

OHIO E.P.A.

DEC 16 2010

ENTERED DIRECTOR'S JOURNAL



BEFORE THE  
OHIO ENVIRONMENTAL PROTECTION AGENCY

In the matter of:

Marathon Oil Company  
539 South Main Street  
Findlay, Ohio 45840

Respondent

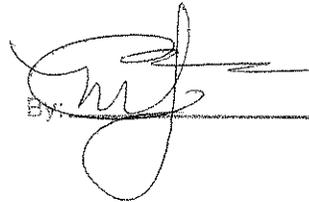
For the Site known as:

Former Marathon Oil Bulk Plant #0279  
2300 West State Street  
Fremont, Sandusky County, Ohio

Director's Final  
Findings and Orders

For Remedial Design  
and Remedial Action

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

By: 

Date: 12.16.2010

**Findings & Orders for RD/RA - Table of Contents**

<b>Name</b>	<b>Page</b>
PREAMBLE .....	3
I. JURISDICTION.....	3
II. PARTIES BOUND.....	3
III. DEFINITIONS.....	3
IV. FINDINGS .....	6
V. GENERAL PROVISIONS.....	8
VI. PERFORMANCE OF THE WORK BY RESPONDENT.....	9
VII. LAND USE AND CONVEYANCE OF TITLE.....	10
VIII. ADDITIONAL WORK.....	12
IX. SAMPLING AND DATA AVAILABILITY.....	13
X. ACCESS.....	13
XI. DESIGNATED SITE COORDINATORS.....	14
XII. PROGRESS REPORTS AND NOTICE.....	15
XIII. REVIEW OF SUBMISSIONS.....	16
XIV. DISPUTE RESOLUTION.....	18
XV. UNAVOIDABLE DELAYS.....	19
XVI. REIMBURSEMENT OF COSTS.....	20
XVII. ACCESS TO INFORMATION.....	21
XVIII. PERIODIC REVIEW.....	22
XIX. MODIFICATIONS.....	22
XX. INDEMNITY.....	22
XXI. CONTRIBUTION AND AGREEMENT NOT TO REFER.....	23
XXII. OTHER CLAIMS.....	23
XXIII. RESERVATION OF RIGHTS.....	23
XXIV. TERMINATION.....	24
XXV. WAIVER AND AGREEMENT.....	24
XXVI. EFFECTIVE DATE.....	25
XXVII. SIGNATORY AUTHORITY.....	25

- Attachment A - Decision Document
- Attachment B - RD/RA SOW
- Attachment C - List of Relevant Guidance Documents
- Attachment D – Proposed Environmental Covenant

## **PREAMBLE**

It is agreed to by the Parties hereto as follows:

### **I. JURISDICTION**

1. These Director's Final Findings and Orders ("Orders") are issued to Marathon Oil Company, pursuant to the authority vested in the Director of Ohio EPA under Ohio Revised Code ("ORC") §§ 3734.13, 3734.20, 6111.03, and 3745.01.

### **II. PARTIES BOUND**

2. These Orders shall apply to and be binding upon Respondent and its successors in interest liable under Ohio law.

3. No change in ownership or legal status of the Respondent including, but not limited to, any transfer of assets or real or personal property shall in any way alter Respondent's obligations under these Orders.

4. Respondent shall provide a copy of these Orders to all contractors, subcontractors, laboratories and consultants retained to conduct any portion of the Work performed pursuant to these Orders, upon the date of retention. Respondent shall ensure that all contractors, subcontractors, laboratories and consultants retained to perform the Work pursuant to these Orders also comply with the applicable provisions of these Orders.

### **III. DEFINITIONS**

5. Unless otherwise expressly provided herein, all terms used in these Orders or in any appendices shall have the same meaning as defined in ORC Chapters 3734 and 6111, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the rules promulgated thereunder. Whenever the terms listed below are used in these Orders or in any appendices, attached hereto and incorporated herein, the following definitions shall apply:

- a. "CERCLA" means the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. 9601 et seq.
- b. "Contaminant" and "Contamination" means (1) any "hazardous waste" under ORC § 3734.01(J); (2) any "industrial waste" under ORC § 6111.01(C); and/or (3) any "other wastes" under ORC § 6111.01(D), including any release of one or more of the same.

- c. "Day" means a calendar day unless expressly stated to be a business day. "Business day" shall mean a day other than a Saturday, Sunday, or state holiday. In computing any period of time under these Orders, where the last day would fall on a Saturday, Sunday, or state holiday, the period shall run until the close of the next business day.
- d. "Decision Document" means the document detailing the remedial action selected by Ohio EPA for the Site as set forth in the document attached to these Orders as Appendix A.
- e. "Environmental Covenant" means a servitude arising under an environmental response project that imposes activity and use limitations and that meets the requirements established in section 5301.82 of the Revised Code.
- f. "NCP" means the National Oil and Hazardous Substances Pollution Contingency Plan, codified at 40 C.F.R. Part 300 (1990), as amended.
- g. "Ohio EPA" means the Ohio Environmental Protection Agency and its designated representatives.
- h. "Orders" means these Director's Final Findings and Orders and all attachments hereto.
- i. "Paragraph" means a portion of these Orders identified by an arabic numeral or an uppercase or lowercase letter.
- j. "Parties" means Respondent and Ohio EPA.
- k. "Property" means the former Marathon Oil Bulk Plant #0279 located at 2300 (formerly 2416) West State Street in Fremont, Sandusky County, Ohio.
- l. "Respondent" means Marathon Oil Company, located at 539 South Main Street, Findlay, Ohio 45840.
- m. "Remedial Action" ("RA") means those activities to be undertaken by Respondent to implement and maintain the effectiveness of the final plans and specifications submitted by Respondent pursuant to the Remedial Design and Remedial Action Work Plan.

- n. "Remedial Design" ("RD") means those activities to be undertaken by Respondent to develop the final plans and specifications for the Remedial Action pursuant to the Remedial Design and Remedial Action Work Plan.
- o. "Remedial Design and Remedial Action Work Plan" ("RD/RA Work Plan") means the document submitted by Respondent and approved by Ohio EPA pursuant to the Performance of Work Section of these Orders.
- p. "Response Costs" means all costs incurred by Ohio EPA including, but not limited to, payroll costs, contractor costs, travel costs, direct costs, overhead costs, legal and enforcement related costs, oversight costs, laboratory costs, and the costs of reviewing or developing plans, reports, and other items pursuant to these Orders, verifying the Work, or otherwise implementing or enforcing these Orders.
- q. "Section" means a portion of these Orders identified by a roman numeral.
- r. "Site" means the "facility" as defined in ORC 3734.01(N), which is located at 2300 West State Street, Fremont, Sandusky County, Ohio, where the historical releases or disposal of hazardous waste, and/or the discharge to waters of the state of industrial waste or other wastes have occurred, including any other area where such hazardous wastes, industrial wastes, and/or other wastes have migrated or threaten to migrate.
- s. "Statement of Work" ("SOW") means the Model Statement of Work for Remedial Design and Remedial Action for the implementation of the Remedial Design and Remedial Action at the Site, as set forth in Attachment B of these Orders. The SOW is not specific to this Site.
- t. "Supporting Documents" means the field sampling plan ("FSP") and quality assurance project plan ("QAPP") developed concurrently with the RD/RA Work Plan pursuant to these Orders and Section 4 of the SOW.
- u. "Transferee" means any future owner of any interest in the Site, including but not limited to, owners of an interest in fee simple, mortgagors, easement holders, and lessees.
- v. "Work" means all activities Respondent is required to perform under the Performance of the Work by Respondent and Additional Work Sections of these Orders.

#### IV. FINDINGS

6. Nothing in these Orders shall be considered to be an admission by Respondent of any matter of law or fact. Subject to the foregoing, the Director of Ohio EPA has determined the following findings:
- a. The former Marathon Oil Bulk Plant #0279 site is located at 2300 West State Street, Fremont, Sandusky County, Ohio ("Site"). Formerly, the address was 2416 West State Street.
  - b. The Site is owned and was operated by Marathon Oil Company, an Ohio corporation located at 539 South Main Street in Findlay, Ohio.
  - c. The Site was in operation as a bulk petroleum storage terminal from 1954 until 1989. The storage facility consisted of above-ground storage tanks (ASTs) used to store leaded and unleaded gasoline, diesel fuel, and heating and lubricating oil. Respondent decommissioned the facility in 1991 and conducted several surface and subsurface investigations.
  - d. The results of the subsurface investigation conducted by Respondent indicated the presence of petroleum hydrocarbons in both soil and ground water. Lead was also present in the ground water, believed to be the result of contamination by leaded petroleum products. The investigation did not reveal off-Site migration of Contaminants. Respondent notified Ohio EPA of existing contamination on May 7, 1992. The analytical results submitted by Respondent indicated that volatile organic compound (VOC) contaminants exceeded maximum contaminant levels (MCLs) for drinking water.
  - e. On October 7, 1992, Ohio EPA conducted a split sampling at the Site for VOCs under the toxicity characteristic leaching procedure (TCLP). Benzene was detected in the soil under this testing method of sampling at 1300 parts per billion (ppb). Benzene exceeding 500 ppb under this testing method is a hazardous waste, number D018, pursuant to OAC rule 3745-51-24.
  - f. On January 23, 1995, the Director of Ohio EPA issued Director's Final Findings and Orders to Respondent to complete a remedial investigation and feasibility study (RI/FS) at the Site. The RI/FS Orders established cleanup levels for VOCs benzene, toluene, ethylbenzene, and xylene, in both soil and ground water, and for lead in ground water.
  - g. Ohio EPA approved the RI Report on November 12, 2003 and approved the FS Report on October 20, 2004. The RI identified public health and environmental

risks at the Site resulting from the contaminated ground water and soil. The RI characterized the nature and extent of the contaminants released at the Site and the potential risks to human health and safety and the environment. The RI revealed that the principal contaminants of concern are VOCs, including benzene, toluene, ethylbenzene and total xylenes in both soil and ground water, and lead in ground water. The source of VOCs detected in soil and ground water beneath the facility appear to originate within or near the former AST area where seven ASTs were formerly located.

- h. On May 7, 2008, Ohio EPA notified the public of its Preferred Plan for remediation of the Site and solicited public comments. The Preferred Plan summarizes the information presented in the RI/FS Report prepared by Respondent and identifies and explains Ohio EPA's preferred alternative for the remedial action at the Site. The preferred remedial alternative in the Preferred Plan includes: monitored natural attenuation (i.e., ground water monitoring and evaluation program); well abandonment; a risk management plan for protection of construction and excavation workers; an environmental covenant establishing activity and use limitations for the Site property; and associated reporting.
- i. On July 17, 2008, Ohio EPA held a public meeting and hearing on the Preferred Plan. The public comment period ended on August 17, 2008. Ohio EPA did not receive any comments on the Preferred Plan during the public meeting and public comment period.
- j. On December 23, 2008, Ohio EPA issued a Decision Document, which selected the remedy for the Site. The Decision Document is attached hereto as Appendix A, and incorporated by reference herein.
- k. The Site is a location where hazardous waste was released or disposed.
- l. Because of their quantity, concentration, physical or chemical characteristics, the benzene, toluene, ethylbenzene, total xylenes and lead found at the Site are "hazardous waste" as defined under ORC § 3734.01(J).
- m. The benzene, toluene, ethylbenzene, total xylenes and lead found at the Site are "industrial waste" or "other wastes" as defined under ORC §§ 6111.01(C) and (D).
- n. The ground waters at the Site are "waters of the state" as defined in ORC § 6111.01(H).

- o. Ohio EPA has incurred Response Costs and continues to incur Response Costs associated with this Site.
- p. Respondent is a "person" as defined under ORC §§ 3734.01(G) and 6111.01(I).
- q. Conditions at the Site constitute a substantial threat to public health or safety or are causing or contributing or threatening to cause or contribute to air or water pollution or soil contamination as provided in ORC § 3734.20(B).
- r. The migration and threatened migration of Contaminants to ground water, or surface water at or from the Site constitutes a discharge to "waters of the state," as the term is defined in ORC § 6111.01(H).
- s. The Work required pursuant to these Orders will contribute to the prohibition or abatement of the discharge of Contaminants to waters of the State.
- t. In issuing these Orders, the Director has given consideration to, and based his determination on, evidence relating to technical feasibility and economic reasonableness of complying with these Orders, and to evidence relating to conditions calculated to result from compliance with these Orders, and their relation to the benefits to the people of the state to be derived from such compliance.
- u. The actions to be taken pursuant to these Orders are reasonable and necessary to protect the public health or safety or the environment as provided in ORC § 3734.20.

## **V. GENERAL PROVISIONS**

### **7. Objectives of the Parties**

The objectives of the Parties in entering into these Orders are to protect public health and safety and the environment from the disposal, discharge, or release of Contaminants through design, construction, implementation, operation, and maintenance of the remedy by Respondent as set forth in the Decision Document and in accordance with these Orders.

### **8. Commitment of Respondent**

Respondent agrees to perform the Work in accordance with these Orders including but not limited to the SOW, all relevant guidance documents, and all standards, specifications, and schedules as approved by Ohio EPA pursuant to these

Orders. Respondent also agrees to reimburse Ohio EPA for all Response Costs as provided in the Reimbursement of Costs Section and perform all other obligations of these Orders.

9. Compliance With Law

- a. All activities undertaken by Respondent pursuant to these Orders shall be performed in accordance with the requirements of all applicable federal, state and local laws and regulations, and in a manner consistent with the NCP.
- b. Ohio EPA expects that activities conducted pursuant to these Orders, if approved by Ohio EPA, would be considered necessary and consistent with the NCP.
- c. Where any portion of the Work requires a permit, license or other authorization from Ohio EPA or any other state, federal or local government agency, Respondent shall submit applications in a timely manner and take all other actions necessary to obtain such permit, license or other authorization. These Orders are not, and shall not be construed to be, a permit, license or other authorization issued pursuant to any statute or regulation.

**VI. PERFORMANCE OF THE WORK BY RESPONDENT**

10. Supervising Contractor

All Work performed pursuant to these Orders shall be under the direction and supervision of an employee or contractor with expertise in hazardous waste site investigation and remediation. Prior to the initiation of the Work, Respondent shall notify Ohio EPA in writing of the name of the supervising employee or contractor and any subcontractor to be used in performing the Work under these Orders.

11. Remedial Design and Remedial Action

- a. RD/RA project initiation meeting. Within seven (7) days of the effective date of these Orders, unless otherwise mutually agreed to by the Parties, Respondent shall meet with Ohio EPA to discuss the requirements of the RD/RA Work Plan.
- b. Submission of RD/RA Work Plan. Within thirty (30) days after the effective date of these Orders, unless otherwise specified in writing by Ohio EPA, Respondent shall submit to Ohio EPA a RD/RA Work Plan and schedule for implementation of the Work required under this Section of these Orders. The RD/RA Work Plan shall provide for the design, construction, final operation and maintenance of the remedy as set forth in the Decision Document.

- c. Criteria for RD/RA Work Plan development. The RD/RA Work Plan, Supporting Documents, and any other deliverables required under the approved RD/RA Work Plan shall be developed in conformance with the RD/RA SOW contained in Attachment B of these Orders, and the guidance documents listed in Attachment C of these Orders. The RD/RA Work Plan shall include a proposed schedule that includes a completion date for each task. If Ohio EPA determines that any additional or revised guidance documents affect the Work to be performed in implementing the RD/RA Work Plan, Ohio EPA will notify Respondent, and the RD/RA Work Plan and other affected documents shall be modified accordingly.
- d. Handling any inconsistencies. Should Respondent identify any inconsistency between any of the laws and regulations and guidance documents that Respondent is required to follow by these Orders, Respondent shall notify Ohio EPA in writing of each inconsistency and the effect of the inconsistencies upon the Work to be performed. Respondent shall also recommend, along with supportable rationale that justify each recommendation, the requirement that Respondent believes should be followed. Respondent shall implement the affected Work as directed in writing by Ohio EPA, subject to the provisions of the Dispute Resolution provision.
- e. Review of RD/RA Work Plan. Ohio EPA will review the RD/RA Work Plan and Supporting Documents pursuant to the procedures set forth in the Review of Submissions Section of these Orders.
- f. Implementation of the RD/RA Work Plan. Upon Ohio EPA's approval of the RD/RA Work Plan, Respondent shall implement the RD/RA Work Plan as approved. Respondent shall submit all plans, reports, or other deliverables required under the approved RD/RA Work Plan, in accordance with the approved schedule, for Ohio EPA's review and approval pursuant to the Review of Submissions Section of these Orders.

