written notification by Ohio EPA that further investigations or corrective measures are necessary.

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

Permittee shall 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:

Facility Submission	Due Date
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

OHIO EPA DHWM

JUN 20 2003

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

OHIO EPA DHWM

JUN 20 2003

## MODULE F - GROUND WATER DETECTION MONITORING

### F.1. Module Highlights

This module addresses the ground water monitoring program associated with the Primary Pond Waste Consolidation Area (PPWCA) at the Lima Refinery. The PPWCA is being monitored as a landfill with post-closure care under the PPWCA Post-Closure Ground-Water Detection Monitoring Plan (PCGWDMP) which was approved by Ohio EPA on May 1, 2002.

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

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

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

- a) The Permittee shall maintain, as part of a Ground Water Detection Monitoring System complying with OAC Rule 3745-54-97(A) and (B), the ground water monitoring wells on the map in Figure 1 of this module and in conformance with the following list.

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

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

OHIO EPA DHWM

JUN 20 2003

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

- b) The Permittee shall maintain the monitoring wells identified in Permit Condition F.2(a), in accordance with the detailed plans and specifications presented in the document entitled: "Post-Closure Ground-Water Detection Monitoring Plan for the Primary Pond Waste Consolidation Area, Lima, Ohio Refinery, BP Oil Company", Eagon & Associates, Inc., May 1, 2002, which shall also be known as the PCGWDMP throughout the remainder of this permit. The PCGWDMP is hereby incorporated into the approved permit application.
- c) The Permittee shall remove or replace any monitoring well identified in Permit Condition F.2(a) in accordance with the Appendix to OAC Rule 3745-50-51 permit modification process. Each change must be accompanied by a revised map as specified on Figure 1 of the PCGWDMP for Permit Condition F.2(a).
- d) All wells removed or replaced in accordance with Permit Condition F.2(c) shall be plugged and abandoned in accordance with the document entitled "State of Ohio Technical Guidance for Sealing Unused Wells" (State Coordinating Committee on Ground Water, 1996).
- e) Whenever any of the wells specified in Permit Condition F.2(a) are replaced, the Permittee must demonstrate to Ohio EPA that the ground water quality at the replacement well meets the criteria in Permit Condition F.2(a) within a two year period of the date of replacement using means appropriate to the reason for replacement.

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

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

OHIO EPA DHWM

JUN 20 2003

Parameter/Constituent	Established Background Concentrations Milligrams per liter (mg/l)
Antimony	TBD
Arsenic	TBD
Barium	TBD
Beryllium	TBD
Cadmium	TBD
Cobalt	TBD
Lead	TBD
Mercury	TBD
Nickel	TBD
Selenium	TBD
Vanadium	TBD
Benzene	0.001
Carbon disulfide	0.001
Chlorobenzene	0.001
Chloroform	0.001
1,2-Dichloroethane	0.001
Ethyl benzene	0.001
Ethylene dibromide	0.000046
Methylethyl ketone (2-butanone)	0.010
Styrene	0.001
Toluene	0.001
Xylene	0.001
Anthracene <sup>1</sup>	0.010
Benzenethiol <sup>1</sup>	0.010
Benzo(a)anthracene <sup>1</sup>	0.010
Benzo(a)pyrene <sup>1</sup>	0.0002
Benzo(b)fluoranthrene <sup>1</sup>	0.010
Benzo(k)fluoranthrene <sup>1</sup>	0.010
Bis (2-ethylhexyl) phthalate <sup>1</sup>	0.010
Butyl benzyl phthalate <sup>1</sup>	0.010
Chrysene <sup>1</sup>	0.010
<p><sup>1</sup> Samples will only be collected and analyzed for these semi-volatile organic compounds (SVOCs) on an annual basis.</p> <p>TBD - To be determined upon the collection of an adequate amount of background data.</p>	

OHIO EPA D4WM

JUN 20 2003

Parameter/Constituent	Established Background Concentrations Milligrams per liter (mg/l)
Dibenz(a,j)acridine <sup>1</sup>	0.050
Dibenz(a,h)anthracene <sup>1</sup>	0.010
1,2-Dichlorobenzene <sup>1</sup>	0.010
1,3-Dichlorobenzene <sup>1</sup>	0.010
1,4-Dichlorobenzene <sup>1</sup>	0.010
Diethyl phthalate <sup>1</sup>	0.010
7,12-Dimethylbenz(a)anthracene <sup>1</sup>	0.020
2,4-Dimethylphenol <sup>1</sup>	0.010
Dimethyl phthalate <sup>1</sup>	0.010
Di(n)butyl phthalate <sup>1</sup>	0.010
2,4-Dinitrophenol <sup>1</sup>	0.050
Di(n)octyl phthalate <sup>1</sup>	0.010
1,4-Dioxane <sup>1</sup>	0.010
Fluoranthene <sup>1</sup>	0.010
Indene <sup>1</sup>	0.020
1-Methyl naphthalene <sup>1</sup>	0.010
2-Methylphenol <sup>1</sup>	0.010
4-Methylphenol/3-Methylphenol <sup>1</sup>	0.020
6-Methyl chrysene <sup>1</sup>	0.020
Naphthalene <sup>1</sup>	0.010
4-Nitrophenol <sup>1</sup>	0.050
Phenanthrene <sup>1</sup>	0.010
Phenol <sup>1</sup>	0.010
Pyrene <sup>1</sup>	0.010
Pyridine <sup>1</sup>	0.020
Quinoline <sup>1</sup>	0.010
<sup>1</sup> Samples will only be collected and analyzed for these semi-volatile organic compounds (SVOCs) on an annual basis.  TBD - To be determined upon the collection of an adequate amount of background data.	

b) For those parameters and constituents in Permit Condition F.3(a), for which no background values are established at the time the Permit is issued, the Permittee shall establish background values in accordance with the following procedures.

i) During each sampling event, the Permittee shall take a minimum of one sample from each well (background and compliance point wells).

OHIO EPA CHWM

JUN 20 2003

and analyze for each parameter or constituent specified in the permit, and

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

OHIO EPA/DHWM

JUN 20 2003

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

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

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

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

OHIO EPA DHWM

JUN 20 2003

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

**F.5. Elevation of the Ground Water Surface**

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

**F.6. Statistical Procedures**

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

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

chart for statistical analysis decision making as included in the ASTM guidance document number D 6312-98 entitled: "Standard Guide for Developing Appropriate Statistical Approaches for Ground-Water Detection Monitoring Programs." The ASTM guidance also may be followed, where deemed appropriate by the Ohio EPA.