## **VII. LAND USE AND CONVEYANCE OF TITLE**

### **12. Environmental Covenant**

Within thirty (30) days after the effective date of these Orders, Respondent shall record with the Sandusky County Recorder's Office an Environmental Covenant for the property that is part of the Site owned by the Respondent. The Environmental Covenant shall be consistent with the template contained in Attachment D, shall be signed by Respondent, and shall be approved and signed by Ohio EPA. The Environmental Covenant shall be recorded in the deed or official records of the County

Recorder of Sandusky County, Ohio pursuant to ORC § 5301.82. The terms and conditions of the Environmental Covenant are incorporated into these Orders and shall be binding upon Respondent.

13. Proof of Filing Environmental Covenant

Within thirty (30) days after filing with the Sandusky County Recorder the executed Environmental Covenant, Respondent shall certify to Ohio EPA that the Environmental Covenant has been filed for recording, and include with the certification a file and date-stamped copy of the recorded Environmental Covenant. If the Environmental Covenant is violated or breached by Respondent, the Respondent shall be in violation of these Orders.

14. Land Use Self-Reporting Requirement

Respondent shall ensure that no portion of the Site will be used in any manner that would adversely affect the integrity of any monitoring systems at the Site. Respondent shall submit on an annual basis, written documentation verifying that any monitoring system is in place and operational.

15. Notice of Intention to Transfer Property

Prior to each conveyance by Respondent of an interest in any portion of the Site, including but not limited to easements, deeds, leases and mortgages, Respondent shall notify Transferee of the existence of the monitoring system and activity and use limitations and shall provide a copy of these Orders to Transferee. Respondent shall notify Ohio EPA at least thirty (30) days in advance of each conveyance of an interest in any portion of the Site that is owned by Respondent. Respondent's notice shall include the name and address of the Transferee and a description of the provisions made for the continued access to and maintenance of the monitoring system.

16. Instrument and Confirmation of Conveyance

Upon each conveyance by Respondent of an interest in any portion of the Property, including but not limited to easements, deeds, leases and mortgages, Respondent shall include in the instrument of conveyance a restatement consistent with paragraph 10 of the Environmental Covenant. Within thirty (30) days after each conveyance of an interest in any portion of the Site that is owned by Respondent, Respondent shall submit to Ohio EPA, via certified mail, the following information:

- a. A copy of the deed or other documentation evidencing the conveyance;

- b. The name, address, and telephone number of the new property owner and the name, address, and telephone number of the contact person for the property owner;
- c. A legal description of the property, or the portion of the property, being transferred;
- d. A survey map of the property, or the portion of the property, being transferred; and
- e. The closing date of the transfer of ownership of the property, or portion of the property.

### **VIII. ADDITIONAL WORK**

17. Ohio EPA or Respondent may determine that in addition to the tasks defined in the approved RD/RA Work Plan, additional Work may be necessary to accomplish the Objectives of the Parties as provided in the General Provisions Section of these Orders. Additional Work may also include, pursuant to ORC § 3734.20 or other applicable law, the implementation of interim actions to address substantial threats to public health or safety or the environment should such threats be identified during the conduct of the RD/RA. Any additional Work proposed under this Section shall not exceed the scope of the Preferred Plan.

18. Within thirty (30) days of receipt of written notice from Ohio EPA that additional Work is necessary, unless otherwise specified in writing by Ohio EPA, Respondent shall submit a proposed addendum to the RD/RA Work Plan ("RD/RA Work Plan Addendum"), which contains (a) a work plan for the implementation of the additional Work, (b) any revisions to the Supporting Documents and other RD/RA deliverables, as appropriate, (c) a schedule for the performance of the additional Work, and (d) revisions to other schedules impacted by the additional Work, if any. If Respondent disputes the necessity of additional Work, Respondent shall initiate the procedures for dispute resolution set forth in the Dispute Resolution Section of these Orders within fourteen (14) days after receipt of Ohio EPA's notification of the need for additional Work. The RD/RA Work Plan Addendum shall conform to the standards and requirements set forth in the documents attached to these Orders as Attachments B and C (RD/RA SOW and List of Relevant Guidance Documents). Upon approval of the RD/RA Work Plan Addendum by Ohio EPA pursuant to the Review of Submissions Section of these Orders, Respondent shall implement the approved RD/RA Work Plan Addendum in accordance with the schedules contained therein.

19. If Respondent determines that additional Work is necessary, Respondent shall submit a proposal to Ohio EPA to explain what the additional Work is, why the additional Work is necessary, and what impact, if any, the additional Work will have on the RD/RA Work Plan and schedule. If Ohio EPA concurs with the request to perform additional Work, Respondent shall submit a RD/RA Work Plan Addendum, as described above, for the performance of additional Work. The RD/RA Work Plan Addendum shall conform to the standards and requirements set forth in the documents attached to these Orders as Appendices B and C. Upon approval of the RD/RA Work Plan Addendum by Ohio EPA pursuant to the Review of Submissions Section of these Orders, Respondent shall implement the approved RD/RA Work Plan Addendum in accordance with the schedules contained therein. Additional Work does not include any activity performed in response to an emergency at the Site for which Respondent submits to Ohio EPA written notice of the performed activity.

#### **IX. SAMPLING AND DATA AVAILABILITY**

20. Unless otherwise agreed to by the Site Coordinators, Respondent shall notify Ohio EPA not less than fifteen (15) days in advance of all sample collection activity. Upon request, Respondent shall allow split and/or duplicate samples to be taken by Ohio EPA or its designated contractor. Ohio EPA shall also have the right to take any additional samples it deems necessary. Upon request, Ohio EPA shall allow Respondent to take split and/or duplicate samples of any samples Ohio EPA takes as part of its oversight of Respondent's implementation of the Work.

21. Within seven (7) days of Respondent's receipt of a request by Ohio EPA, Respondent shall submit to Ohio EPA copies of the results of all sampling and/or tests or other data, including raw data and original laboratory reports, generated by or on behalf of Respondent with respect to the Site and/or the implementation of these Orders. An electronic copy shall also be provided in a format approved by Ohio EPA. Respondent may submit to Ohio EPA any interpretive reports and written explanations concerning the raw data and original laboratory reports. Such interpretive reports and written explanations shall not be submitted in lieu of original laboratory reports and raw data. Should Respondent subsequently discover an error in any report or raw data, Respondent shall promptly notify Ohio EPA of such discovery and provide the correct information.

#### **X. ACCESS**

22. Ohio EPA and its contractors shall have access at all reasonable times to the Site and any other property to which access is required for the implementation of these Orders, to the extent access to the property is controlled by Respondent. Access under

these Orders shall be for the purposes of conducting any activity related to these Orders including but not limited to the following:

- a. Monitoring the Work;
- b. Conducting sampling, including any background monitoring wells;
- c. Inspecting and copying records, operating logs, contracts, and other documents related to the implementation of these Orders;
- d. Conducting investigations, tests, and other activities associated with the implementation of these Orders; and
- e. Verifying any data and/or other information submitted to Ohio EPA.

23. To the extent that the Site or any other property to which access is required for the implementation of these Orders is owned or controlled by persons other than Respondent, Respondent shall use its best efforts to secure from such persons access for Respondent and Ohio EPA and its contractors as necessary to effectuate these Orders. Copies of each access agreement obtained by Respondent shall be provided to Ohio EPA upon execution of the access agreement. If any access required to implement these Orders is not obtained prior to Respondent's submission of the RD/RA Work Plan [unless otherwise agreed to in writing by Ohio EPA], Respondent shall promptly notify Ohio EPA in writing of the steps Respondent has taken to attempt to obtain access. Ohio EPA may, as it deems appropriate, assist Respondent in obtaining access.

24. Notwithstanding any provision of these Orders, the State of Ohio retains all of its access rights and authorities, including enforcement authorities related thereto, under any applicable statute or regulation including but not limited to ORC §§ 3734.20 and 6111.05.

#### **XI. DESIGNATED SITE COORDINATORS**

25. Within seven (7) days of the effective date of these Orders, Respondent shall notify Ohio EPA, in writing, of the name, address, telephone number, and email address of its designated Site Coordinator and Alternate Site Coordinator.

26. As used in these Orders, the term "Site Coordinator" refers interchangeably to the Site Coordinator and the Alternate Site Coordinator designated for a named party. If any designated Site Coordinator is changed, the identity of the successor will be given

to the other Party at least seven (7) days before the changes occur, unless impracticable, but in no event later than the actual day the change is made.

27. To the maximum extent practicable, except as specifically provided in these Orders, communications between Respondent and Ohio EPA concerning the implementation of these Orders shall be made between the Site Coordinators. Respondent's Site Coordinator shall be available for communication with Ohio EPA regarding the implementation of these Orders for the duration of these Orders. Each Site Coordinator shall be responsible for ensuring that all communications from the other Party are appropriately disseminated and processed. Respondent's Site Coordinator shall be present on the Site or on call during all hours of Work at the Site.

28. Without limitation of any authority conferred on Ohio EPA by statute or regulation, Ohio EPA's Site Coordinator's authority includes but is not limited to the following:

- a. Directing the type, quantity and location of samples to be collected by Respondent pursuant to an approved Work Plan;
- b. Collecting samples;
- c. Observing, taking photographs, or otherwise recording information related to the implementation of these Orders, including the use of any mechanical or photographic device;
- d. Directing that the Work stop whenever Ohio EPA's Site Coordinator determines that the activities at the Site may create or exacerbate a threat to public health or safety, or threaten to cause or contribute to air or water pollution or soil contamination;
- e. Conducting investigations and tests related to the implementation of these Orders;
- f. Inspecting and copying records, operating logs, contracts and/or other documents related to the implementation of these Orders; and
- g. Assessing Respondent's compliance with these Orders.

## **XII. PROGRESS REPORTS AND NOTICE**

29. Unless otherwise directed by Ohio EPA, Respondent shall submit a written periodic progress report to Ohio EPA, per an Ohio EPA-approved sampling and

analysis plan. At a minimum, the progress reports shall include that information designated in Section 3.7 of the SOW. Periodic progress reports may not be used to propose modifications to approved plans. Respondent shall submit such requests to Ohio EPA in a separate written correspondence.

30. Progress reports (one copy only) shall be sent either by e-mail with confirmed receipt or by hard copy to the address listed below. All other documents (two copies) required to be submitted pursuant to these Orders to Ohio EPA shall be sent to the following agency address(s):

Ghassan Tafla  
Ohio EPA - DERR  
Northwest District Office  
347 North Dunbridge Road  
Bowling Green, Ohio 43402  
Ghassan.tafla@epa.state.oh.us

All written (including electronic) correspondence to Respondent shall be directed to:

Brice Birkhofer  
Marathon Petroleum Company LLC  
539 South Main Street  
Findlay, Ohio 45840-3295  
BGBirkhofer@marathonoil.com

With copies to:  
Sherry L. Hesselbein  
Marathon Petroleum Company LLC  
539 South Main Street  
Findlay, Ohio 45840  
shesselbein@marathonoil.com

A Party may designate an alternative contact name or address upon written notification to the other Party and in accordance with the Designated Site Coordinators Section of these Orders, as applicable.

### **XIII. REVIEW OF SUBMISSIONS**

31. Ohio EPA shall review any work plan, report, or other item required to be submitted pursuant to these Orders.

32. Upon review, Ohio EPA may in its sole discretion: (a) approve the submission in whole or in part; (b) approve the submission with specified conditions; (c) modify or, modify and approve, the submission; (d) disapprove the submission in whole or in part; or (e) any combination of the above. The results of Ohio EPA's review shall be detailed in writing and shall identify any conditions, modifications and/or deficiencies. Excluded from Ohio EPA's approval pursuant to this Section are the health and safety plan (HASP) and progress reports.

33. In the event that Ohio EPA approves an initial submission, Respondent shall proceed to take such action as required by Ohio EPA. In the event that Ohio EPA approves with conditions or modification to an initial submission, Respondent shall either (a) proceed to take such action as required by Ohio EPA, or (b) initiate the procedures for dispute resolution set forth in the Dispute Resolution Section of these Orders, within fourteen (14) days of receipt of Ohio EPA's written response to Respondent's submission. Respondent shall proceed to take any action required by an unmodified or unconditioned portion of the submission, as those portions are considered approved, to the extent such unmodified or unconditioned portions are not dependent upon a disputed portion of the submission.

34. In the event that Ohio EPA disapproves an initial submission in whole or in part, or conditionally approves a submission and notifies Respondent in writing of the deficiencies or conditions, Respondent shall within twenty-one (21) days, or such longer period of time as specified by Ohio EPA in writing, correct the deficiencies, and/or incorporate the conditions, and submit a revised submission to Ohio EPA for approval. The revised submission shall incorporate all of the undisputed changes, additions, and/or deletions specified by Ohio EPA in its notice of disapproval. Revised submissions shall be accompanied by a letter indicating how and where each of Ohio EPA's comments was incorporated into the revised submission. To facilitate review of the revised submission, those portions of the document not affected by the Ohio EPA comments should remain unchanged. The letter accompanying the submission should indicate, however, any indirect changes necessitated by Ohio EPA's comments.

35. To the extent that Respondent disputes any of Ohio EPA's changes, additions, deletions, and/or conditions to an initial submission, Respondent shall initiate the procedures for dispute resolution set forth in the Dispute Resolution Section of these Orders, within fourteen (14) days after receipt of Ohio EPA's written notice of disapproval. Notwithstanding the disapproval, Respondent shall proceed to take any action required by a non-deficient or unconditionally approved portion of the submission that is not specified as disapproved in the notice of disapproval.

36. In the event that Ohio EPA disapproves or modifies a revised submission, in whole or in part, and notifies Respondent in writing of the deficiencies, Respondent shall

within twenty-one (21) days, or such longer period of time as specified in writing by Ohio EPA, either: (1) correct the deficiencies and incorporate all changes, additions, and/or deletions, and submit the revised submission to Ohio EPA for approval; or (2) initiate the dispute resolution process pursuant to the Dispute Resolution Section of these Orders. If Respondent fails to submit a revised submission incorporating all changes, additions, modifications and/or deletions within fourteen (14) days, or such longer period of time as specified by Ohio EPA in writing, Respondent shall be considered in breach and/or violation of these Orders. If Respondent is in breach and/or violation of these Orders, Ohio EPA retains the right to: (1) perform any additional remediation, including complete or partial Remedial Design or Remedial Action; and/or (2) enforce the terms of these Orders as provided in the Reservation of Rights Section of these Orders.

37. All work plans, reports, or other items required to be submitted to Ohio EPA under these Orders shall, upon approval by Ohio EPA, be deemed to be incorporated in and made an enforceable part of these Orders. In the event that Ohio EPA approves a portion of a work plan, report, or other item, the approved portion shall be deemed to be incorporated in and made an enforceable part of these Orders.

#### **XIV. DISPUTE RESOLUTION**

38. The Site Coordinators shall, whenever possible, operate by consensus.

39. In the event of a disapproval, or an approval with condition(s) or modification(s) by Ohio EPA of a submission by Respondent, or a disagreement regarding the Work performed under these Orders, Respondent's Site Coordinator shall notify Ohio EPA's Site Coordinator in writing that Respondent wishes to invoke an informal dispute pursuant to this Section. The notification to invoke an informal dispute shall occur prior to the submission deadline.

40. The Parties shall have ten (10) days from the date written notice of the informal dispute is received by Ohio EPA's Site Coordinator to negotiate in good faith to resolve the dispute. This informal dispute resolution period may be extended by agreement of the Site Coordinators for up to twenty (20) additional days.

41. In the event that the dispute is not resolved during the informal dispute resolution period, Respondent's Site Coordinator shall notify Ohio EPA's Site Coordinator in writing by the end of the informal dispute resolution period that Respondent wishes to invoke a formal dispute pursuant to this Section. This notice shall include a brief description of the item(s) in dispute. Within twenty (20) days of receipt of the written notice invoking the formal dispute resolution procedure, the Site Coordinators shall exchange written positions, including technical rationale supporting their positions. The

Site Coordinators shall have ten (10) days from the date they have exchanged written positions to negotiate in good faith to resolve the formal dispute. This formal dispute period may be extended by agreement of the Site Coordinators for up to twenty (20) additional days.

42. In the event the dispute is not resolved in the formal dispute resolution period, Respondent's Site Coordinator shall notify Ohio EPA's Site Coordinator in writing by the end of the formal dispute resolution period whether Respondent wishes to submit final written positions to a DERR District Manager for review and resolution. The Site Coordinators shall have ten (10) days from the end of the formal dispute resolution period to submit their written positions. The DERR District Manager will resolve the dispute based upon and consistent with these Orders, the SOW, the RD/RA Work Plan, and applicable or relevant and appropriate federal and state laws. The decision of the DERR District Manager is considered final for the purposes of these Orders.

43. The pendency of a dispute under this Section shall extend only the time period for completion of the item(s) in dispute, except that upon mutual agreement of the Site Coordinators, any time period may be extended as is deemed appropriate under the circumstances. Such agreement shall not be unreasonably withheld by Ohio EPA. To the extent not dependent upon disputed portions of the submittal, elements of the Work not affected by the dispute shall be completed in accordance with the applicable schedules and time frames.

44. This Section does not apply to the Reimbursement of Costs Section of these Orders.

#### **XV. UNAVOIDABLE DELAYS**

45. Respondent shall cause all Work to be performed in accordance with applicable schedules and time frames set forth in these Orders or any approved work plan unless any such performance is prevented or delayed by an event that constitutes an unavoidable delay. For purposes of these Orders, an "unavoidable delay" shall mean an event beyond the control of Respondent that prevents or delays performance of any obligation required by these Orders and that could not be overcome by due diligence on the part of Respondent. Increased cost of compliance, among other circumstances, shall not be considered an event beyond the control of Respondent for the purposes of these Orders.

46. Respondent shall notify Ohio EPA in writing within ten (10) days after the occurrence of an event that Respondent contends is an unavoidable delay. Such written notification shall describe the anticipated length of the delay, the cause or causes of the delay, the measures taken and to be taken by Respondent to minimize

the delay, and the timetable under which these measures will be implemented. Respondent shall have the burden of demonstrating that the event constitutes an unavoidable delay.

47. If Ohio EPA does not agree that the delay has been caused by an unavoidable delay, Ohio EPA will notify the Respondent in writing of that finding and of the noncompliance with these Orders. If Ohio EPA agrees that the delay is attributable to an unavoidable delay, Ohio EPA will notify Respondent in writing of the length of the extension for the performance of the obligations affected by the unavoidable delay.

#### **XVI. REIMBURSEMENT OF COSTS**

48. Ohio EPA has incurred and continues to incur Response Costs in connection with the Site. Respondent shall reimburse Ohio EPA for all Response Costs incurred both prior to and after the effective date of these Orders.

49. Within thirty (30) days of receipt of an itemized invoice for the Response Costs incurred prior to the effective date of these Orders, Respondent shall remit a check to Ohio EPA for the full amount invoiced.

50. For Response Costs incurred after the effective date of these Orders, Ohio EPA will submit to Respondent on an annual basis an itemized invoice of its Response Costs for the previous year. Within thirty (30) days of receipt of such itemized invoice, Respondent shall remit payment for all of Ohio EPA's Response Costs for the previous year. In the event that Respondent does not remit payment of Response Costs within sixty (60) days after receipt of such invoice, Respondent shall remit payment for the unpaid balance and the interest accrued on the unpaid balance. Interest shall accrue beginning thirty (30) days from the date of the invoice until the date payment is remitted, and shall be calculated at the rate specified by ORC § 5703.47(B) or any subsequent rate adjustments.

51. Respondent shall remit payments to Ohio EPA pursuant to this Section as follows:

- a. Payment shall be made by bank check payable to "Treasurer, State of Ohio / Hazardous Waste Special Cleanup Account" and shall be forwarded to Office of Fiscal Administration, Attn: Brenda Case, Ohio EPA, Lazarus Government Center, P.O. Box 1049, Columbus, Ohio 43216-1049;
- b. A copy of the transmittal letter and check shall be sent to the Fiscal Officer, DERR, Ohio EPA, P.O. Box 1049, Columbus, Ohio 43216-1049, and to the Ohio EPA Site Coordinator; and

- c. Each payment shall identify the name and address of the party making payment, the Site name, and Ohio EPA's revenue number identified on the associated invoice.

## **XVII. ACCESS TO INFORMATION**

52. Upon request, Respondent shall provide to Ohio EPA within fourteen (14) days, copies of all documents and information within its possession or control or that of its contractors or agents relating to events or conditions at the Site including but not limited to manifests, reports, correspondence, or other documents or information related to the Work. This provision shall not be a limitation on any request for information to the Respondent by Ohio EPA made under state or federal law for information relating to events or conditions at the Site.

53. Respondent may assert a claim that documents or other information submitted to Ohio EPA pursuant to these Orders are confidential under the provisions of OAC 3745-50-30(A) or ORC § 6111.05(A). If no such claim of confidentiality accompanies the documents or other information when it is submitted to Ohio EPA, it may be made available to the public without notice to Respondent.

54. Respondent may assert that certain documents or other information are privileged under the attorney-client privilege or any other privilege recognized by state law. If Respondent makes such an assertion, it shall provide Ohio EPA with the following: (1) the title of the document or information; (2) the date of the document or information; (3) the name and title of the author of the document or information; (4) the name and title of each addressee and recipient; (5) a general description of the contents of the document or information; and (6) the privilege being asserted by Respondent.

55. For purposes of responding to Ohio EPA's request for information pursuant to these Orders, Respondent may not claim confidentiality with respect to any data or reports, including but not limited to laboratory or interpretive reports, and all sampling, analytical, and monitoring data.

56. Respondent shall preserve for the duration of these Orders and for a minimum of ten (10) years after termination of these Orders, all documents and other information within its possession or control, or within the possession or control of its contractors or agents, which in any way relate to the Work notwithstanding any document retention policy to the contrary. Respondent may preserve such documents by microfiche or other electronic or photographic device. At the conclusion of this document retention period, Respondent shall notify Ohio EPA at least sixty (60) days prior to the destruction of these documents or other information; and upon request, shall deliver such

documents and other information to Ohio EPA.

### **XVIII. PERIODIC REVIEW**

57. Respondent shall conduct studies and investigations as requested by Ohio EPA in order to permit Ohio EPA to conduct reviews as to the effectiveness of the Remedial Action at least every five (5) years as described in section 121(c) of CERCLA and any applicable regulations.

58. If Ohio EPA determines that information received, in whole or in part, during a review conducted pursuant to the Periodic Review Section of these Orders indicates that the Remedial Action is not protective of public health and safety and the environment, the Respondent shall undertake any further response actions Ohio EPA has determined are appropriate. Respondent shall submit a plan for such work to Ohio EPA for approval in accordance with the procedures set forth in the Review of Submissions Section of these Orders, within thirty (30) days of receiving a request from Ohio EPA to submit such a work plan.

59. Respondent may invoke the procedures in the Dispute Resolution Section to dispute: (1) Ohio EPA's determination that the Remedial Action is not protective of public health and safety and the environment; or (2) Ohio EPA's selection of further response actions.

### **XIX. MODIFICATIONS**

60. These Orders may be modified by agreement of the Parties. Modifications shall be in writing, signed by the authorized representative of the Respondent and by the Director, and shall be effective on the date entered in the Journal of the Director of Ohio EPA.

### **XX. INDEMNITY**

61. Respondent agrees to indemnify, save, and hold harmless Ohio EPA from any and all claims or causes of action arising from, or related to, the implementation of these Orders or to events or conditions at the Site, including any acts or omissions of Respondent, and its successors in interest. Said indemnification shall not apply to acts or omissions of the State of Ohio, its employees, agents or assigns at, on, upon, or related to the Site if said acts are negligent, performed outside the scope of employment or official responsibilities, or performed with malicious purpose, in bad faith, or in a wanton or reckless manner. Ohio EPA shall not be considered a party to and shall not be held liable under any contract entered into by Respondent in carrying out the activities pursuant to these Orders. Ohio EPA agrees to provide notice to Respondent

within thirty (30) days after receipt of any claim that may be the subject of indemnity as provided in this Section, and to cooperate with Respondent in the defense of any such claim or action against Ohio EPA.

#### **XXI. CONTRIBUTION AND AGREEMENT NOT TO REFER**

62. With respect to matters addressed in these Orders, the Parties hereto agree that these Orders constitute an administrative settlement for purposes of CERCLA sections 113(f)(2) and 113 (f)(3)(B), 42 U.S.C. § 9613(f)(2) and § 9613(f)(3)(B), pursuant to which Respondent has resolved its liability to the State, and that Respondent is entitled to contribution protection and contribution rights as of the effective date of these Orders as to any liable persons who are not parties to these Orders, as provided by CERCLA section 113(f)(2) and (f)(3)(B), 42 U.S.C. § 9613(f)(2) and (f)(3)(B), provided that Respondent complies with these Orders. The "matters addressed" in these Orders are all investigative and remedial actions taken or to be taken and all response costs incurred or to be incurred by Ohio EPA or any other person with respect to the Site, including without limitation the Work and Response Costs under these Orders.

63. During the implementation of these Orders, and provided Respondent is considered by Ohio EPA to be in compliance with these Orders, Ohio EPA agrees not to refer Respondent to the Ohio Attorney General's Office for enforcement, or take administrative enforcement action against Respondent or its successors in interest liable under Ohio law for Work required under these Orders at the Site. Upon termination of these Orders pursuant to the Termination Section, Ohio EPA agrees to not refer Respondent to the Ohio Attorney General's Office for enforcement, or take administrative enforcement action against Respondent and its successors in interest liable under Ohio law for Work required under these Orders at the Site.

#### **XXII. OTHER CLAIMS**

64. Nothing in these Orders shall constitute or be construed as a release from any claim, cause of action, or demand in law or equity against any person, firm, partnership, or corporation not a Party to these Orders, for any liability arising from, or related to, events or conditions at the Site.

#### **XXIII. RESERVATION OF RIGHTS**

65. Ohio EPA reserves the right to seek legal and/or equitable relief to enforce the terms and conditions of these Orders, including penalties against Respondent for noncompliance with these Orders. Except as provided herein, Respondent reserves any rights it may have to raise any legal or equitable defense in any action brought by Ohio EPA to enforce the terms and conditions of these Orders.

66. Ohio EPA reserves the right to terminate these Orders and/or perform all or any portion of the Work or any other measures in the event that the requirements of these Orders are not wholly complied with within the time frames required by these Orders.

67. Subject to Paragraph 63 (Agreement not to Refer), Ohio EPA reserves the right to take any action, including but not limited to any enforcement action, action to recover costs, or action to recover damages to natural resources, pursuant to any available legal authority as a result of past, present, or future violations of state or federal laws or regulations or the common law, and/or as a result of events or conditions arising from, or related to, the Site. Respondent reserves all defenses it may have to any of the actions that may be taken by Ohio EPA. Upon termination pursuant to the Termination Section of these Orders, Respondent shall have resolved its liability to Ohio EPA only for the Work and payment of Response Costs performed pursuant to these Orders.

#### **XXIV. TERMINATION**

68. Respondent's obligations under these Orders shall terminate upon Ohio EPA's written approval of Respondent's written certification to Ohio EPA that all Work required to be performed under these Orders including payment of Response Costs has been completed. The Respondent's certification shall contain the following attestation: "I certify that the information contained in or accompanying this certification is true, accurate, and complete." This certification shall be submitted by Respondent to Ohio EPA and shall be signed by a responsible official of Respondent. The termination of Respondent's obligations under these Orders shall not terminate the Respondent's obligations under the Reservation of Rights, Access to Information, Indemnity, Other Claims, Contribution and Agreement Not to Refer, and Land Use and Conveyance of Title Sections of these Orders.

#### **XXV. WAIVER AND AGREEMENT**

69. In order to resolve disputed claims, without admission of fact, violation, or liability, Respondent consents to the issuance of these Orders, and agrees to comply with these Orders.

70. Respondent hereby waives the right to appeal the issuance, terms and conditions, and service of these Orders and Respondent hereby waives any and all rights that it may have to seek administrative or judicial review of these Orders either in law or equity.

71. Notwithstanding the waiver herein of Respondent's right to appeal or seek administrative or judicial review, Ohio EPA and Respondent agree if these Orders are

appealed by any other party to the Environmental Review Appeals Commission, or any court, Respondent retains the right to intervene and participate in such appeal. In such event, Respondent shall continue to comply with these Orders notwithstanding such appeal and intervention unless these Orders are stayed, vacated or modified.

**XXVI. EFFECTIVE DATE**

72. The effective date of these Orders shall be the date these Orders are entered in the Journal of the Director of Ohio EPA.

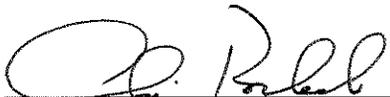
73. Upon the effective date of these Orders, the Director's Final Findings and Orders dated January 23, 1995, shall be terminated in accordance with Section XXIV of those Final Findings and Orders.

**XXVII. SIGNATORY AUTHORITY**

74. Each undersigned representative of a Party to these Orders certifies that he or she is fully authorized to enter into these Orders and to legally bind such Party to these Orders.

**IT IS SO ORDERED AND AGREED:**

**OHIO ENVIRONMENTAL PROTECTION AGENCY**



Chris Korleski, Director  
Ohio Environmental Protection Agency

DEC 16 2010

Date

**IT IS SO AGREED:**

**MARATHON OIL COMPANY**



Signature

11/3/10  
Date

J. F. Cavallero, Assistant Treasurer  
Printed Name & Title



ATTACHMENT A



State of Ohio  
Environmental Protection Agency

OHIO E.P.A.

DEC 23 2008

Division of Emergency and Remedial Response

UNRECORDED COPY

**DECISION DOCUMENT  
FOR THE REMEDIATION OF  
Marathon Oil Bulk Plant #0279  
Sandusky County, Ohio**

prepared by  
**THE OHIO ENVIRONMENTAL PROTECTION AGENCY**

---

**Date: December 2008**

Ted Strickland, Governor  
Chris Korleski, Director, *State of Ohio Environmental Protection Agency*

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

By: *Chris Korleski* Date: 12-23-08

# DECLARATION

## SITE NAME AND LOCATION

The former Marathon Oil Bulk Plant  
2416 West State Street, Fremont, Sandusky County, Ohio.

## STATEMENT OF BASIS AND PURPOSE

This Decision Document presents the selected remedial action for the former Marathon Oil Bulk Plant in Fremont, Sandusky County, Ohio, chosen in accordance with the policies of the Ohio Environmental Protection Agency, statutes and regulations of the State of Ohio, and the National Contingency Plan, 40 CFR Part 300.

## ASSESSMENT OF THE SITE

Marathon began operations at the Site in 1954 as a storage facility consisting of above ground storage tanks (ASTs) used to store leaded and unleaded gasolines, diesel fuel, heating oil and lubricating oil. These petroleum products were temporarily stored at the Site and transported by truck to retail outlets and privately owned locations. The facility ceased operations in 1989, and the facility was decommissioned in 1991.

On January 23, 1995, a Consent Order was issued by Ohio EPA to Marathon Oil Company also known as Marathon Ashland Petroleum LLC (Marathon). The Consent Order established cleanup levels for benzene, toluene, ethylbenzene, and xylenes in both soil and ground water and lead in ground water. A remedial investigation/feasibility study (RI/FS) was completed at the Marathon facility to comply with this Order.

Sources of volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) detected in soil and ground water beneath the facility appear to originate from one source area at the Site. This source area is within or near the former AST area, where seven ASTs were formerly located (referred to as the "former AST area"). The former AST area was identified prior to the RI as the only potential source of contamination. Constituents of concern (COCs) associated with the facility are benzene, toluene, ethylbenzene, and xylenes (BTEX) in both soil and ground water, and lead in ground water.

## DESCRIPTION OF THE SELECTED REMEDY

The selected remedial action includes:

- Monitored natural attenuation;
- Ground water monitoring program, including data evaluation;
- Monitoring well abandonment;

- Reporting;
- Risk management plan (RMP) for protection of construction and excavation workers from exposure to contaminated subsurface media;
- Environmental covenant to establish activity and use limitations.

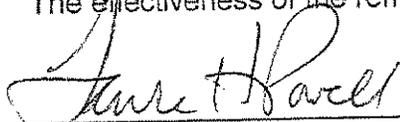
More specifically, the components of the selected remedy consist of the following: monitoring well abandonment (abandonment of monitoring wells that will not be used for the purpose of collecting ground water samples); collection of ground water samples on a semiannual basis for the first three years and on an annual basis for two more years. It will also consist of implementation of an environmental covenant, in general, to prohibit excavation of soils beneath a depth of 4 feet without implementation of an Ohio EPA-approved Risk Management Plan (RMP) to prevent human exposure to contamination in environmental media; to prohibit the removal of ground water for any use except for investigatory or remedial purposes or dewatering (i.e., no use of ground water for potable purposes); and to restrict the use of the property to only industrial / commercial uses. The activity and use limitations are intended to prevent exposure to contaminated soil or ground water at the Site.