Any statistical method that is chosen must comply with the following performance standards:

- i) The statistical method shall utilize a sample size large enough to ensure with reasonable confidence that a contaminant release to the ground water from the facility will be detected.
- ii) The statistical procedure must be protective of human health and the environment and provide reasonable confidence that migration of hazardous constituents from a regulated unit into and through the aquifer will be indicated.
- iii) The statistical method must be used in evaluating ground water monitoring data for each hazardous constituent specified in Permit Condition F.3(a).
- iv) The statistical method must be appropriate for the distribution of the data used to establish background values or concentration limits. If the distribution for the constituents differ from one another, more than one statistical method may be needed.
- v) The statistical method must provide a reasonable balance between the probability of falsely identifying a non-contaminating unit and the probability of failing to identify a contaminating regulated unit.
- vi) The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment. Any practical quantitation limit (PQL) approved in the permit that is used in the statistical method shall be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility using the methods outlined in the most recent version of SW-846.

**OHIO EPA DHWM**

**JUN 20 2003**

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

#### **F.7. Monitoring Program and Data Evaluation**

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

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

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

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

OHIO EPA DHWM

JUN 20 2003

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

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

Operating Record

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

- a) Ohio EPA may request a copy of the full QA/QC report for a particular sampling event if circumstances warrant, but in general, QA/QC data will not be required except as described below. The Permittee shall enter all of the following information obtained in accordance with Permit Condition F.7 in the operating record as required by OAC Rule 3745-54-73(B)(5&6), 54-97(J) and 54-98(C):
  - i) The laboratory results from each of the wells and their associated qualifiers, including the laboratory sheets for the full volatile and semi-volatile analyses (must include method codes, detection limits and units of measurement);
  - ii) The date each well was sampled (tabulated);
  - iii) The date, time, and identification of all blanks and duplicates;
  - iv) Any field log documentation of deviation from the procedures in the PCGWDMP, including documentation of parameter omissions during the sampling event;
  - v) The date the Permittee received the results from the laboratory;
  - vi) The date the owner or operator completed their review of the analytical laboratory's verification of the accuracy and precision of the analytical data and determined its quality.
  - (vii) The results of the data validation review per F.8(a)(vi) including: report completeness, chain of custody, sample receipt form, signed statement of validity, technical holding time review, data qualifiers including their definitions, dilutions, blank data, spikes, spike recovery

OHIO EPA D/HWA

JUN 20 2003

- %, surrogate recovery, and an explanation of any rejected results consistent with the U.S. EPA and Ohio EPA guidelines for data review;
- viii) Results of all blanks and duplicates (trip, field, equipment and method);
  - ix) Results of the field parameters;
  - x) All chains of custody;
  - xi) The date the statistical evaluation was completed;
  - xii) The statistical evaluation of the data according to the statistical tests(s) that the Director has specified (must include all computations and results of statistical tests);
  - xiii) Any changes in well status (i.e., going from unaffected to affected status and vice versa);
  - xiv) Ground water surface elevations taken at the time of sampling for each well as required by OAC Rule 3745-54-73(B)(6);
  - xv) Data and results of the annual determination of the ground water flow rate and direction as required by OAC Rule 3745-54-73(B)(6); and
  - xvi) The results of the last three years of all inspections required under OAC Rule 3745-54-15(D) related to ground water monitoring and equipment, as required under OAC Rule 3745-54-73(B)(5).
- b) The established background values and the computations necessary to determine background values must be included in the operating record and submitted to Ohio EPA within ninety (90) days of the completion of the last background sampling event.
- c) The Permittee must submit an annual report to the Director by March 1st or first business day thereafter if this falls on a weekend. The annual reports must reference the titles and dates of any other periodic reports required by the Permit or any updates to those reports (for example, due to confirmation sampling, comments by Ohio EPA, etc.), but generally do not need to include duplicates of hard copies previously submitted. The annual reports must

OHIO EPA DHWM

JUN 20 2003

include, at a minimum, the analytical results required by Permit Conditions F.7(b), the ground water elevation data required by Permit Condition F.5(a) and F.7(c), and the results of the initial statistical analyses required by Permit Condition F.7(d), and the results of the evaluations required by Permit Conditions F.7(e). In addition, a copy on disk of all ground water and blank data must be submitted electronically in the format supplied by the Director. A hard copy of well-specific information [location (latitude and longitude), depth, construction, etc.] for any new/replacement wells, and any other information specified in the instructions for the annual report but not addressed in this Condition, must be submitted in accordance with the schedule stated in Condition F.8(d) as required by OAC Rule 3745-54-75 and OAC Rule 3745-54-97(J).

d) Other Reports

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

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

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

F.9. Assurance of Compliance

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

OHIO DEPT. OF ENVIRONMENTAL PROTECTION

JUN 20 2003

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

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

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

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

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

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

OHIO EPA DHWM

JUN 20 2003

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

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

OHIO EPA DHWM

JUN 20 2003

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

- i) Notify the Director, in writing, within seven (7) days of determining a statistically significant increase, that he intends to make a demonstration.
- ii) Within ninety (90) days of determining a statistically significant increase, submit a report to the Director which successfully demonstrates that a source other than a regulated unit caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation.
- iii) Within ninety (90) days of determining a statistically significant increase, submit to the Director an application for a permit modification to make any appropriate changes to the detection monitoring program at the facility.
- iv) The Permittee may make this demonstration in addition to, or in lieu of, submitting a permit modification application for a compliance ground water monitoring program under OAC 3745-54-99. However, the same period of ninety (90) days is required for both a successful "Other Source Demonstration" and the submittal of the permit modification application for compliance ground water monitoring. The Permittee is not relieved of the ninety (90) day requirement for a permit modification unless the "Other Source Demonstration" is deemed successful by the Agency prior to the ninety (90) day time limit.
- v) Continue to monitor in accordance with the detection monitoring program at the facility.

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

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

OHIO EPA DHWM

JUN 20 2003

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

#### F.12. Compliance Schedule

The Permittee shall, within 90 days of permit journalization, submit an amended PCGWDMP to meet the revisions required by this permit. The submittal of the revised PCGWDMP constitutes a Class 1 permit modification for which the Director's approval is required. The Permittee shall address the following:

F.2.c) - "... Each change must be accompanied by a revised map as specified on Figure 1 of the PCGWDMP for Permit Condition F.2(a)." This is not stated in the PCGWDMP.