Additionally, the existing pathway for exposure to ground water will be eliminated by properly abandoning some of the existing monitoring wells. Potential future uses of ground water will be further restricted through an environmental covenant. After five years of ground water monitoring and reporting, Ohio EPA in conjunction with Marathon will evaluate the data and determine if natural attenuation processes are continuing and if additional monitoring is warranted.

Ohio EPA finds that the selected remedy will protect public health and the environment by reducing risk to acceptable levels once the remedial action objectives have been achieved.

#### STATUTORY DETERMINATIONS

The selected remedy is protective of human health and the environment, complies with legally applicable state and federal requirements, is responsive to public participation and input and is cost-effective. The remedy uses permanent solutions to the maximum extent practicable to reduce toxicity, mobility and volume of hazardous substances at the Site. The effectiveness of the remedy will be reviewed regularly.

  
 Chris Korleski, Director of Ohio EPA

DEC 23 2008  
 Date

## TABLE OF CONTENTS

	Page Number
<b>1.0 SUMMARY OF SITE CONDITIONS</b>	
1.1 Site History	5
1.2 Summary of the Remedial Investigation	5
1.2.1 Soil Contamination	6
1.2.2 Ground Water Contamination	6
1.3 Interim or Removal Actions Taken to Date	8
1.4 Summary of Site Risks and Need for Remedial Action	8
1.4.1 Risks to Human Health	8
1.4.2 Commercial Worker	9
1.4.3 Off-Site Resident	10
1.4.4 Construction/Excavation Worker	10
1.4.5 Risk-Derived Numerical Standards	11
1.4.6 Risks to Ecological Receptors	12
<b>2.0 REMEDIAL ACTION OBJECTIVES</b>	12
<b>3.0 SUMMARY OF REMEDIAL ALTERNATIVES</b>	13
3.1 Alternative 1: No Action	13
3.2 Preferred Alternative: Monitored Natural Attenuation with Institutional Controls	13
3.3 Alternative 2: Ground Water Pump and Treat	14
3.4 Alternative 3: Dual Phase Extraction	14
3.5 Alternative 4: In-situ Bioremediation	15
3.6 Alternative 5: Monitored Natural Attenuation	15
3.7 Alternative 6: Limited Source Area Removal	15
<b>4.0 COMPARISON AND EVALUATION OF ALTERNATIVES</b>	16
4.1 Evaluation Criteria	16
4.2 Analyses of Evaluation Criteria	17
4.2.1 Overall Protection of Human Health and the Environment	17
4.2.2 Compliance with ARARs	19
4.2.3 Long-Term Effectiveness and Permanence	19
4.2.4 Reduction of Toxicity, Mobility or Volume by Treatment	19
4.2.5 Short-Term Effectiveness	20
4.2.6 Implementability	20
4.2.7 Cost	20

4.2.8 Community Acceptance	20
<b>5.0 SELECTED REMEDIAL ALTERNATIVE</b>	<b>20</b>
5.1 Environmental Covenant (Institutional Controls)	21
5.2 Monitored Natural Attenuation	22
<b>6.0 DOCUMENTATION OF SIGNIFICANT CHANGES</b>	<b>22</b>
<b>7.0 RESPONSIVENESS SUMMARY</b>	<b>22</b>
<b>8.0 GLOSSARY</b>	<b>23</b>
<b>FIGURES</b>	
Figure 1 - Site Location Map	
Figure 2 - Site Plan	

## **DECISION SUMMARY**

For the former Marathon Oil Bulk Plant  
Fremont, Sandusky County, Ohio

### **1.0 SUMMARY OF SITE CONDITIONS**

#### **1.1 Site History**

The former Marathon Oil Bulk Plant (Site) is located at 2416 West State Street, in Fremont, Sandusky County, Ohio between West State Street (Rt. 20) and the Norfolk and Southern Railroad tracks. Fremont is located in an agricultural area and has a population of about 18,000 people.

The Site encompasses some 1.5 acres of land presently unoccupied and unused. Two (2) small buildings exist on the property, a small brick office and steel warehouse.

The Site is bound by the Old Orchard Motel to the northwest, Fredrick Garden Equipment to the south and southeast, and by several large industrial facilities to the east and northeast across the Norfolk and Southern Railroad tracks. Marathon began operations at the Site in 1954, ceased operations in 1989, and decommissioned the facility in 1991. The Site has been vacant since the late 1980's when bulk storage operations ceased. The storage facility consisted of above ground storage tanks (ASTs) used to store leaded and unleaded gasolines, diesel fuel, heating oil and lubricating oil. These petroleum products were temporarily stored at the Site and transported by truck to retail outlets and privately owned locations.

On January 23, 1995, a Consent Order was issued by Ohio EPA to Marathon Oil Company also known as Marathon Ashland Petroleum LLC (Marathon). The Consent Order established cleanup levels for benzene, toluene, ethylbenzene, and xylenes in both soil and ground water and lead in ground water. A remedial investigation/feasibility study (RI/FS) was completed at the Marathon facility to comply with the Order.

The Site is zoned I-2 for "General Industrial", as are many of the properties to the east and northeast across the Norfolk and Southern Railroad tracks. Properties immediately surrounding the Site in all other directions are zoned B-2 for "General Commercial".

#### **1.2 Summary of the Remedial Investigation**

The Remedial Investigation (RI) was conducted by Marathon with oversight by Ohio EPA.

The RI included a number of tasks to identify the nature and extent of site-related chemical contaminants. The RI, Revision III, Report was updated on August 15, 2003, and approved by Ohio EPA on November 12, 2003. The tasks included sampling of soil and ground water. The data obtained from the investigation were used to conduct a baseline risk assessment and to determine the need to evaluate remedial alternatives.

The nature and extent of contamination at the former Marathon Oil Bulk Plant in each environmental medium and the contaminants of concern attributable to the Site are described below.

### 1.2.1 Soil Contamination

Sources of VOCs and semi-volatile organic compounds (SVOCs) detected in soil and ground water beneath the facility appear to originate from one source area at the Site. This source area is within or near the former AST area, where seven ASTs were formerly located (referred to as the "former AST area"). The former AST area was identified even prior to the RI as the only potential source of contamination. Constituents of concern (COCs) associated with the facility are benzene, toluene, ethylbenzene, and xylenes (BTEX) in both soil and ground water and lead in ground water.

Soil Clean Up Levels* (Per January 23, 1995 Director's Final Findings and Orders)					
Benzene	Toluene	Ethylbenzene	Xylenes	TPH	Lead
0.5	12.0	18.0	85.0	105	Background

\* Levels reported in mg/kg.

The vertical extent of contamination above Site clean up levels in the soil appears to be limited to depths of approximately six to eight feet below grade. The lateral extent of soil contamination with BTEX and/or TPH concentrations above the site-specific clean up levels is limited to the area of the former ASTs and the area immediately to the west.

### 1.2.2 Ground Water Contamination

The COCs associated with the facility are BTEX in both soil and ground water and lead in ground water. Site clean up levels for ground water are as follows:

Ground Water Clean Up Levels* (Per January 23, 1995, Director's Final Findings and Orders)					
Benzene	Toluene	Ethylbenzene	Xylenes	TPH	Lead
0.005	1.0	0.7	10.0	N/A	15.0

\* Levels reported in mg/l.

The following table notes ground water analytical results from those shallow monitoring wells within the center of the shallow ground water contaminant plume. The wells represent maximum concentrations of COCs associated with the former AST area and are screened within a silty clay unit directly overlying bedrock. Shallow ground water occurs within 2-4 feet below ground surface at the facility.

Parameter / Well	benzene (ug/l)	toluene (ug/l)	ethylbenzene (ug/l)	xylene (ug/l)	total lead (mg/l)
<b>MW-2</b>					
01/12/91	550	160	150	581	<1
07/31/91	817	163	55	163	<0.16
10/4/95	3200	930	810	5300	0.005
12/19/97	1990	60	520	2820	NS
09/15/98	2800	160	290	1480	0.013
06/28/00	1480	18	67	278	<0.003
12/13/01	2200	122	26	369	NS
<b>MW-3</b>					
01/12/91	22000	1000	14000	6700	0.003
07/31/91	70734	25367	4208	24994	0.340
10/3/95	3200	930	810	5300	0.005
12/19/97	30500	1350	16800	70800	NS
09/15/98	22000	350	1800	7830	<0.05
06/28/00	15000	258	1270	5600	<0.03
12/13/01	13000	1490	267	4000	NS
<b>MW-9R</b>					
09/15/98	3400	<250	<250	1800	<0.005
06/28/00	341	13	81	316	<0.003
12/13/01	2900	445	54	873	NS

Parameter / Well	benzene (ug/l)	toluene (ug/l)	ethylbenzene (ug/l)	xylene (ug/l)	total lead (mg/l)
<b>MW-13R</b>					
09/15/98	14000	<250	700	3100	<0.005
06/28/00	11000	149	1290	2900	<0.003
12/13/01	3500	330	50	490	NS
<b>MW-20</b>					
09/15/98	12000	530	800	6500	<0.005
06/28/00	13000	316	1410	6400	<0.003
12/13/01	7400	1080	146	1550	NS

**Notes**

NS: Not sampled.

Bold: Concentrations exceed corresponding ground water clean up level.

There are additional shallow monitoring wells (MW-18R, MW-4, MW-5, MW-14, and MW-8) further downgradient of wells MW-2 and MW-13R and the former AST area which were non-detect for BTEX during the last (December 13, 2001) sampling event at the facility. Ground water in monitoring wells MW-11 and MW-12, screened within the underlying dolomitic bedrock, has not indicated the presence of COCs during the last two sampling events. Based upon the aforementioned data, there is no indication that the contamination in the shallow saturated zone and in the shallow soils have impacted the dolomitic bedrock saturated zone.

Ohio EPA is currently satisfied that the rate, extent, and concentrations of COCs associated with the former AST area have been adequately delineated in the shallow saturated zone.

### **1.3 Interim or Removal Actions Taken to Date**

To date, the only remedial action taken at the facility was the removal of all ASTs at the Site, including: three (3) 15,000-gallon ASTs, two (2) 12,000-gallon ASTs, one (1) 20,000-gallon AST, and one (1) 6,000-gallon AST, used to store petroleum products, including leaded and unleaded gasoline, diesel fuel, heating oil, and lubricating oil. The removal of the ASTs was conducted by Marathon as part of the facility decommissioning process in 1991.

### **1.4 Summary of Site Risks and Need for Remedial Action**

The site-specific risk assessment contained a risk analysis specific to site conditions (August 2002). The site-specific risk assessment involved the elimination of potable use pathways in the commercial and residential scenarios both on- and off-Site. This was appropriate due to the demonstration that the COC-impacted upper saturated zone is not used for potable use and is incapable of producing water in volumes suitable for future potable use. Therefore, the potential human exposure pathways in the commercial and residential scenarios were only those via the indoor air pathways. The construction worker scenario evaluated all potential exposures that may occur during a hypothetical construction project.

Additionally, the site-specific risk assessment included the development of Risk-Derived Numerical Standards (RDNS) for benzene in ground water, which could serve as a COC.

#### **1.4.1 Risks to Human Health**

The purpose of a baseline risk assessment is to assess the magnitude of potential risk to human health and the environment from detected constituents in environmental media. The results provide the basis for determining whether or not remedial action is necessary.

A baseline risk assessment was conducted to assess constituents detected in soil as part of the RI. The baseline risk assessment concluded that there were limited potential

pathways of exposure to constituents detected in Site soil. Shallow soil constituents had been excavated, while deeper soil constituents were at depths that would not be encountered under normal facility operations. As part of the risk assessment, an exposure assessment was conducted to evaluate the type and magnitude of potential pathways by which humans may be exposed to constituents detected in environmental media at the Site. Pathways that are considered complete represent a potential for exposure. Incomplete pathways represent situations in which exposure is not expected. Without exposure, there is no risk of adverse health effects associated with the constituents.

Potential risks associated with direct contact with soil were evaluated for the Site. There is minimal potential exposure to site-related COCs under current site-use conditions, as explained below. Estimates of carcinogenic (cancer causing) and non-carcinogenic risks from exposure to COCs in the soils were calculated.

Cancer risk is defined as the probability of an individual developing cancer over a lifetime as a result of exposure to a potential carcinogen as compared with a person not exposed to the Site.

#### **1.4.2 Commercial Worker**

Based on all the information presented in the Revised Risk Assessment Report (August 2002), a potable use scenario where ground water from the shallow 10-foot clayey silt saturated zone is very unlikely to occur. For this reason, ground water ingestion and related potable use exposure pathways were justifiably eliminated from the site-specific commercial worker scenario. For example, dermal contact with ground water while showering will not occur since a potable well scenario has been eliminated. Based on the same reasoning, the chance of inhalation of ground water volatiles while showering is also not expected.

The exposure to volatiles from COCs in subsurface soil migrating to indoor air is theoretically higher than exposure to vapors emanating to outdoor, ambient air. The COCs can accumulate indoors as opposed to the outdoors where conditions exist that would dilute the concentration (e.g. the wind). As a result, indoor exposure (volatiles from subsurface soil migrating into buildings to adult human receptor populations) is a more conservative exposure pathway and was used in the commercial worker scenario instead of the outdoor exposure pathway (inhalation of ambient vapors from subsurface soil, to adult receptors, outdoors). The same rationale can be used to justify an indoor inhalation pathway for vapors emanating from contamination in ground water. The following pathways were therefore evaluated in the commercial worker scenario:

- a) Inhalation of vapors from ground water migrating into buildings;
- b) Inhalation of volatiles from subsurface soil migrating into buildings.

As shown in the Revised Risk Assessment Report, the total site noncarcinogenic risk for the commercial scenario was determined to be 0.0013. This risk is well below unity or one (1), the acceptable noncarcinogenic risk level. The total site carcinogenic risk was calculated to be  $1.4E-8$ , which is below the  $1E-5$  carcinogenic risk threshold.

#### 1.4.3 Off-Site Resident

The potable use of ground water from the shallow 10-foot clayey silt saturated zone is unlikely to occur. For this reason, ground water ingestion and related potable use exposure pathways are justifiably eliminated from the site-specific off-site residential worker scenario.

In contrast, exposure to volatiles from COCs in subsurface soil migrating to indoor air is theoretically higher than exposure to vapors outdoors. The vapors can accumulate indoors as opposed to the outdoors where conditions exist that would dilute the concentration (e.g. the wind). As a result, indoor exposure (volatiles from subsurface soil migrating into buildings, exposed to adult human receptors) is a more conservative exposure pathway and is used in the residential scenario instead of the outdoor exposure pathway. The same rationale can be used to justify an indoor inhalation pathway for vapors from COCs in ground water. The pathways that were evaluated in the residential scenario are listed below:

- a) Inhalation of vapors from ground water migrating into buildings;
- b) Inhalation of volatiles from subsurface soil migrating into buildings.

Since it is uncertain as to whether the COCs have migrated from the facility property to the adjacent motel property, this residential scenario evaluation served as a conservative measure of potential risk to motel occupants.

As shown in the Revised Risk Assessment Report, the total noncarcinogenic risk for the off-site residential scenario was determined to be 0.037. This risk is well below one (1), the acceptable noncarcinogenic risk level. The total carcinogenic risk was calculated to be  $1.8E-7$ , which is below the  $1E-5$  carcinogenic risk threshold.

Therefore, because the risks calculated for this scenario were determined to be below the acceptable thresholds, remediation does not need to occur based on risks to this receptor.

#### 1.4.4 Construction/Excavation Worker

There exists a potential for exposures to a construction worker at this property. The depth of the excavation pit was conservatively estimated to be 10 feet. Therefore, exposures to ground water infiltrating the trench and accumulating as surface water could potentially occur.

Exposures by direct contact with COCs in soil are also expected. The following exposure pathways were evaluated in the construction worker scenario in the Revised Risk Assessment Report (August 2002):

- a) Incidental ingestion of soil;
- b) Inhalation of volatiles from soil;
- c) Inhalation of soil particulate;
- d) Inhalation of vapors from ground water accumulating in a trench;
- e) Dermal contact with soil;
- f) Dermal contact with ground water.

As shown in the Revised Risk Assessment Report (August 2002), the total site noncarcinogenic risk for the construction worker scenario was determined to be 3.5, versus one (1). The total site carcinogenic risk was calculated to be 7.9E-6.

The carcinogenic risk does not exceed the risk threshold of 1E-5. The noncarcinogenic risk calculated in the Revised Risk Assessment Report (August 2002) exceeds the threshold of one (1). The majority of the noncarcinogenic risk associated with the construction worker scenario is from dermal exposure to benzene in ground water. Of the noncarcinogenic hazard index of 3.5 applicable to the construction worker, the resulting risk value of 3.375 is due to dermal exposure to benzene in ground water. Therefore, an RMP to be approved by Ohio EPA and implemented by Marathon is necessary to protect construction or excavation workers from exposure to contamination in environmental media.

#### **1.4.5 Risk-Derived Numerical Standards**

The current exposure point concentrations for COCs in soil do not exceed risk thresholds (carcinogenic risk of 1E-5 or non-carcinogenic hazard index of 1) for the residential, commercial worker or construction worker scenarios. Therefore, there are no COCs at concentrations above risk thresholds in soil at this Site. No risk-derived numerical standards were derived for any of the COCs found in soil.

The current exposure point concentrations for COCs detected or potentially existing in the ground water do not exceed risk thresholds (carcinogenic risk of 1E-5 or non-carcinogenic hazard index of 1) for the site-specific residential or commercial worker scenarios. However, the carcinogenic risk for the construction worker scenario was calculated to be 8.0E-6, and the noncarcinogenic risk is estimated to be 3.5. For the construction worker scenario, the carcinogenic risk does not exceed the threshold of 1E-5.

If any scenarios have a carcinogenic risk greater than 1E-5 (Ohio EPA standard) or a noncarcinogenic hazard index greater than 1, then a remedial goal must be established. The construction/excavation worker scenario has a hazard index of 3.5, which is greater than the 1.0 objective.

The only COC that contributed a non-cancer hazard index greater than 1 was benzene in ground water. Instead of calculating a risk-derived numerical standard (RDNS), the drinking water standard (MCL) of 5 ppb was selected as the remedial goal for benzene in ground water.

#### **1.4.6 Risks to Ecological Receptors**

Exposure of ecological receptors to site-related contaminants is unlikely; the impacts have not been discovered at the ground surface and the majority of the Site is paved. Additionally, the Site is located in a commercial and industrial area that does not support important ecological receptors. Furthermore, the impacted ground water is not hydraulically connected to the ditch that is situated to the north of the Site. Therefore, potential exposures to ecological receptors are expected to be minimal.

## **2.0 REMEDIAL ACTION OBJECTIVES**

As part of the remedial investigation/feasibility study (RI/FS) process, remedial action objectives (RAOs) were developed in accordance with the National Contingency Plan (NCP), 40 CFR Part 300, which was promulgated under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended, and U.S. EPA guidance. The RAOs are goals that a remedy should achieve in order to ensure the protection of human health and the environment.

The goals are designed specifically to mitigate the potential adverse effects of Site contaminants present in environmental media. For environmental media, remediation levels were developed for a range of potential residual carcinogenic risk levels (i.e., 1 in 100,000) and using a non-cancer hazard quotient (or index) of 1 and a range of potential exposed receptors.

For example, a 1 in 10,000 risk level means that if 10,000 people were chronically exposed to the carcinogens at the Site, there is a probability of one additional case of cancer. Note that these risks refer only to the incremental risks created by exposures from the Site. They do not include the risks of cancer from other non-site related factors to which people may be exposed.

Non-carcinogenic hazards are generally expressed in terms of a hazard quotient or index, which combines the concentration of chemical exposures with the toxicity of the chemicals (quotient refers to the effects of an individual chemical whereas index refers to the combined effects of all chemicals). A hazard index of 1 represents the maximum exposure at which no harmful effects are expected.

These carcinogenic risk levels refer to the increased likelihood that someone exposed to the chemical releases from the Site would develop cancer during his lifetime as compared with a person not exposed to the Site.

The RAOs were developed to ensure that remedial actions reduce the projected risk to humans to acceptable levels. Ohio EPA defines acceptable Site remediation goals for known or suspected carcinogens to be concentration levels that represent an upper bound excess lifetime cancer risk, above that of the background, to an individual as 1 in 100,000 using information on the relationship between dose and response. Non-carcinogenic risks are also to be reduced to an acceptable level, which corresponds to a hazard index of 1, at which harmful effects are generally not observed in exposed persons. In a similar manner, important ecological resources (e.g., waters of the state or endangered species) will also be protected.

The RAOs developed for this Site are identified below:

- Reduction of contaminant concentrations in Site ground water to levels less than the ground water clean up levels established for the Site; and,
- Restriction of property usage, access or exposure to contaminated media on the facility property until COC levels in soil and ground water meet the clean up levels established for the Site.

The RAOs were considered in the process for evaluating the remedial alternatives for the Site.

### **3.0 SUMMARY OF REMEDIAL ALTERNATIVES**

A total of six (6) remedial alternatives were considered in the FS. A brief description of the major features of each of the remedial alternatives follows. More detailed information about these alternatives can be found in the FS.

#### **3.1 Alternative 1: No Action**

Alternative 1 consists of No Action and has been retained in accordance with the NCP. The No Action alternative provides no measures to prevent exposure to constituents in soil or ground water beneath the Site. Under Alternative 1, the existing Site monitoring wells would remain in place. Because existing wells are required to be maintained, maintenance of the Site monitoring wells is the only activity that would be conducted under Alternative 1.

#### **3.2 Preferred Alternative (Alternative 7): Monitored Natural Attenuation with Institutional Controls**

The preferred alternative (Alternative 7 as described in the Preferred Plan) consists of Alternative 5 (monitored natural attenuation) along with several activity and use limitations. The preferred alternative is described below:

- a. Ground water samples will be collected from shallow monitoring wells MW-3, MW-5, MW-8, MW-13R, and MW-18R and bedrock well MW-12 on a semiannual basis

for three years. After three years, ground water samples shall be collected on an annual basis for two more years. After the fifth year, Ohio EPA in conjunction with Marathon shall evaluate the data and determine if natural attenuation processes are continuing and if additional monitoring is warranted.

In addition, a ground water risk assessment will be performed to determine if the remedial alternative is effective in reducing concentrations of COCs, namely, benzene, to a level below the standard.

- b. Prohibit excavation on the property at depths below four feet of the ground surface except where an Ohio EPA-approved RMP is implemented to protect construction or excavation workers from exposure to BETX. The implementation of needed human health and safety precautions will prevent human contact with contamination at concentrations above the risk-based numerical standard for benzene in ground water.
- c. Marathon and Ohio EPA would enter into an environmental covenant for the Site, pursuant to ORC 5301.80 thru 5301.92, to prohibit the extraction or use of ground water except for certain purposes, such as investigatory, remedial or trench dewatering purposes (i.e., no use of ground water for potable purposes), to restrict the use of the property to industrial/commercial purposes, and to prohibit excavation at the property at depths below four feet below land surface, without implementation of environmental protections for excavation or construction workers, who may be exposed to contamination, as noted above.

### **3.3 Alternative 2: Ground Water Pump and Treat**

Ground water pump and treat technology involves the extraction and treatment of benzene-impacted ground water. Typically, submersible electric pumps are used to extract ground water from one or more extraction wells and the resulting liquid process stream is treated to discharge standards. A system of this type would not be effective due to the low hydraulic conductivity and ground water yield in the shallow ground water zone at this site.

In order to implement a pump and treat system, a pilot study would first need to be conducted. If this technology was deemed appropriate after completion of the pilot study, several months would be required for design, installation and permitting before remediation could begin.

### **3.4 Alternative 3: Dual Phase Extraction**

Dual Phase Extraction (DPE) involves recovery of total fluids and soil vapor using induced vacuum. DPE systems typically use a blower to induce a vacuum in the recovery well/s, which enables recovery of fluids and soil vapor. Free product and water are segregated for treatment or containerization using mechanical separation, and the vapor phase is treated and discharged to the atmosphere. The effectiveness of this technology

would be reduced due to the shallow depth to impacted ground water (typically 1.5 to 4.0 feet below ground surface), and the inability of native soils to comprise an effective air permeability barrier. These factors would cause vacuum short-circuiting and result in unacceptably small radii of influence at recovery wells. As with pump and treat, a pilot study would be required prior to installing the system.

### **3.5 Alternative 4: In-situ Bioremediation**

In-situ bioremediation involves the introduction of one or more commercially available bioremediation products into the subsurface in order to stimulate existing attenuation processes by optimizing subsurface conditions that regulate in-situ bioremediation. This technology would be relatively ineffective at this Site due to low soil permeability. In order to implement this technology, a bench scale study or pilot study would need to be conducted. This technology would also require the installation of an extensive network of closely spaced injection points.

### **3.6 Alternative 5: Monitored Natural Attenuation**

Natural Attenuation utilizes the natural assimilative capacity of impacted media to reduce COC concentrations to below site action levels. Natural attenuation combines many chemical, physical, and biological processes that cause reduction of mass in soil and ground water over time.

Dissolved phase plumes are typically referred to as expanding, stable, or shrinking, depending on the geometry of the plume through time. As discussed above, significant natural attenuation is occurring at this Site, and the dissolved phase benzene plume is characterized as stable to shrinking.

At this Site, monitoring would consist of periodic analysis of ground water for benzene, and evaluation of laboratory data to determine if natural attenuation continues to meet the remediation objectives.

### **3.7 Alternative 6: Limited Source Area Removal**

Limited source area removal would involve excavation and disposal of soil within areas with the highest concentrations of benzene in ground water in order to remove the source of mass loading to ground water and speed up natural attenuation of contaminants. The excavation would be backfilled to grade with clean aggregate, and select monitoring wells formerly present in the excavation area would be re-installed.

## **4.0 COMPARISON AND EVALUATION OF ALTERNATIVES**

### **4.1 Evaluation Criteria**

In selecting a remedy for a contaminated Site, Ohio EPA considers the following eight evaluation criteria as outlined in U.S. EPA's NCP promulgated under CERCLA (40 CFR 300.430):

1. Overall protection of human health and the environment – Remedial alternatives shall be evaluated to determine whether they can adequately protect human health and the environment, in both the short- and long-term, from unacceptable risks posed by contaminants present at the Site.
2. Compliance with all applicable or relevant and appropriate requirements (ARARs) – Remedial alternatives shall be evaluated to determine whether a remedy will meet all of the ARARs of state and federal environmental laws.
3. Long-term effectiveness and permanence – Remedial alternatives shall be evaluated to determine the ability of a remedy to maintain reliable protection of human health and the environment over time once pollution has been abated and RAOs have been met. This includes assessment of the residual risks remaining from untreated wastes, and the adequacy and reliability of controls such as containment systems and institutional controls.
4. Reduction of toxicity, mobility, or volume through treatment – Remedial alternatives shall be evaluated to determine the degree to which recycling or treatment are employed to reduce toxicity, mobility, or volume, including how treatment is used to address the principal threats posed by the Site.
5. Short-term effectiveness – Remedial alternatives shall be evaluated to determine the following: (1) Short-term risks that might be posed to the community during implementation of an alternative; (2) Potential impacts on workers during remedial action and the effectiveness and reliability of protective measures; (3) Potential environmental impacts of the remedial action and the effectiveness and reliability of mitigative measures during implementation; and (4) Time until protection is achieved.
6. Implementability – Remedial alternatives shall be evaluated to determine the ease or difficulty of implementation and shall include the following as appropriate: (1) Technical difficulties and unknowns associated with the construction and operation of a technology, the reliability of the technology, ease of undertaking additional remedial actions, and the ability to monitor the effectiveness of the remedy;  
  
(2) Administrative feasibility, including activities needed to coordinate with other offices and agencies and the ability and time required to obtain any necessary approvals and permits from other agencies (for off-site actions); and (3) Availability of services and materials, including the availability of adequate off-site treatment, storage capacity, and disposal capacity and services; the availability of necessary equipment and specialists, and provisions to ensure any necessary additional

resources; the availability of services and materials; and the availability of prospective technologies.

7. Cost – Remedial alternatives shall evaluate costs and shall include the following: (1) Capital costs, including both direct and indirect costs; (2) Annual operation and maintenance (O&M) costs; and (3) Net present value of capital and O&M costs.

The cost estimates include only the direct costs of implementing an alternative at the Site and do not include other costs, such as damage to human health or the environment associated with an alternative. The cost estimates are based on figures provided by the Feasibility Study.

8. Community acceptance -Remedial alternatives shall be evaluated to determine which of their components interested persons in the community support, have reservations about, or oppose.

#### **4.2 Analysis of Evaluation Criteria**

This section looks at how each of the evaluation criteria is applied to each of the remedial alternatives and compares how the alternatives achieve the criteria. Evaluation Criteria 1 and 2 are threshold criteria required for acceptance of an alternative that has accomplished the goal of protecting human health and the environment and complied with the law. Any acceptable remedy must comply with both of these criteria. Evaluation Criteria 3 through 7 are the balancing criteria for selecting the best remedial alternative. Evaluation Criteria 8, community acceptance, will be determined, in part, by written responses received during the public comment period and statements offered at the public meeting.

##### **4.2.1 Overall Protection of Human Health and the Environment**

The assessment of cancer risks and non-cancer hazards to human receptors requires that exposure pathways be identified and the risks and hazards of each pathway be numerically estimated.

As shown in the Revised Risk Assessment Report (August 2002), the total site noncarcinogenic risk for the construction worker scenario was determined to be 3.5. The total site carcinogenic risk was calculated to be 7.9E-6. The carcinogenic risk does not exceed the risk threshold of 1E-5. The noncarcinogenic risk calculated in the Revised Risk Assessment Report (August 2002) exceeds the threshold of one (1).

The exposure pathway for direct contact with constituents in soil would only be complete if excavation of greater than four feet below land surface was conducted at the Site. Therefore, a RMP approved by Ohio EPA would be required prior to excavation activities to prevent exposure to contaminants at the Site during the excavation activities. Adverse impacts to ecological receptors are identified as a hazard quotient and, when appropriate, a hazard index value greater than 1.0. The exposure pathway for ground

water exposure of ecological receptors to site-related contaminants is unlikely, as there are few complete exposure pathways.

#### **Alternative 1: No Action**

The No Action alternative is not protective of human health or the environment in that it provides no means to prevent access to constituents in ground water beneath the Site.

#### **Alternative 2: Ground Water Pump and Treat**

Alternative 2 does not provide overall protection of human health and the environment. Ground Water Pump and Treat system would not be effective due to the low hydraulic conductivity and ground water yield at this site. In order to implement a pump and treat system, a pilot study would first need to be conducted. After completion of the pilot study, several months would be required for design, installation and permitting before remediation could begin. This Alternative does not eliminate current and potential future access to soil and current access to constituents in ground water beneath the Site. It does not prevent future potential exposure to ground water because it does not incorporate a use restriction to prohibit use of ground water.

#### **Alternative 3: Dual Phase Extraction**

Alternative 3 does not provide overall protection of human health and the environment. The effectiveness of Dual Phase Extraction technology would be reduced to the shallow depth to impacted ground water (typically 1.5 to 4.0 feet below ground surface), and the inability of native soils to comprise an effective air permeability barrier. These factors would cause vacuum short-circuiting and result in unacceptably small radii of influence at recovery wells. As with pump and treat, a pilot study would be required prior to installing the system.

#### **Alternative 4: In-situ Bioremediation**

Alternative 4 would be relatively ineffective at this site due to low soil permeability. In order to implement this technology a bench scale study or pilot study would need to be conducted. This technology would also require the installation of an extensive network of closely spaced injection points. This technology is not recommended for use at this site due to its technical limitations.

#### **Alternative 5: Monitored Natural Attenuation**

Monitored Natural Attenuation at this site would consist of periodic analysis of ground water for benzene, and evaluation of laboratory data to determine if natural attenuation continues to meet the remediation objectives. Natural Attenuation is not recommended for use as stand-alone alternative because it provides no means to prevent access to constituents in ground water beneath the Site. However, Monitored Natural Attenuation can be utilized with other alternatives to be a part of a remedial alternative.

## **Alternative 6: Limited Source Area Removal**

Alternative 6 would be relatively ineffective in eliminating exposure to contaminated ground water. Furthermore, Alternative 6 is not recommended for use as stand-alone alternative because it provides no means to prevent access to constituents in ground water beneath the Site and does not restrict the Site to commercial/industrial usage.