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

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

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

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

OHIO EPA DWM

JUN 20 2003

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

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

F.7.e) - "The Permittee shall perform statistical evaluations within 90 days after completion of sampling." This is not stated in the PCGWDMP.

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

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

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

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

OHIO EPA DHWM

JUN 20 2003

## MODULE G - POST-CLOSURE CARE

### G.1 Module Highlights

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

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

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

#### **Primary and C Ponds (Surface Impoundment)**

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

#### **LTU (Land Treatment Unit)**

An above and below-grade surface impoundment used for the land application of hazardous wastewater treatment unit sludge. Ohio EPA is requiring the RCRA closure of this unit to be incorporated as part of corrective action. See Module E of this permit for specifics.

### 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:

OHIO EPA DHWM

JUN 20 2003

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

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

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

OHIO EPA DHWM

JUN 20 2003

- i) continue all operations (including pH control) necessary to enhance degradation and transformation and sustain immobilization of hazardous constituents in the treatment zone to the extent that such measures are consistent with other post-closure care activities;
  - ii) maintain a vegetative cover over closed portions of the facility;
  - iii) maintain the run-on control system required under OAC Rule 3745-56-72(B); and
  - iv) maintain the run-off management system required under OAC Rule 3745-56-72(C).
  - v) control wind dispersal of hazardous waste as required under OAC Rule 3745-56-72(E).
  - vi) continue to comply with any prohibitions or conditions concerning growth of food-chain crops required under OAC Rule 3745-56-76.
- e) The Permittee shall comply with all security requirements, as specified in the Part B permit application.
  - f) The Permittee shall not allow any use of the units designated in Permit Condition G.2. which will disturb the integrity of the final cover, liners, any components of the containment system, or the function of the facility's monitoring systems during the post-closure care period.
  - g) The Permittee shall implement the procedures as detailed in the Post-Closure Plan within Section I of the approved application. All post-closure care activities must be conducted in accordance with the provisions of the Post-Closure Plan.

#### G.4. Inspections

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

OHIO EPA D11111

JUN 20 2003

**G.5. Notices and Certification**

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

OHIO EPA DHWM

JUN 20 2003

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

- d) No later than 60 days after completion of the established post-closure care period for each hazardous waste disposal unit, the Permittee shall submit to the Director, by registered mail, a certification that the post-closure care for the hazardous waste disposal unit was performed in accordance with the specifications in the approved Post-Closure Plan. The certification must be signed by the Permittee and an independent, registered professional engineer. Documentation supporting the independent, registered professional engineer's certification must be furnished to the Director upon request until the Director releases the Permittee from the financial assurance requirements for post-closure care under OAC Rule 3745-55-45.

G.6. Financial Assurance

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

G.7. Post-Closure Permit Modifications

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

**END OF PERMIT CONDITIONS**

OHIO EPA DHWM

JUN 20 2003

Attachment 1

# OHIO CORRECTIVE ACTION PLAN

OHIO EPA DHWM

JUN 20 2003

## Table of Contents

Foreword .....	i
Corrective Action Goal .....	ii
<i>Chapter 1: The Corrective Action Process</i> .....	1
I. Introduction .....	1
II. Steps in the Corrective Action Process .....	1
<i>Chapter 2: The RCRA Facility Assessment</i> .....	2
<i>Chapter 3: Interim Measures/Stabilization</i> .....	3
Examples of Interim Measures .....	4
<i>Chapter 4: The RCRA Facility Investigation</i> .....	5
I. Introduction .....	5
II. The RCRA Facility Investigation Work Plan - Ohio EPA Approach ...	5
III. The RFI Report - Ohio EPA Approach .....	8
IV. Identification of RCRA Corrective Action Options .....	8
V. Figure 4-1: Corrective Action Options .....	12
<i>Chapter 5: The Corrective Measures Study</i> .....	13
I. Introduction .....	13
II. The Corrective Measures Study Work Plan - Ohio EPA Approach ...	13
III. The Corrective Measures Study Report - Ohio EPA Approach .....	14
<i>Chapter 6: Corrective Measures Implementation</i> .....	15
<i>Appendix A: Corrective Action Reference List/Bibliography</i>	

OHIO EPA DHWM

JUN 20 2003

## FOREWORD

This document provides the framework for the Ohio EPA Division of Hazardous Waste Management's implementation of the RCRA Corrective Action program. It was developed by a Division of Hazardous Waste Management (DHWM) workgroup that included representatives of all five district offices, DHWM Central Office, the Legal Office and the Division of Drinking and Ground Waters. It can be termed Ohio's Corrective Action Plan and is based on U.S. EPA's final Corrective Action Plan (OSWER Directive Number 9902.13-2A) that was issued in May, 1994. Ohio's plan is not meant to recreate or duplicate U.S. EPA's Corrective Action Plan (CAP) but instead is intended to be a revised, streamlined version that takes advantage of the flexibility offered in U.S. EPA's CAP while remaining consistent with the CAP. This document is subject to change based on legislative and regulatory changes currently being debated and contemplated on the national level.

Ohio EPA, through the DHWM, will use this framework in implementing RCRA Corrective Action through hazardous waste installation and operation permits issued pursuant to Ohio Revised Code Section 3734.05 and administrative orders issued pursuant to Ohio Revised Code Section 3734.20. Rule 3745-55-011 of the Ohio Administrative Code provides Ohio EPA the authority to implement RCRA Corrective Action through permits. RCRA Corrective Action requirements contained in administrative orders will be developed on a site-specific, order by order basis in conjunction with the individual facility.

DHWM stresses its willingness to work with facilities to require only that information that is truly necessary for a facility to fulfill its RCRA Corrective Action obligations and achieve final environmental remediation goals. As stated by U.S. EPA, the CAP provides an overall model for the RCRA Corrective Action process. U.S. EPA further states that the scopes of work in the CAP are not boilerplate and should only be considered menus of possible activities most facilities may be required to conduct. As represented in this document, Ohio EPA has selected only the activities from those menus that the Agency believes are necessary for a facility to conduct in order to realize the goal of the RCRA Corrective Action program. This approach should enable the Agency and facilities to move through the RCRA Corrective Action process effectively and efficiently and measurably reduce risk to human health and the environment.