## **Preferred Alternative (Alternative 7): Monitored Natural Attenuation with Institutional Controls**

The Preferred Alternative is effective because it would eliminate some of the existing wells which will prevent exposure to Site contaminated ground water. The preferred alternative, as modified with respect to the future use of the property, will prevent exposure to contaminated soil and prohibit the use of ground water. Additionally, ground water monitoring will continue to monitor natural attenuation.

As noted in Section 4.2, Evaluation Criteria 1 (Overall Protection of Human Health and the Environment) and 2 (Compliance with ARARs) are threshold criteria required for acceptance of an alternative that has accomplished the goal of protecting human health and the environment and complied with the law. Any acceptable remedy must comply with both of these criteria. As Alternative 1 is not protective, Alternatives 2, 3, and 4 are not technically effective in achieving the RAOs, and Alternatives 5 and 6 provide only limited protection on their own, these Alternatives have not been carried forward in the evaluation under this Decision Document.

### **4.2.2 Compliance with ARARs**

The Preferred Alternative complies with all identified ARARs.

### **4.2.3 Long-Term Effectiveness and Permanence**

The Preferred Alternative provides the most long-term effectiveness and permanence because it uses an environmental covenant to restrict the Site to commercial/industrial usage, prevent excavation worker exposure to contaminated soil or ground water through implementation of an Ohio EPA-approved RMP, and prohibit the use of ground water for any potable purposes. Additionally, the recommended ground water monitoring will continue to provide data that will document that natural attenuation is effective at reducing the contamination to achieve the standard.

### **4.2.4 Reduction of Toxicity, Mobility or Volume by Treatment**

The Preferred Alternative complies with this criterion by way of the natural attenuation processes occurring in ground water beneath the Site, the toxicity and volume of VOCs in ground water are being reduced. The further monitoring of the processes will evaluate whether the processes are continuing in an effective manner to achieve the standard.

#### 4.2.5 Short-Term Effectiveness

The Preferred Alternative has short-term effectiveness because it restricts the Site to commercial/industrial usage, eliminates the existing monitoring wells, and prohibits the future use of ground water through an activity and use limitation.

Additionally, a separate activity and use limitation would restrict access and protect construction or excavation workers from exposure to constituents in the subsurface by prohibiting excavations below four feet in depth without implementation of an RMP that has been approved by Ohio EPA.

#### 4.2.6 Implementability

The Preferred Alternative should be readily implementable because it requires some of the existing monitoring wells at the Site be properly abandoned. The Preferred Alternative also uses an environmental covenant to restrict the Site to commercial/industrial usage, prevent excavation worker exposures to the subsurface contamination through implementation of an Ohio EPA-approved RMP, and prohibit the use of ground water for potable uses. Additionally, ground water monitoring will continue to monitor natural attenuation.

#### 4.2.7 Cost

Cost estimate to implement the Preferred Alternative is provided below.

Alternative	Capital Cost	Annual Short-term O&M	Annual Long-term O&M	Present Worth
Alternative 7 <b>Monitored Natural Attenuation with Institutional Controls</b>	\$ 5,000 (for environmental covenant development)	\$ 30,000 (MNA)	\$ 15,000 (MNA)	<b>\$ 50,000</b>

#### 4.2.8 Community Acceptance

Ohio EPA has received no comments from any interested parties. Specifically, no comments were received during the public comment period extending until August 17, 2008, nor at the public meeting held on July 17, 2008, at the Birchard Public Library in Fremont, Ohio.

### 5.0 SELECTED REMEDIAL ALTERNATIVE

Ohio EPA has selected the Alternative 7 (Monitored Natural Attenuation with Institutional Controls) as its Preferred Alternative. Primarily, remedial actions are required to provide overall protection of public health and the environment and compliance with Federal and State ARARs. Additionally, a selected remedial action must be cost-effective and utilize innovative technologies to the maximum extent practicable.

Based on these factors, Alternative 7 is the alternative that satisfies the legal requirements applicable to the Site. Alternative 7 consists of the following elements: Institutional Controls and Monitored Natural Attenuation.

### **5.1 Environmental Covenant (Institutional Controls)**

With an RAO of restricting property usage, access and exposure to contaminated media on the property until contaminant levels in soil and ground water meet site clean up levels, an environmental covenant will be established to: prohibit the extraction or use of ground water except for certain purposes, such as investigatory, remedial or trench dewatering purposes (i.e., no use of ground water for potable purposes); restrict the property to commercial/industrial usage only; and prohibit excavation on the property at depths below four feet without implementation of a risk management plan (RMP) approved by Ohio EPA.

#### Performance Standards

Enter into an environmental covenant that contains the following activity and use limitations:

- Prohibit the installation of any water supply wells or the withdrawal of ground water for potable use at the property (while allowing for continued assessment and remediation of the ground water, and site dewatering during any excavation activities);
- Restrict the property to commercial/industrial usage only; and
- Prohibit excavation on the facility property at depths below four (4) feet without implementation of an Ohio EPA-approved RMP (to protect construction workers from exposure to contamination in subsurface media).

The performance standard shall be achieved upon the recording of the environmental covenant in the same manner as a deed for the property at the Sandusky County Recorder's Office, its continued enforcement, and through submittal to Ohio EPA of a copy of the recorded environmental covenant.

The environmental covenant shall be recorded prior to the deadline established in the anticipated Remedial Design/Remedial Action Order.

### **5.2 Monitored Natural Attenuation**

With an RAO of reducing COC concentrations in ground water to clean up levels for the Site, ground water samples will be collected from shallow monitoring wells MW-3, MW-5, MW-8, MW-13R, and MW-18R and bedrock well MW-12 on a semiannual basis for three years. After three years, ground water samples shall be collected on an annual basis for 2 additional years. After the fifth year, Ohio EPA shall evaluate the monitoring data and determine if natural attenuation processes are continuing and if additional monitoring is warranted.

Natural attenuation utilizes the natural assimilative capacity of impacted media to reduce COC concentrations to below site action levels. Natural attenuation combines many chemical, physical, and biological processes that cause reduction of mass in soil and ground water over time.

Dissolved phase plumes are typically referred to as expanding, stable, or shrinking, depending on the geometry of the plume through time. As discussed above, and in the RI and FS reports, significant natural attenuation is occurring at this site, and the dissolved phase benzene plume is characterized as stable to shrinking.

#### Performance Standards

- Conduct and report on periodic sampling and analysis of ground water per an Ohio EPA-approved sampling and analysis plan.
- Demonstrate via periodic ground water monitoring that natural attenuation of COCs in ground water is continuing and that the RAOs will be achieved by the conclusion of the 5 year monitoring period, or as otherwise agreed upon by Ohio EPA.

## **6.0 DOCUMENTATION OF SIGNIFICANT CHANGES**

Ohio EPA received no comments during the public meeting and public comment period. Therefore, no changes were made to the selected remedial alternative as presented in the Preferred Plan.

## **7.0 RESPONSIVENESS SUMMARY**

Ohio EPA did not receive any comments during the public meeting and public comment period. Therefore, no changes were made to the selected remedial alternative as presented in the Preferred Plan.

## 8.0 GLOSSARY

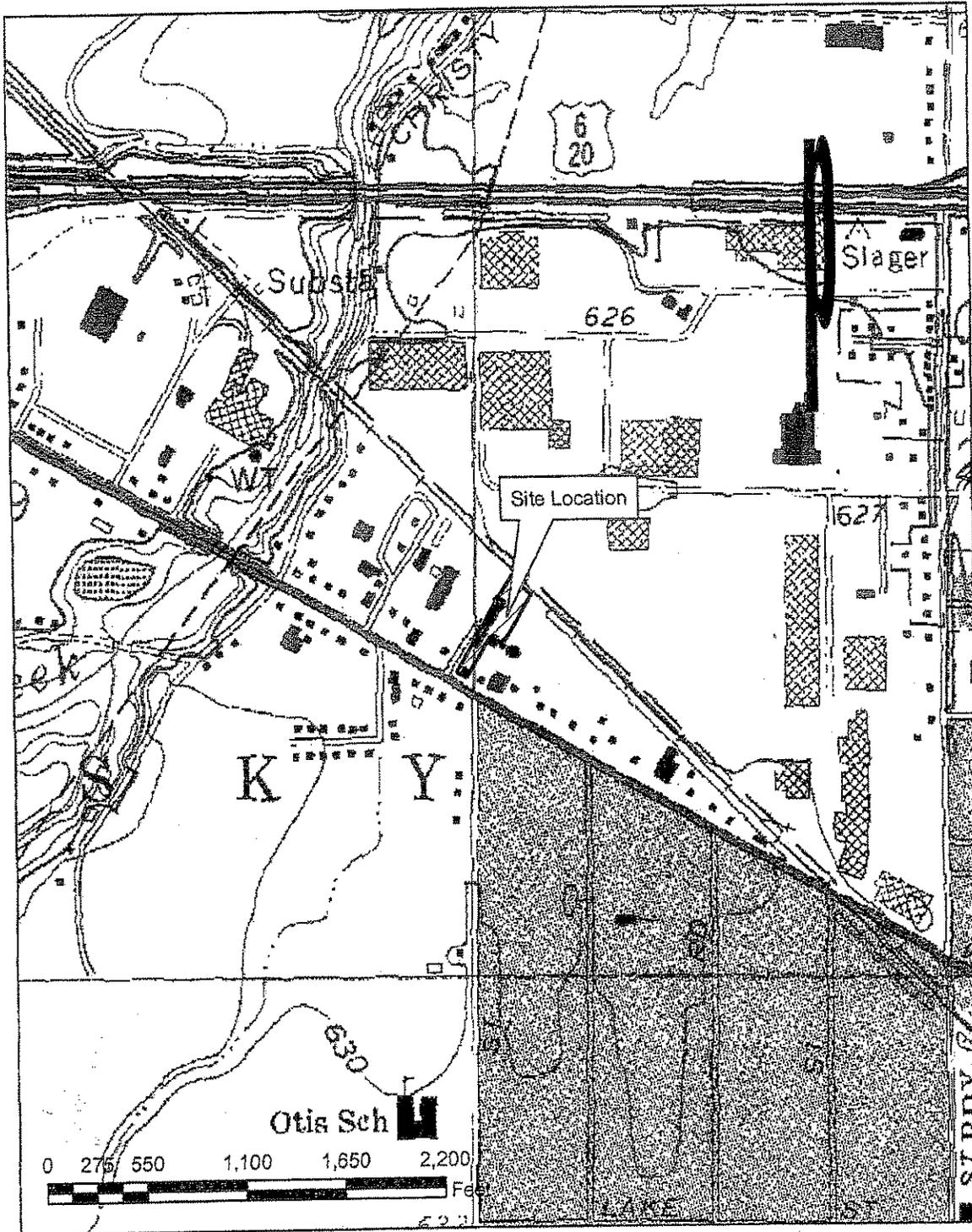
Aquifer -	An underground geological formation capable of holding and yielding water.
ARARs -	Applicable or relevant and appropriate requirements. Those rules including state and federal laws which strictly apply to remedial activities at the site, or those rules whose requirements would help achieve the remedial goals for the site.
Baseline Risk Assessment -	An evaluation of the risks to humans and the environment posed by a site.
BETX -	Benzene, ethylbenzene, toluene and xylenes
Carcinogen -	A chemical that causes cancer.
CERCLA -	Comprehensive Environmental Response, Compensation and Liability Act. A federal law that regulates cleanup of hazardous substances sites under the U.S. EPA Superfund Program.
Decision Document -	A statement issued by the Ohio EPA giving the Director's selected remedy for a site and the reasons for its selection.
Ecological Receptor -	Animals or plant life exposed to chemicals released from a site.
Environmental Covenant-	A servitude arising under an environmental response project that imposes activity and use limitations and that meets the requirements established in section 5301.82 of the Ohio Revised Code.
Exposure Pathway -	Route by which a chemical is transported from the site to a human or ecological receptor.
Feasibility Study -	A study conducted to ensure that appropriate remedial alternatives are developed and evaluated such that relevant information concerning the remedial action options can be presented to a decision-maker and an appropriate remedy selected.
Hazardous Substance -	A chemical that may cause harm to humans or the environment.

Hazardous Waste -	A waste product, listed or defined by the RCRA, which may cause harm to humans or the environment.
Human Receptor -	A person exposed to chemicals released from a site.
MCL -	Maximum Contaminant Level. The highest level of a contaminant that is allowed in drinking water. The level is established by U.S. EPA.
NCP -	National Oil and Hazardous Substances Pollution Contingency Plan, codified at 40 C.F.R. Part 300 (1990), as amended. A framework for remediation of hazardous substances sites specified in CERCLA.
O&M -	Operation and Maintenance. Long-term measures taken at a site, after the initial remedial actions, to assure that a remedy remains protective of human health and the environment.
Preferred Plan -	The plan that evaluates the preferred remedial alternatives presented in the FS and identifies the preferred remedial alternative selected by Ohio EPA to remediate the site in a manner that best satisfies the evaluation criteria.
RCRA -	Resource Conservation and Recovery Act of 1976, codified at 42 U.S.C. 6901 et seq., as amended. A federal law that regulates the handling of hazardous wastes.
Remedial Action Objectives (RAOs) -	Specific goals of the remedy for reducing risks posed by the site.
Remedial Investigation -	Those activities undertaken by Respondent to determine the nature and extent of the contamination at the Site caused by disposal, discharge, or release of waste materials.
Responsiveness Summary-	A summary of all comments received during the public comment period concerning the Preferred Plan and Ohio EPA's response to all issues raised in those comments.
Water Quality Criteria -	Chemical and thermal standards that define whether a body of surface water is unacceptably contaminated. These standards are intended to ensure that a body of water is safe for fishing, swimming and as a drinking water source.

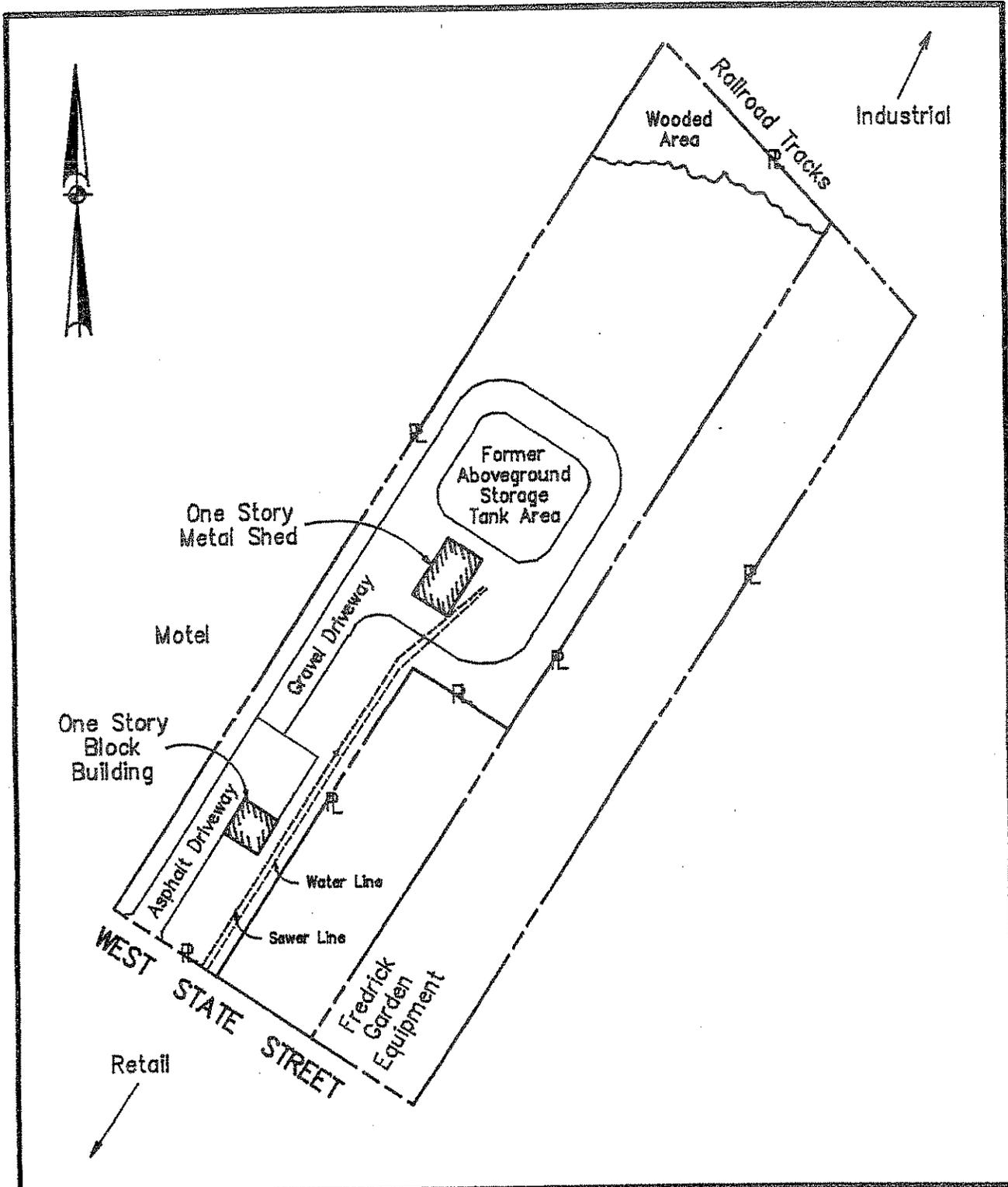
- PCE - Tetrachloroethene or Perchloroethylene. A common industrial solvent and cleaner, often used for dry cleaning.
- SVOCs - Semivolatile organic compounds, also known as "SVOCs," are substances that contain carbon and various proportions of other elements found in VOCs. The main difference is that these compounds evaporate less readily.
- TAL - Target Analyte List. The TAL was originally derived from the U.S. EPA Priority Pollutant List under CERCLA. A fact sheet on the total metals, dissolved metals and cyanide can be obtained from the U.S. EPA Contract Laboratory Program.
- VOCs - Volatile organic compounds, also known as "VOCs," are substances containing carbon and different proportions of other elements such as hydrogen, oxygen, fluorine, chlorine, bromine, sulfur, or nitrogen. VOCs are most commonly used as solvents such as paint thinners, lacquer thinner, degreasers, and dry cleaning fluids.