**GOAL OF THE RCRA CORRECTIVE ACTION PROGRAM, AS APPLIED TO  
BOTH THE OHIO EPA AND HAZARDOUS WASTE FACILITIES SUBJECT TO  
RCRA CORRECTIVE ACTION:**

---

*TO EVALUATE THE NATURE AND EXTENT OF THE RELEASE OR THREAT OF  
RELEASE OF HAZARDOUS WASTE OR CONSTITUENTS; TO EVALUATE RELEVANT  
FACILITY CHARACTERISTICS (WHICH ALSO OCCURS AS PART OF THE INITIAL  
ASSESSMENT OF THE FACILITY); AND TO IDENTIFY, DEVELOP AND IMPLEMENT  
THE APPROPRIATE CORRECTIVE MEASURE OR MEASURES ADEQUATE TO  
PROTECT HUMAN HEALTH AND THE ENVIRONMENT.*

## CHAPTER 1

### The Corrective Action Process

#### I. Introduction

Implementation of RCRA Corrective Action at Ohio RCRA facilities necessitates Ohio EPA and the facility owner/operator going through several steps to complete the process. The degree to which each step is necessary, if it is in fact necessary, depends on the available quantity and quality of environmental data and information for a particular facility, the analysis of that data and information and the collective decisions made by both the Ohio EPA and the facility, with public input, on how to respond to that data and information. A general listing and description of the steps follows.

#### II. Steps in the Corrective Action Process

*FACILITY ASSESSMENT* - Updated or conducted by Ohio EPA. It answers the questions: Is there a current release and/or imminent threat? Is there a potential release and/or imminent threat? See Chapter 2.

*INTERIM MEASURE(S)* - Undertaken by the facility, it addresses in the near term a release or potential release and/or an imminent threat or potential imminent threat. An Interim Measure may be required to be implemented at any step in the process. See Chapter 3.

*INVESTIGATION* - Undertaken by the facility. It answers the questions: How significant is the release or potential release and/or imminent threat or potential imminent threat? and provides further definition of the release or potential release and/or imminent threat or potential imminent threat. See Chapter 4.

*CORRECTIVE MEASURE(S) STUDY AND DECISION* - Shared responsibility by both the facility and Ohio EPA. It determines how to best address the release or potential release and/or imminent threat or potential imminent threat. See Chapter 5.

*CORRECTIVE MEASURE(S) IMPLEMENTATION* - Performed by the facility, it designs the solution and addresses the release or potential release and/or imminent threat or potential imminent threat. See Chapter 6.

*OPERATION AND MAINTENANCE* of the corrective measure addressing the release or potential release and/or imminent threat or potential imminent threat (if necessary). See Chapter 6.

## CHAPTER 2

### The RCRA Facility Assessment

The RCRA Facility Assessment, often referred to as either the RFA or a Preliminary Assessment/Visual Site Inspection (PA/VSI), is conducted by U.S. EPA or Ohio EPA. U.S. EPA has conducted most of the assessments by utilizing the services of one of its contractors. Ohio EPA, through its Division of Emergency and Remedial Response, has conducted some assessments. Future assessments will be conducted by the Division of Hazardous Waste Management.

The RFA documents environmental conditions at the facility in regard to past and present waste management activities. All related facility files are reviewed and a visual on-site evaluation is also performed. The final RFA document identifies all (solid) waste management units and areas of concern and indicates if either a release of hazardous waste or constituents has occurred or if the potential for such a release exists. Conclusions and recommendations are included for each unit or area regarding the need for further investigation and/or some type of corrective action.

The RFA is used in several different ways. First, it is used to determine the facility's priority for corrective action purposes under U.S. EPA's National Corrective Action Prioritization System (NCAPS). Second, it provides the factual basis for both corrective action permit terms and conditions and the findings of fact in a state administrative order. Finally, it can help determine if an interim measure is necessary to be implemented in the short term to "stabilize" a site.

If a new assessment has to be conducted, Ohio EPA will access all available sources of information in order to conduct a comprehensive, accurate facility assessment. Ohio EPA will not redo already existing assessments but will update those existing assessments as necessary. Additional information to supplement or update an existing assessment will be gathered by performing a comprehensive file review and by sending an information request letter to the subject facility. Information obtained through a response to this letter and any other information obtained from other Ohio EPA divisions, other agencies or departments or any other source will be used to build upon or update existing information. Ohio EPA will determine if field sampling (including ground water) is necessary to further document environmental conditions at a facility on a case by case basis.

## CHAPTER 3

### Interim Measures/Stabilization

U. S. EPA's Stabilization Initiative was developed in 1992. According to U.S. EPA, the Initiative is an implementation approach that focuses resources on near-term activities to control or abate threats and/or to prevent or minimize the further spread of contamination across many facilities rather than following the traditional process of pursuing final, comprehensive remedies at a few facilities. Interim Measures are the stabilization tools used to address obvious environmental problems in either the short or long term. Several Interim Measures may be used in combination. Examples of Interim Measures are found on the following page. These examples were taken from U.S. EPA's Corrective Action Plan (CAP).

Although the Stabilization Initiative is an approach that should be considered for all facilities subject to RCRA Corrective Action, Ohio EPA emphasizes that the need for Interim Measures is determined on a site specific basis and may be identified at any point in the corrective action process. If the need for Interim Measures is identified, Ohio EPA will require its implementation. The facility may be required to gather data to facilitate the design and implementation of Interim Measures. Interim Measures are more likely to be effective if a specific aspect of the overall contamination at a facility can be isolated in conjunction with an exposure threat to humans or ecosystems. Under these conditions, the act of implementing Interim Measures is designed to stop or slow contamination migration, thereby potentially reducing risk to human health and the environment. Site-specific data must be generated to increase the chance of success of Interim Measures. It is possible for an Interim Measure to be the final remedy at a facility. However, for facilities where additional corrective measures are necessary, Ohio EPA and the facility will ensure that the implementation of Interim Measures will complement or be consistent with the final corrective measure.

Ohio EPA will be evaluating facilities to determine the need for Interim Measures throughout the RCRA Corrective Action process as it is being implemented by the facility. This will occur on an ongoing basis as environmental data and information is generated and analyzed.