## Figures

# Site Location Map



# Marathon Bulk Plant



**SITE PLAN**  
**RI/FS WORK PLAN**  
**FORMER MARATHON BULK PLANT NO. 279**  
**2416 WEST STATE STREET**  
**FREMONT, OHIO**

PROJECT NO. 22-07-94-47644	
SCALE 1 in. ~ 100 ft.	
FIGURE NO. 2	
DATE 01/24/95	APPROVED BY <i>[Signature]</i>



# ATTACHMENT B

## STATE OF OHIO MODEL STATEMENT OF WORK FOR REMEDIAL DESIGN AND REMEDIAL ACTION AT:

Former Marathon Oil Bulk Plant #0279  
2300 West State Street  
Fremont, Sandusky County, Ohio

### 1.0 PURPOSE

The purpose of this Remedial Design/Remedial Action Statement of Work (RD/RA SOW) is to define the procedures the Respondent(s) shall follow in designing and implementing the selected remedy for the Former Marathon Oil Bulk Plant #0279 (Site) as described in this SOW and the Director's Final Findings and Orders (Orders) to which it is attached. The Division of Emergency and Remedial Response (DERR) documented the selection of a remedy for the Site in a Decision Document dated December 23, 2008. The intent of the remedy is to protect the public health and/or the environment from the actual or potential adverse effects of the contaminants discovered at and related to the Site. Further guidance for performing the RD/RA work tasks may be found in the U.S. EPA Superfund Remedial Design and Remedial Action Guidance document (OSWER Directive 9355.0-4A). All applicable regulatory requirements pertaining to the selected remedy and RD/RA activities shall be followed.

The Ohio EPA shall provide oversight of the Respondent's activities throughout the RD/RA. The Respondent(s) shall support the Ohio EPA's initiatives and conduct of activities related to the implementation of oversight activities.

### 2.0 DESCRIPTION OF THE REMEDIAL ACTION/ PERFORMANCE STANDARDS

Performance standards and specifications of the major components of the remedial action to be designed and implemented by the Respondent(s) are described below. Performance standards shall include cleanup standards, standards of control, quality criteria, and other requirements, criteria or limitations as established in the Decision Document, this SOW and the Orders to which it is attached.

See Appendix A, Decision Document, for description of the remedial action components and associated performance standards.

### **3.0 SCOPE OF THE REMEDIAL DESIGN AND REMEDIAL ACTION**

The Remedial Design/Remedial Action (RD/RA) shall consist of seven principal tasks described below. Each task shall be completed and required documentation shall be submitted in accordance with the schedules established in the Orders and in the RD/RA Work Plan approved by Ohio EPA. All work related to this SOW shall be performed by the Respondent(s) in a manner consistent with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) as amended, 42 USC 9601, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. Part 300 (1990), and other applicable federal and state rules and regulations.

#### Task Summary

- 3.1 Task I: RD/RA Work Plan
  - 3.1.1 Site Access
  - 3.1.2 Pre-Design Studies Plan
  - 3.1.3 Regulatory Compliance Plan
  - 3.1.4 Natural Resource Damage Assessment
- 3.2 Task II: Pre-Design Studies
- 3.3 Task III: Remedial Design
  - 3.3.1 General Requirements for Plans and Specifications
  - 3.3.2 Design Phases
  - 3.3.3 Estimated Cost for Remedial Action
  - 3.3.4 Remedial Action Implementation Plan
  - 3.3.5 Community Relations Support
- 3.4 Task IV: Remedial Action Construction
  - 3.4.1 Preconstruction Inspection and Conference
  - 3.4.2 Design Changes During Construction
  - 3.4.3 Remedial Action Construction Completion and Acceptance
  - 3.4.4 Community Relations Support
- 3.5 Task V: Five-Year Reviews
- 3.6 Task VI: Operation and Maintenance/Performance Monitoring
  - 3.6.1 Reporting During Operation and Maintenance
  - 3.6.2 Completion of Remedial Action Report
- 3.7 Task VII: Reporting Requirements
  - 3.7.1 Monthly Progress Reports during RD and RA Construction
  - 3.7.2 Summary of Reports and Submittals

#### **3.1 TASK I: RD/RA WORK PLAN**

The Respondent(s) shall submit a work plan for the Remedial Design and Remedial Action (RD/RA) to the Ohio EPA for review and approval, which presents the overall strategy for performing the design, construction, operation, maintenance and monitoring of the Remedial Action (RA). The work plan shall provide a detailed discussion of the specific tasks necessary to implement the selected remedy, including a description of the technical

approach, personnel requirements, plans, specifications, permit requirements and other reports described in this SOW.

The work plan shall document the responsibilities and authority of all organizations and key personnel involved with the development and implementation of the RD/RA. The qualifications of key personnel directing the RD/RA tasks, including contractor personnel, shall be described.

The work plan shall include schedules fixed in real time for the development of the (RD) and implementation of the RA, including milestones for the submittal of the document packages for Ohio EPA review and meetings for discussion of the submittals. The RD/RA Work Plan must be reviewed and approved by the Ohio EPA prior to initiation of field activities or proceeding with the RD.

Specific requirements to be addressed by the RD/RA Work Plan are described in the following sections.

### **3.1.1 Site Access**

All site access agreements necessary to implement the RD and RA shall be obtained by the Respondent(s) prior to the initiation of any activities to be conducted under the Work Plan. Site access agreements shall extend for the duration of all remedial activities and shall include allowances for all operation and maintenance considerations and State oversight activities. The work plan shall describe the activities necessary to satisfy these requirements.

### **3.1.2 Pre-Design Studies Plan**

The Respondent(s) shall develop a plan to complete the pre-design studies, which are required to design and fully implement the remedial action.

The Pre-Design Studies Plan (PDSP), as a component of the RD/RA Work Plan, will identify and describe, in detail, activities necessary to conduct the pre-design studies. The plan shall include sufficient sampling, testing, and analyses to develop quantitative performance, cost and design data for the selected remedy.

At the discretion of the Site Coordinator for the Ohio EPA, the PDSP may be submitted for review and comment under separate cover from the work plan in accordance with the schedule established in the Orders. The PDSP must be approved by the Ohio EPA prior to initiation of associated field activities or treatability studies.

The Pre-Design Studies Plan shall include, as necessary, a Field Sampling Plan (FSP), a Quality Assurance Project Plan (QAPP) and a Health and Safety Plan (HSP). Section 4.0 of this SOW describes the required content of supporting plans

such as the Field Sampling Plans, Quality Assurance Project Plans and Health and Safety Plans.

Prior to development of the Pre-Design Studies Plan, there shall be a meeting of the Site Coordinator for the Ohio EPA and the Project Manager representing the Respondent(s) to discuss scope, objectives, quality assurance and quality control issues, resources, reporting, communication channels, schedule, and roles of personnel involved. Other personnel representing the Respondent(s) and Ohio EPA, who may be needed to fully discuss the issues involved, should also participate in this meeting. Guidance documents to be consulted in developing the Pre-Design Studies Plan include U.S. EPA's Guidance for Conducting Remedial Investigations and Feasibility Studies (EPA/540/G-89/004, October 1988) and Guide for Conducting Treatability Studies Under CERCLA (EPA/540/2-89/058, December 1989), as well as others listed in Appendix A, attached to this SOW.

The pre-design studies will be conducted as described under Task II.

### **3.1.3 Regulatory Compliance Plan**

It shall be the responsibility of the Respondent(s) to ensure compliance with all applicable regulatory state and federal requirements for the RD/RA activities to be conducted at the site. The Respondent(s) shall develop a plan to identify and to satisfy all applicable state and federal laws and regulations for the RD/RA. The plan will include the following information:

- 1) Permitting authorities
- 2) Permits required to conduct RD/RA activities
- 3) Time required by the permitting agency(s) to process permit applications
- 4) Identification of all necessary forms
- 5) Schedule for submittal of applications
- 6) All monitoring and/or compliance testing requirements

The Respondent(s) shall identify in the plan any inconsistencies between any regulatory requirements or permits that may affect any of the work required. The plan shall also include an analysis of the possible effects such inconsistencies may have on the remedial action, recommendations, and supporting rationale for the recommendations. The Regulatory Compliance Plan shall be submitted to the Ohio EPA as part of the RD/RA Work Plan.

### **3.1.4 Natural Resource Damage Assessment**

If natural resources are or may be injured as a result of a release, the Respondent(s) shall ensure that the trustees of the effected natural resources are notified. The trustees will initiate appropriate actions and provide input into the RD/RA in order to minimize or mitigate natural resource damages in accordance

with the NCP and 43 CFR part 11. Trustees define "injury" as "a measurable adverse change, either long- or short-term, in the chemical or physical quality of a natural resource resulting either directly or indirectly from exposure to a discharge of oil or release of a hazardous substance. The Respondent(s) shall make available to the trustees all necessary information and documentation needed to assess actual or potential natural resource injuries.

### **3.2 TASK II: PRE-DESIGN STUDIES**

The Respondent(s) shall schedule and detail the work necessary to accomplish the pre-design studies described in the Pre-Design Studies Plan submitted with the RD/RA Work Plan. The requirements of this section shall apply to studies undertaken to refine the understanding of the nature and extent of contamination at the site, as well as to bench and pilot scale treatability studies.

For any such studies required, the Respondent(s) shall furnish all services, including necessary field work, materials, supplies, labor, equipment, supervision, and data interpretation. Sufficient sampling, testing, and analyses shall be performed to provide the technical data necessary to support the remedial design effort with the goal of optimizing the required treatment and/or disposal operations and systems.

The Respondent(s) shall submit a draft Pre-Design Studies report for Ohio EPA's review and comment when the investigation and/or testing required by the Pre-Design Studies Plan is complete. The draft report shall present investigation/testing data and results along with an analysis of the implications those results have on the RD/RA, including a cost analysis, when appropriate. The draft report shall be submitted prior to the preliminary design submittal in accordance with the schedule specified in the Orders and approved RD/RA Work Plan. After making any required corrections or modifications based on Ohio EPA comments, the Respondent(s) shall submit the final report with the Preliminary Design Report, unless otherwise specified in the approved RD/RA Work Plan.

#### **3.2.1. Reporting Requirements for Groundwater data.**

The Respondent(s) shall submit all groundwater data and monitoring well construction data. The Respondent(s) shall implement a groundwater monitoring program as identified in the RD workplan or as required by Ohio EPA. Respondent(s) shall submit all groundwater data and monitoring well construction data on a 3.5 inch diskette using the most current version of the U.S. EPA developed Ground Water Information Tracking System (GRITS) database software. GRITS is free software, and can be obtained by calling EPA office of Research and Development (ORD), at 513-569-7562, ask for Document # EPA/625/11-91/002. Respondent(s) shall submit one copy of each round of sampling data on printed paper in addition to the diskette format. The printed copy will be the official copy of the data.

### 3.3 TASK III: REMEDIAL DESIGN

The Respondent(s) shall prepare and submit to the Ohio EPA, in accordance with the schedule set forth in the compliance schedule of the Orders, construction plans, specifications and supporting plans to implement the remedial action at the Site as defined in the Purpose and Description of the Remedial Action sections of this SOW, the Decision Document, and/or the Orders.

#### 3.3.1 General Requirements for Plans and Specifications

The construction plans and specifications shall comply with the standards and requirements outlined below. All design documents shall be clear, comprehensive and organized. Supporting data and documentation sufficient to define the functional aspects of the remedial action shall be provided. Taken as a whole, the design documents shall demonstrate that the remedial action will be capable of meeting all objectives of the Decision Document, including any performance standards.

The plans and specifications shall include the following:

- 1) Discussion of the design strategy and design basis including:
  - a. Compliance with requirements of the Decision Document and the Orders and all applicable regulatory requirements;
  - b. Minimization of environmental and public health impacts;
- 2) Discussion of the technical factors of importance including:
  - a. Use of currently accepted environmental control measures and technologies;
  - b. The constructability of the design;
  - c. Use of currently accepted construction practices and techniques;
- 3) Description of the assumptions made and detailed justification for those assumptions;
- 4) Discussion of possible sources of error and possible operation and maintenance problems;
- 5) Detailed drawings of the proposed design including, as appropriate:
  - a. Qualitative flow sheets;
  - b. Quantitative flow sheets;
- 6) Tables listing equipment and specifications;
- 7) Tables giving material and energy balances;

- 8) Appendices including:
- a. Sample calculations (one example presented and clearly explained for significant or unique calculations);
  - b. Derivation of equations essential to understanding the report;
  - c. Results of laboratory tests, field tests and any additional studies.

### **3.3.2 Design Phases**

The Respondent(s) shall meet when necessary with Ohio EPA representatives to discuss design issues. The design shall be developed and submitted in the phases outlined below to facilitate progression toward an acceptable and functional design.

Submittals shall be made in accordance with the compliance schedule in the Orders, and the schedule in the approved RD/RA Work Plan.

#### **3.3.2.1 Preliminary Design**

A Preliminary Design, which reflects the design effort at approximately 30% completion, shall be submitted to the Ohio EPA for review and comment. At this stage of the design process, the Respondent(s) shall have verified existing conditions at the site that may influence the design and implementation of the selected RA. The Preliminary Design shall demonstrate that the basic technical requirements of the remedial action and any permits required have been addressed. The Preliminary Design shall be reviewed to determine if the final design will provide an operable and usable RA that will be in compliance with all permitting requirements and response objectives. The Preliminary Design submittal shall include the following elements, at a minimum:

- Preliminary plans, drawings and sketches, including design calculations;
- Results of treatability studies and additional field sampling;
- Design assumptions and parameters, including design restrictions, process performance criteria, appropriate unit processes for treatment systems, and expected removal or treatment efficiencies for both the process and waste (concentration and volume);
- Proposed cleanup verification methods, including compliance with applicable laws and regulations;
- Outline of design specifications;
- Proposed siting/locations of processes/construction activity;
- Expected long-term operation and monitoring requirements;
- Real estate and easement requirements;
- Preliminary construction schedule, including contracting strategy.

The supporting data and documentation necessary to define the functional aspects of the RA shall be submitted with the Preliminary Design. The technical specifications shall be outlined in a manner that anticipates the scope of the final specifications. The Respondent(s) shall include design calculations with the Preliminary Design completed to the same degree as the design they support.

If the Pre-Design Studies Report required under Task II have not been submitted prior to submission of the Preliminary Design, it shall be submitted with the Preliminary Design. Any revisions or amendments to the Preliminary Design required by the Ohio EPA shall be incorporated into the subsequent design phase.

### **3.3.2.2 Intermediate Design**

Complex project designs necessitate preparation and Ohio EPA review of design documents between the preliminary and prefinal design phases. The Respondent(s) shall submit intermediate design plans and specifications to the Ohio EPA for review and comment when the design is approximately 60% complete in accordance with the schedule in the approved RD/RA Work Plan. All plans, specifications, design analyses and design calculations submitted to the Ohio EPA shall reflect the same degree of completion. The Respondent(s) shall ensure that any required revisions or amendments resulting from the Ohio EPA's review of the Preliminary Design are incorporated into the Intermediate Design.