## Example Interim Measures

### ***Site Security and Fencing***

#### *Ground Water*

Interceptor trench/sump/subsurface drain  
Pump and treat system (source removal and containment)  
Physical barriers (covers/slurry walls)

#### *Soils*

Run-off/run-on control (diversion or collection devices)  
Cap/cover  
Source removal/excavation

#### *Surface Water Release (point and non-point)*

Overflow/underflow dams  
Filter fences  
Run-off/run-on control (diversion or collection devices)  
Regrading/revegetation

#### *Gas Migration Control*

Barriers/collection (e.g., vapor extraction)/treatment/monitoring  
Evacuation (buildings)

#### *Particulate Emissions*

Truck wash (decontamination unit)  
Revegetation  
Application of dust suppressant  
Cover/cap

Note: Most of these examples were taken directly from U.S. EPA's CAP.

## CHAPTER 4

### The RCRA Facility Investigation

#### I. Introduction

The purpose of the investigation is to evaluate thoroughly the nature and extent of the releases or threat of releases of hazardous waste and hazardous constituents at a hazardous waste facility. Its purpose is also to gather data necessary to support the Corrective Measures Study, Interim/Stabilization Measures and final Corrective Measure Implementation. Pursuant to a RCRA Corrective Action Order or RCRA permit term or condition, the facility is required to provide Ohio EPA with a plan that furnishes information on all personnel, materials, and services necessary for, or incidental to, performing the RCRA Facility Investigation (RFI). This information, commonly referred to as the RFI Work Plan, is submitted to the Agency for review and approval. The facility is responsible for conducting the RFI. If a facility believes it is not necessary to conduct an investigation, the facility may provide a rationale on why it was not necessary to evaluate a release or threat of a release. This rationale will be subject to Ohio EPA review and approval.

Facilities are urged to work closely with the Ohio EPA project manager to establish streamlined site-specific Data Quality Objectives (DQO) tailored to the purpose(s) for which the data will be used. If applicable generic media cleanup standards are available, the DQO should be established with those standards in mind. Previously existing data generated by the facility and methods used by the facility to analyze such data will be evaluated pursuant to available federal guidance.

Ohio EPA supports a flexible approach to the overall facility investigation. In the following section, Ohio EPA has selected only those activities from the RFI Scope of Work contained in U.S. EPA's Corrective Action Plan (CAP) that the Agency believes are necessary for a facility to prepare an approvable RFI Work Plan and implement the RFI. However, Ohio EPA will consider alternatives to the approach set forth in the following section if a facility is able to justify an alternative approach based on factors specific to that facility. Ohio EPA will use available federal guidance to review the RFI Work Plan.

#### II. The RCRA Facility Investigation Work Plan - Ohio EPA Approach

Listed below are the components of the RFI Work Plan and their purpose. This is followed by Ohio EPA's view regarding when the component is needed, if it needs to be reviewed and if it needs to be approved. Ohio EPA notes that if generic RCRA Corrective Action cleanup standards or action levels are available for the contaminants of concern at a facility, those standards and other applicable standards will be provided to the facility prior to its submittal of the RFI Work Plan and discussed with the facility in the context of

establishing Data Quality Objectives. If such standards or levels are not available, Ohio EPA will work to develop them. In the absence of such standards, the facility shall perform a baseline risk assessment. The availability of such standards or levels in no way precludes a facility from pursuing a site specific approach to remediation.

The components include:

- 1) *Description of Current Conditions (DCC)*. This component of the Work Plan serves to provide a current, accurate representation of environmental conditions at a facility from the facility's perspective. It shall include a description of the facility's background, a preliminary assessment of the nature and extent of contamination and a description of any Interim or Stabilization Measure that was implemented. Although Ohio EPA recognizes the importance of this information, Ohio EPA will consider alternatives to the development of the DCC, as it's described in U.S. EPA's Corrective Action Plan, as long as the goal of the document is realized. Possible alternatives include use of the RCRA Facility Assessment or its equivalent, a release assessment, a conceptual site model or some combination of these.
- 2) *Objectives of the Investigation*. This component of the Work Plan lists the objectives of the investigation. The permit or order may also list the objectives of the investigation.
- 3) *Field Sampling Plan (FSP)*. This component of the Work Plan serves as a road map on how and where the facility will sample the affected environmental media at the facility. It shall be submitted to Ohio EPA and is subject to Ohio EPA review and approval. If the facility develops a plan for collecting data necessary to demonstrate the possibility of using a specific corrective technology, known as a Corrective Technology Plan (CTP), that plan may be submitted as part of the FSP. However, flexibility regarding the timing of the submittal of the CTP is necessary as development of the CTP might only occur once the Investigation has commenced.
- 4) *Quality Assurance Plan and Procedures (QAPP)*. The purpose of this component of the Work Plan is to specify the field and laboratory procedures necessary to collect, analyze, verify and assure the quality of the data gathered through implementation of the FSP. The field portion of the QAPP is necessary and shall be included with the FSP, which must be reviewed and approved by Ohio EPA. The lab portion of the QAPP may be addressed through development of a site-specific QAPP or use of a generic QAPP, which was developed by U.S. EPA Region 5 and is available. Ohio EPA supports the use of this generic QAPP, which shall be accompanied by a certification statement from the facility attesting to the facility's commitment to follow it. If deviations from the generic QAPP are desired, they shall be proposed to Ohio EPA along with sufficient justification. Such deviations are subject to review and approval by Ohio EPA.

- 5) *Health and Safety Plan (HASP)*. This component of the Work Plan is a plan developed to ensure the health and safety of the surrounding community and all persons who may be on-site during the investigation. It shall be submitted and will be reviewed for informational purposes with Ohio EPA reserving its right to comment on it. Some of the regulations governing on-site worker safety may be found in 29 Code of Federal Regulations (CFR) Part 1910 and Ohio Administrative Code (OAC) Chapter 4121:1-5. Other Occupational Safety and Health Administration (OSHA) regulations may apply. Additional regulations governing on-site and community safety are found in 40 CFR Parts 302, 311 and 312 and OAC Chapter 3750. Matters regulated by OSHA will not be evaluated by Ohio EPA. The HASP must be submitted to Ohio EPA prior to the initiation of any field work.
- 6) *Data Management Plan*. This component of the Work Plan is site-specific and describes how the raw data gathered in the field will be analyzed and presented. It shall be submitted and is subject to Ohio EPA review and approval. It may not have to be submitted with the Work Plan but it should be listed in the Schedule of Deliverables. However, if circumstances warrant, the Ohio EPA project manager may require its submittal with the Work Plan. The timing of its submittal is generally flexible as long as it is subject to Ohio EPA approval prior to its implementation. Records management/retention may be addressed in the permit, order or RFI Work Plan.
- 7) *Project Management Plan*. This component of the Work Plan describes the qualifications and responsibilities of each person who will be performing work as part of the investigation. Ohio EPA will only require submittal of a list of contractors and a table of organization. Ohio EPA reserves the right to ask for more information if deemed necessary. The Plan shall be submitted to Ohio EPA prior to the initiation of field work.
- 8) *Public Involvement Plan*. This component of the Work Plan describes how the facility will involve the public during the investigation and throughout the corrective action process. It shall be submitted and is subject to Ohio EPA review and approval. The Plan shall be consistent with the public involvement requirements of RCRA and any guidance available from U.S. EPA or Ohio EPA.
- 9) *Schedule of Activities/Submittal of Deliverables*. This component of the Work Plan describes what activities and deliverables (e.g., progress reports) will be done by whom and by when, and when they will be submitted as draft and final. It shall be submitted and is subject to initial Ohio EPA approval with the possibility of agreed-to modifications occurring subsequent to the initial approval.
- 10) *Corrective Technology Plan* (special data that must be gathered to support the possible utilization of a particular remedial technology). This component of the Work Plan is used to screen potential technologies and also identifies any special field

data that may need to be collected in order to evaluate a particular remedial technology along with the method of collecting it. It shall be submitted and is subject to Ohio EPA review but not necessarily approval. It must be site specific. It is desirable for the CTP to be submitted along with the FSP although it's possible for it to be submitted at a later date.

### III. The RFI Report

The purpose of the RCRA Facility Investigation (RFI) Report is to describe the results of the investigation performed by the facility. The Report shall describe the facility's environmental setting and shall also characterize contaminant sources and contaminant characteristics. Potential receptors shall be identified. Data gathered shall be analyzed and summarized and conclusions shall be drawn about the results and the likely next step. Methodologies used for sampling and other investigatory activities shall be documented in detail. The report shall follow up on any specific items in the RFI Work Plan.

Meetings with the facility prior to completion and submission of the Report are necessary in order for the facility and Ohio EPA to agree on the future course of action in a manner that conserves the resources of both the facility and Ohio EPA to the extent practicable. A specific meeting with the facility to agree on the content and scope of the RFI Report is essential. The RFI Report should not be viewed simply as the end of one phase of the corrective action process but more as a bridge geared toward making the transition from investigation to actual cleanup of the facility. The RFI Report must be approved by Ohio EPA to provide assurances to both parties on the desired future course of corrective action at the facility.

Again, Ohio EPA supports a flexible approach to the overall facility investigation including the RFI Report. In the following section, Ohio EPA has set forth the components that shall be included in the overall RFI Report and submitted for approval. The listed components are consistent with the Ohio EPA approach on the RFI Work Plan found in Section II of this chapter. Ohio EPA will use available federal guidance to review the RFI Report.

### IV. The RFI Report - Ohio EPA Approach

Ohio EPA's list of the components that shall be included in the overall RFI Report and submitted for approval is as follows.

- 1) *Purpose and Objectives.* The Report shall include an executive summary that identifies the purpose and objectives of the RFI and the RFI Report itself.
- 2) *Data Presentation and Analysis.* The Report shall present the data gathered during the investigation and shall identify any data gaps. The methodologies used to

gather, analyze and summarize the data shall be described in detail. The nature and extent of any contamination discovered during the investigation shall be revealed. Potential receptors shall be identified. Ohio EPA strongly recommends that a conceptual site model/diagram be used as a tool to facilitate site-specific conditions. Data gathered and analyzed during the investigation shall be consistent with the Data Quality Objectives that were established and described in the RFI Work Plan.

- 3) *Evaluation of Data Against Cleanup Standards.* If generic cleanup standards are available, the data shall be evaluated against those standards. In the absence of generic standards, a baseline risk assessment shall be performed. If a site-specific baseline risk assessment was performed, the methodologies and assumptions used to perform it shall be described along with any cleanup standards the facility developed. A human health and ecological risk assessment shall be included in the report. The level of detail necessary in the ecological risk assessment shall be determined as part of the process for establishing the goals of the investigation. Generally, detailed ecological risk assessments are not necessary for facilities located in urban settings.
- 4) *Summary - Identify Potential Remedies/Future Course of Action.* The summary shall fully explore and describe one of the following options/scenarios:
  - a) Identify a presumptive remedy for one or more units/media as appropriate and describe it; or
  - b) Identify units/media for which a Corrective Measures Study (CMS) or limited CMS is necessary and list potential technologies that the CMS or limited CMS will evaluate; or
  - c) Identify any units/media for which a No Further Action finding is appropriate;
  - d) Evaluate the need for an Interim Measure for site stabilization purposes; or
  - e) Evaluate the effectiveness of an already existing Interim Measure and determine if it should be continued and/or what role the Interim Measure may play in the overall corrective action that may be needed at the facility.

#### V. Identification of RCRA Corrective Action Options

This narrative accompanies Figure V-1 titled *Identification of RCRA Corrective Action Options*. Its purpose is to describe what Ohio EPA views as the RCRA corrective action options available to a facility once the data and information collected during the RCRA Facility Investigation (RFI) have been compiled, analyzed, verified for accuracy and accepted by the Agency. Each option is described below.

### *Interim Measure*

If an Interim Measure (IM) was implemented prior to or during the course of the RFI, the RFI Report should examine its performance/effectiveness to date and determine if it should continue to be implemented. The RFI Report should ascertain the role, if any, the IM, or possibly a modified IM, will play as part of the overall site remedy. In some cases, the RFI Report may be the basis for initiating an IM.

### *Performance Based Remedy*

Implementation of a Performance Based Remedy relies on a process different from that most commonly utilized to select the remedy or corrective measure, where maximum Agency involvement and oversight drives the process. The process can begin once Ohio EPA is satisfied that all releases from the facility have been adequately identified and evaluated. The facility and Ohio EPA can then attempt to agree on remedial goals and technologies needed to achieve them. The goals and technologies both need to meet the threshold and balancing criteria for corrective measures found in Chapter 5.

Once agreement on the goals and technologies is reached, Ohio EPA will not require a Corrective Measures Study to be conducted nor will it require Corrective Measure Implementation (CMI) final design plans to be submitted for review and approval. Rather, the facility will be expected to design and implement the remedy and achieve the remedial goals within a mutually agreed upon time period. The results of the remedy being implemented will be monitored by Ohio EPA and documented by the facility in a final report that shall be submitted to Ohio EPA.

### *Presumptive Remedy*

Once the data and information from the RFI is compiled, analyzed and verified, Ohio EPA and the facility may be able to agree that remedial goals can be achieved through the implementation of a particular remedial technology. This would likely occur at less complex facilities which share common characteristics with other facilities. The goals and the selected technology must meet both the threshold and balancing criteria for corrective measures found in Chapter 5. The plan to implement a Presumptive Remedy shall be documented in the final RFI Report. Under these circumstances, Ohio EPA will not require the facility to conduct a CMS. The facility will only be expected to submit the final CMI design plans for review and approval.

### *Identify Potential Remedial Technologies*

At what could be described as the more complex facilities, it may not be readily apparent from the data and information collected during the RFI which particular remedial technology or combination of remedial technologies may accomplish the site cleanup objectives. Under these circumstances, the facility should identify in the RFI Report which technologies it plans to

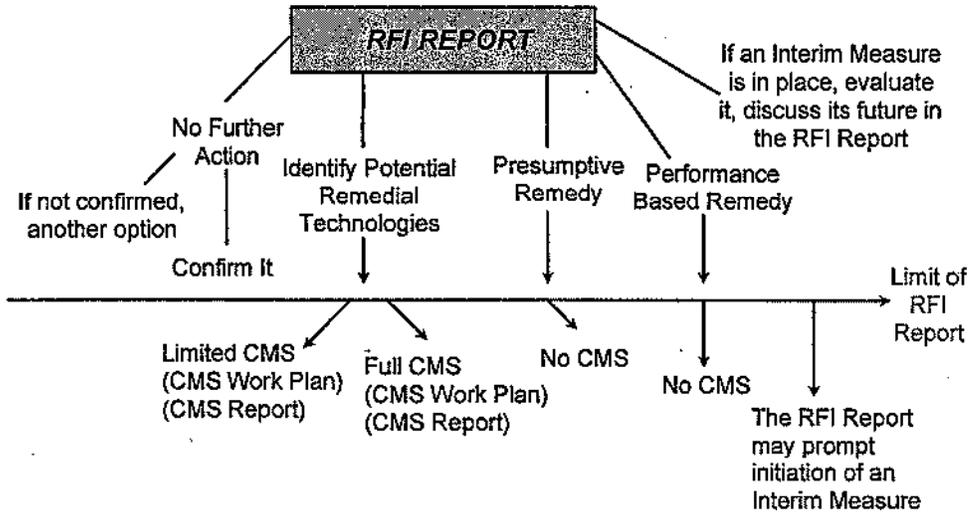
evaluate in the RFI Report. Depending on the range of possible technologies, the facility may conduct either a limited CMS or a full CMS and describe such in the CMS Work Plan to be submitted for review and approval. If the CMS is to be of limited scope, the RFI Report may include the CMS Work Plan outline.

*No Further Action*

The facility may conclude that, based on the data and information collected during the RFI, no corrective measure is necessary. Ohio EPA may agree with the facility but may require some type of future monitoring or institutional control(s) for continuing confirmation that no further action is necessary. Such a requirement may actually constitute a type of Presumptive Remedy. In either circumstance, the decision shall be documented in the final RFI Report. If Ohio EPA does not agree with the facility's conclusion that further action is unnecessary, the facility shall select another option that includes eventual implementation of a corrective measure. The option selected would determine the need for a limited or full CMS or if one was necessary.

Figure 4-1

Identification of RCRA Corrective Action Options



## CHAPTER 5

### The Corrective Measures Study

#### I. Introduction

The purpose of the Corrective Measures Study (CMS) portion of the RCRA Corrective Action process is to identify and evaluate potential remedial alternatives for any releases identified at a facility. The data and information gathered during the RCRA Facility Assessment (RFA), the RCRA Facility Investigation (RFI) and any Interim Measure will determine the necessity and/or scope and content of the CMS.

Ohio EPA supports a flexible, site-specific approach to development of the appropriate corrective measure(s) to be implemented at a facility. It may not be necessary for a facility to perform a CMS. If it is necessary to perform a CMS or a limited CMS, Ohio EPA, in the following section, has selected only those activities from the CMS Scope of Work contained in U.S. EPA's Corrective Action Plan that the Agency believes are necessary for a facility to prepare an approvable CMS Work Plan and CMS Report. However, Ohio EPA will consider alternatives to the approach set forth in the following section if a facility is able to justify an alternative approach based on factors specific to that facility. Ohio EPA will use available federal guidance to review the CMS Work Plan and CMS Report.

#### II. Corrective Measures Study Work Plan - Ohio EPA Approach

If Ohio EPA and the facility determine it's necessary to be developed and submitted, the CMS Work Plan shall include the following:

- 1) *CMS Objectives and Performance Standards;*
- 2) *A description of corrective measure technologies as a function of the following four threshold criteria and the following five balancing criteria:*
  - a. Threshold Criteria
    - i. Protect human health and the environment
    - ii. Attain media cleanup standards set by the implementing agency
    - iii. Control source of the release(s) to reduce or eliminate, to the extent practicable, further releases that may pose a threat to human health and the environment

- iv. Comply with applicable standards for management of waste;
- b. Balancing Criteria
  - i. Long term reliability and effectiveness
  - ii. Reduction in the toxicity, mobility or volume of wastes
  - iii. Short term effectiveness
  - iv. Implementability
  - v. Cost;
- 3) *Description of bench scale studies and/or limited fieldwork; and*
- 4) *Timeline/project management (includes progress reports)/outline.*
- 5) *Public involvement plan.* The plan submitted by the facility with the RFI Work Plan should have covered public participation in the CMS phase of the RCRA Corrective Action process. If an update is needed, it shall be included as part of this submittal.

The CMS Work Plan must be approved by Ohio EPA whether it is part of the RFI/RFI Report or is submitted subsequent to it.

### III. Corrective Measures Study Report - Ohio EPA Approach

If necessary to be developed and submitted, the CMS report shall include the following:

- 1) *Description of Current Conditions (only if an update is necessary);*
- 2) *Performance Objectives.* Can they be met, have they changed, or have any additional contaminants been discovered? Applicable standards from Ohio EPA's Voluntary Action Program and RCRA closure (in a site-specific context) that are protective of human health and the environment may be used if appropriate;
- 3) *Identify, Screen and Evaluate Alternatives.* Select the corrective measure, including the justification for the chosen alternative;
- 4) *A demonstration that the threshold goals can be met for each chosen technology; and*
- 5) *A description of public involvement efforts and the subsequent results.*

The CMS report must be approved by Ohio EPA.

## CHAPTER 6

### Corrective Measures Implementation

The purpose of the Corrective Measures Implementation (CMI) portion of the RCRA Corrective Action process is to design, construct, operate, maintain and monitor the performance of the selected corrective measure/remedy.

Subsequent to Ohio EPA's approval of the RFI Report (and possibly a limited or full Corrective Measures Study Report, which is dependent upon the results of the RCRA Facility Investigation [RFI]), Ohio EPA and the facility will participate in a scoping meeting to discuss the conceptual design of the selected corrective measure(s). The facility may elect to prepare some documentation in advance of the meeting to help facilitate the design discussion. Subsequent to the meeting the facility shall submit the following:

1. *Final Design Plans, Design Specifications and an Operation and Maintenance Plan.*

Also to be included with this submittal is a projected schedule of activities, a waste management plan, a sampling and monitoring strategy, a construction work plan and applicable quality assurance/quality control procedures. The level of detail expected for each of these components is dependent on the selected corrective measure. The final plans and supporting documentation must be approved by Ohio EPA.

2. *Health and Safety Plan.* This is a separate document for the final design plans. No approval from Ohio EPA is necessary although review comments may be offered.
3. The *Public Involvement Plan* submitted by the facility with the RFI Work Plan should have covered public participation in the CMI phase of the RCRA Corrective Action process. If an update is needed, it shall be submitted at this time also for Ohio EPA's review and approval.
4. The facility shall submit a *Construction Completion Report* upon completion of construction of the selected corrective measure. This report will serve as a certification that the corrective measure was constructed according to the approved final design plans. Ohio EPA will verify/concur with the conclusions of this report.
5. The facility shall submit *Progress Reports* throughout the implementation and operation and maintenance of the selected corrective measure. The frequency of submittal of the reports will be set forth in the final design plans and will depend on the complexity of and the schedule for the implementation of the corrective measure.
6. The facility shall submit a *Corrective Measures Completion Report* once implementation of the corrective measure is completed. The timing of the submittal is dependent on the approved schedule for the implementation of the selected corrective measure. This report must be approved by Ohio EPA as it will serve to satisfy the requirements of the order or permit condition that compelled the investigation and implementation of the corrective measure.

OHIO EPA DHWM

JUN 20 2003

## ATTACHMENT 2

### Identification of SWMUS

OAC Rules 3745-50-44(d) & 3745-55-011

U.S. EPA and the Permittee have identified the following SWMUs for investigation during the RFI (as submitted in the Part A permit renewal, Volume 1, Section A, Figures 2 and 3) :

### Land Treatment Unit:

- (f) L-4 Dump
- (g) L-5 Landfill
- (h) L-6 Dump
- (q) WP-1 Spent Catalyst Pile
- 41. Miscellaneous Sump
- 44. Acid Pond/Impounding Pound
- 46. Old Primary Pond
- 57. North Ditch
- 58. Tank 271
- 61. Trolumen Pile
- 62. E-Pond
- 63. Buckeye Road Landfill
- 64. Old Fire Training Area
- 65. Sludge Pond
- 66. Lead Waste Area
- 67. Former Coke Pile
- 68. Former Lube Plant
- 69. Aromatics Closed Drain System
- 70. Tank 214
- 71. Tank 207
- 72. Tank 209
- 73. Intermediate Tank Area

### SWMU Group A:

- 3 Old Drum Storage Area
- 5 L-3 Waste Pile

The units were combined into one group due to indistinct and possibly overlapping boundaries.

These units were located in the current vicinity of an above ground storage tank.

OHIO EPA DHWM

JUN 20 2003

SWMU Group B:

- 12 Old Container Storage Area
- 32 South Drying Pit
- 34 Drying Pit
- 45 North Impounding Pond

These four units were combined into one group due to indistinct and potentially overlapping boundaries. These SWMUs are located in the current vicinity of the benzene NESHAPs unit.

SWMU Group C:

- 13 C-3 Drum Collection Area
- 59 WP-2 Spent Catalyst Pile

These two units were combined into one group due to indistinct and potentially overlapping boundaries.

SWMU Group D:

- 14 Influent Sump
- 17 API Separator
- 19 AFU Charge Sump
- 52 South Plant Sewer System
- 53 North Plant Sewer System

This group consists of units that were recommended for inspection only by the U.S. EPA. Since the wastes received by these units originate as part of the refinery waste water treatment facility, the waste material contained in these SWMUs is the same. However, each unit was evaluated discretely and not as a group during the Phase 1 RFI.

SWMU Group E:

- 30 Tank 77
- 31 Tank 77A
- 35 Tank 78
- 36 Tank 79

These four units were combined into one group because they used to manage similar wastes (wastewater treatment plant sludges) and are located in close proximity to one another. The Phase 1 RFI activities addressed each unit discretely and not as a group.

SWMU Group F:

- 42 AFU Oily Sludge Pond
- 43 Oily Sludge Pond
- 60 Sludge Drying Pit

These units were combined into one group because groundwater contamination has been observed in this area. Identification of one SWMU responsible for this contamination is not possible.

SWMU Group G:

- 47 Primary Pond
- 48 C-Pond
- 49 D-Pond
- 50 A-Pond
- 51 B-Pond

These five units were combined into one group for groundwater sampling purposes. In addition, three of these units were used to manage wastes of a similar composition. The SWMUs were investigated discretely during soil/sediment sampling.

SWMU Group H:

- 54 Slop Pond
- 55 Oil Pond No. 1
- 56 Oil Pond No. 2

These units were combined into one group because they used to manage similar wastes and because of their close geographical proximity. However, these units were investigated discretely during the Phase 1 RFI.

Section 1 of the Phase 1 RFI Report (dated January 12, 1999, received by Ohio EPA on January 21, 1999) lists all the SWMUs presently evaluated. Figures 1-2 and 1-3 in Section 1 of the Phase 1 RFI Report shows the locations of the SWMUs.