The Intermediate Design submittal shall include the following components:

- Design Plans and Specifications;
- Draft Construction Quality Assurance Plan;
- Draft Performance Standard Verification Plan;
- Draft Operation and Maintenance Plan;
- Health and Safety Plan.

The design shall include a Construction Quality Assurance Plan, a Performance Standard Verification Plan, an Operation and Maintenance Plan, and a Health and Safety Plan. The Performance Verification Plan shall include a Field Sampling Plan and a Quality Assurance Project Plan, as necessary. Section 4.0 of this SOW describes the required content of the supporting plans. The final Pre-Design Studies Report shall also be included, if it has not already been submitted. Revisions or amendments to the Intermediate Design required by Ohio EPA shall be incorporated into the Prefinal Design.

### 3.3.2.3 Prefinal Design

The Respondent(s) shall submit a Prefinal Design for Ohio EPA review in accordance with the schedule in the approved RD/RA Work Plan when the design effort is at least 90% complete. The Respondent(s) shall ensure that any modifications required by the Ohio EPA's prior review of related Pre-design Studies Reports, technical memoranda, the Preliminary and Intermediate Designs, and the QAPP and HSP are incorporated into the Prefinal Design submittal. The Prefinal Design submittal shall consist of the following components, at a minimum:

- Design Plans and Specifications;
- Construction Quality Assurance Plan;
- Performance Standard Verification Plan;
- Operation and Maintenance Plan;
- Remedial Action Implementation Plan;
- Cost Estimate;
- Health and Safety Plan.

General correlation between drawings and technical specifications is a basic requirement of any set of working construction plans and specifications. Before submitting the remedial design specifications with the Prefinal Design, the Respondent(s) shall: (1) Coordinate and cross-check the specifications and drawings; (2) Complete the proofing of the edited specifications and required cross-checking of all drawings and specifications.

The Respondent(s) shall prepare and include in the technical specifications governing any treatment systems; contractor requirements for providing appropriate service visits by qualified personnel to supervise the installation, adjustment, startup and operation of the treatment systems; and appropriate training on operational procedures once startup has been successfully accomplished.

The Ohio EPA will provide written comments to the Respondent(s) indicating any required revisions to the Prefinal Design. Comments may be provided as a narrative report and/or markings on design plan sheets. Revisions to the plans and specifications required by Ohio EPA shall be incorporated into the Final Design. At the discretion of the Site Coordinator, the Respondent(s) shall also return to Ohio EPA all marked-up prints as evidence that the plans have been completely checked. The Prefinal Design submittal may serve as the Final Design, if Ohio EPA has no further comments and notifies the Respondent(s) that the Prefinal Design has been approved as the Final Design.

#### **3.3.2.4 Final Design**

Following incorporation of any required modifications resulting from the Ohio EPA's review of the Prefinal Design submittal, the Respondent(s) shall submit to the Ohio EPA the Final Design which is 100% complete in accordance with the approved schedule described in the RD/RA Workplan. The Final Design submittal shall include all the components of the Prefinal Design and each of those components shall be complete. At the discretion of the Site Coordinator, any marked-up prints or drawings, which the Ohio EPA may have provided by way of comments on previous design submittals shall be returned to the Ohio EPA, if they have not already been returned.

The Respondent(s) shall make corrections or changes based on Ohio EPA comments on the Final Design submittals. The revised Final Design shall then be submitted in their entirety to the Ohio EPA for approval as the completed Final Design. Upon approval of the Site Coordinator, final corrections may be made by submitting corrected pages to the Final Design design documents. The quality of the Final Design submittal should be such that the Respondent(s) would be able to include them in a bid package and invite contractors to submit bids for the construction project.

#### **3.3.3 Estimated Cost of the Remedial Action**

The Respondent(s) shall refine the cost estimate developed in the Feasibility Study to reflect the detailed plans and specifications being developed for the RA. The cost estimate shall include both capital and operation and maintenance costs for the entire project. To the degree possible, cost estimates for operation and maintenance of any treatment system shall be based on the entire anticipated duration of the system's operation. The final estimate shall be based on the final approved plans and specifications. It shall include any changes required by the Ohio EPA during Final Design review, and reflect current prices for labor, material and equipment.

The refined cost estimate shall be submitted by the Respondent(s) with the Prefinal Design and the final cost estimate shall be included with the Final Design submittal.

#### **3.3.4 Remedial Action Implementation Plan**

The Respondent(s) shall develop a Remedial Action Implementation Plan (RAIP) to help coordinate implementation of the various components of the RA. It shall include a schedule for the RA that identifies timing for initiation and completion of all critical path tasks. The Respondent(s) shall specifically identify dates for completion of the project and major interim milestones in conformance with the approved RD/RA Workplan schedule. The Remedial Action Implementation Plan is a management tool which should address the following topics:

- 1) Activities necessary to fully implement each of the components of the RA;
- 2) How these activities will be coordinated to facilitate construction/implementation in accordance with the approved schedule;
- 3) Potential major scheduling problems or delays, which may impact overall schedule;
- 4) Lines of communication for discussing and resolving problems, should they arise;
- 5) Common and/or anticipated remedies to overcome potential problems and delays.

The Remedial Action Implementation Plan shall be submitted with the Prefinal Design for review and comment by the Ohio EPA. The final plan and RA project schedule shall be submitted with the Final Design for review and approval.

### **3.3.5 Community Relations Support**

A community relations program will be implemented by the Ohio EPA. The Respondent(s) shall cooperate with the Ohio EPA in community relations efforts. Cooperation may include participation in preparation of all appropriate information disseminated to the public, and in public meetings that may be held or sponsored by the Ohio EPA concerning the Site.

## **3.4 TASK IV: REMEDIAL ACTION CONSTRUCTION**

Following approval of the Final Design submittal by the Ohio EPA, the Respondent(s) shall implement the designed remedial action(s) at the Site in accordance with the plans, specifications, Construction Quality Assurance Plan, Performance Standard Verification Plan, Health and Safety Plan, Remedial Action Implementation Plan, Quality Assurance Project Plan, and Field Sampling Plan approved with the final design. Implementation shall include the activities described in the following sections.

### **3.4.1 Preconstruction Inspection and Conference**

The Respondent(s) shall participate in a preconstruction inspection and conference with the Ohio EPA to accomplish the following:

- Review methods for documenting and reporting inspection data;
- Review methods for distributing and storing documents and reports;
- Review work area security and safety protocol;
- Discuss any appropriate modifications to the Construction Quality Assurance Plan to ensure that site specific considerations are addressed. The final CQAP shall be submitted to the Ohio EPA at this time, if it has not already been submitted;
- Introduce key construction contractor, engineering and project management

- personnel and review roles during construction activities;
- Conduct a site walk-around to verify that the design criteria, plans, and specifications are understood and to review material and equipment storage locations.

The Respondent(s) shall schedule the preconstruction inspection and conference to be held within 10 days of the award of the construction contract. The preconstruction inspection and conference shall be documented by a designated person and minutes shall be transmitted to all parties by the Respondent(s) to all parties in attendance.

### **3.4.2 Design Changes During Construction**

During construction, unforeseen site conditions, changes in estimated quantities of required construction materials and other problems associated with the project are likely to develop. Such changing conditions may require either major or minor changes to the approved final design. Certain design changes will require approval of the Ohio EPA prior to implementation to ensure that the intent and scope of the remedial action is maintained. Changes, which could alter the intent or scope of the RA, may require a revision to the Decision Document and a public comment period. Changes to the remedial design which require Ohio EPA written approval prior to implementation include:

- Those that involve the deletion or addition of a major component of the approved remedy (e.g. changing one treatment system for another; deleting any designed layer of a multi-layer cap);
- Those that result in a less effective treatment for wastes associated with the site;
- Any changes that may result in an increase of the exposure to chemicals of concern and/or risk to human health or the environment as compared to the goals for the completed remedial action as stated in the Orders and this SOW;
- Those that result in a significant delay in the completion of the RA;
- Any other changes that alter or are outside of the scope or intent of the approved remedial design.

Ohio EPA shall be notified of other changes made during construction through daily inspection reports and monthly progress reports.

### **3.4.3 Remedial Action Construction Completion and Acceptance**

As the construction of the remedial action nears completion, the following activities and reporting shall be completed by the Respondent(s) to ensure proper project completion, approval, closeout and transition to the operation and maintenance/monitoring phase.

#### **3.4.3.1 Prefinal Construction Conference**

Within seven days of making a preliminary determination that construction is complete, the Respondent(s) shall provide written notification to the Ohio EPA and a prefinal construction conference shall be held with the construction contractor(s) to discuss procedures and requirements for project completion and closeout. The Respondent(s) shall have responsibility for making arrangements for the conference. Participants should include the Project Manager for the Respondent(s), the Site Coordinator for the Ohio EPA, all contractors involved with construction of the remedial action(s) and the remedial design agent (person(s) designed the remedy), if requested.

A list of suggested items to be covered at the conference includes, but is not limited to the following:

- Final Operation and Maintenance (O&M) Plan submission, if it has not been submitted already;
- Cleanup responsibilities;
- Demobilization activities;
- Security requirements for project transfer;
- Prefinal inspection schedule;
- Operator training.

The prefinal conference shall be documented by a designated person and minutes shall be transmitted to all parties in attendance by the Respondent(s).

#### **3.4.3.2 Prefinal Inspection**

Following the prefinal construction conference, a prefinal inspection of the project will be conducted. The prefinal inspection will be led by the Ohio EPA with assistance from the party with primary responsibility for construction inspection, if requested.

The prefinal inspection will consist of a walk-through inspection of the entire site. The completed site work will be inspected to determine whether the project is complete and consistent with the contract documents and the approved RD/RA Work Plan. Any outstanding deficient or incomplete

construction items should be identified and noted during the inspection.

When the RA includes construction of a treatment system, the facility start-up and "shakedown" shall have been completed as part of the RA. "Shakedown" is considered to be the initial operational period following start-up during which adjustments are made to ensure that the performance standards for the system are reliably being achieved. The contractor shall have certified that the equipment has performed to meet the purpose and intent of the contract specifications. Retesting shall have been successfully completed where deficiencies were revealed. Such shakedown may take several months. Determination of remedy effectiveness for other types of remedial actions will be based on the Performance Standard Verification Plan (PSVP).

If construction of major components of a remedial action is performed in distinct phases or under separate contracts due to the complex scope of the site remedy, it may be appropriate to conduct the prefinal inspections of those components separately. The approved RAIP should identify those projects and components, which should be handled in that manner.

Upon completion of the prefinal inspection, an inspection report shall be prepared by the Respondent(s) and submitted to Ohio EPA with the minutes from the prefinal conference. A copy of the report will be provided to all parties in attendance at the inspection. The report will outline the outstanding construction items, actions required to resolve those items, completion date for those items and a date for the final inspection. Ohio EPA will review the inspection report and notify the Respondent(s) of any disagreements with it.

#### **3.4.3.3 Final Inspection**

Within seven days following completion of any outstanding construction items, the Respondent(s) shall provide written notification to the Ohio EPA and schedule a final inspection. A final inspection will be conducted by the Ohio EPA with assistance from the party having primary responsibility for construction inspection, if requested.

The final inspection will consist of a walk-through inspection of the project site focusing on the outstanding construction items identified during the prefinal inspection. The Prefinal Inspection Report shall be used as a checklist. The contractor's demobilization activities shall have been completed, except for equipment and materials required to complete the outstanding construction items. If any items remain deficient or incomplete, the inspection shall be considered a prefinal inspection requiring another prefinal inspection report and final inspection.

As with the prefinal inspection, it may be appropriate to conduct final inspections of major components of a remedial action separately. Such projects and components should be identified in the approved Remedial Action Implementation Plan.

#### **3.4.3.4 Construction Completion Report and Certification**

Upon satisfactory completion of the final inspection, a Construction Completion Report shall be prepared by the Respondent(s) and submitted to the Ohio EPA within 30 days after the final inspection. The report shall include the following elements:

- 1) A brief description of the outstanding construction items from the prefinal inspection and an indication that the items were satisfactorily resolved;
- 2) A synopsis of the work defined in the approved RD/RA Work Plan and the Final Design and certification that this work was performed;
- 3) An explanation of any changes to the work defined in the approved RD/RA Work Plan and Final Design, including as-built drawings of the constructed RA facilities, and why the changes were necessary or beneficial for the project;
- 4) Certification that the constructed RA or component of the RA is operational and functional.

The construction completion report will be reviewed by the Ohio EPA. If Ohio EPA's review indicates that corrections or amendments to the report are necessary, comments will be provided to the Respondent(s). The Respondent(s) shall submit a revised construction completion report based on Ohio EPA comments to the Ohio EPA within 30 days of receipt of those comments. Upon determination by the Ohio EPA that the report is acceptable, written notice of Ohio EPA's approval of the construction completion report will be provided to the Respondent(s).

#### **3.4.4 Community Relations Support**

The Respondent(s) shall provide support for Ohio EPA's community relations program during remedial action implementation as described in Section 3.3.5.

### 3.5 TASK V: FIVE-YEAR REVIEWS

At sites where contaminants will remain at levels that will not permit unrestricted use of the site, a review will be conducted no less frequently than once every five years to ensure that the remedy continues to be protective of human health and the environment. This is known as the "five-year review". The Respondent(s) shall complete Five-Year Review Reports no less often than every five years after the initiation of the remedial action or until contaminant levels allow for unrestricted use of the site. Further guidance for performing five-year review work tasks may be found in the U.S. EPA OSWER Directive 9355.7-02, Structure and Components of Five-Year Reviews.

The more specific purpose of the reviews is two-fold: (1) to confirm that the remedial action as specified in the Decision Document and as implemented continues to be effective in protecting human health and the environment (e.g., the remedy is operating and functioning as designed, institutional controls are in place and are protective); and (2) to evaluate whether original cleanup levels remain protective of human health and the environment. A further objective is to evaluate the scope of operation and maintenance, the frequency of repairs, changes in monitoring indicators, costs at the site, and how each of these relates to protectiveness.

Fifteen months prior to the due date for completion of a five-year review, the Respondent(s) shall meet with Ohio EPA to discuss the requirements of the five-year review. The review must be completed within five years following the initiation of the remedial action. The scope and level of review will depend on conditions at the site. The scoping effort should include a determination by the Site Coordinator and Respondent(s) as to whether available monitoring data and other documentation will be sufficient to perform the five-year review or whether a field sampling effort will be a necessary component of the review. Within three months of the meeting, the Respondent(s) shall develop and submit a workplan to Ohio EPA that shall describe, at a minimum, the following activities and documentation:

1. Document Review
  - a. Background Information
    1. Decision Document
    2. Decision Document Summary
    3. Administrative or Judicial Order for RD/RA
    4. Completion of Remedial Action Report
  - b. Design Review
  - c. Maintenance and Monitoring
    1. O&M Manual
    2. O&M Reports
    3. Groundwater Monitoring Plan
    4. Monitoring Data and Information
2. Standards Review
  - a. Specific performance standards required by Decision Document

- b. Changing Standards
      - 1. Laws and Regulations applicable to conditions and activities at the site
    - c. Risk Assessment
      - 1. As summarized in the Decision Document
      - 2. Review for changes in exposure pathways not previously evaluated
  - 3. Interviews
    - a. Background Information
      - 1. Previous Staff Management
      - 2. Nearest Neighbors, Respondent(s)
    - b. Local Considerations
      - 1. State Contacts
      - 2. Local Government Contacts
    - c. Operational Problems
      - 1. Plant Superintendent
      - 2. O&M Contractors
  - 4. Site Inspection/Technology Review
    - a. Performance and Compliance
      - 1. Visual Inspection
    - b. Offsite Considerations
    - c. Recommendations
  - 5. Report
    - a. Background
      - 1. Introduction
      - 2. Remedial Objectives
      - 3. Review of Applicable Laws and Regulations
    - b. Site Conditions
      - 1. Summary of Site Visit
      - 2. Areas of Noncompliance
    - c. Risk Assessment
    - d. Recommendations
      - 1. Technology Recommendations
      - 2. Statement on Protectiveness
      - 3. Timing and Scope of Next Review
      - 4. Implementation Requirements

If sampling and analysis of environmental samples is required under the five-year review, the Respondent(s) are required to prepare and submit with the workplan other supporting plans. Supporting plans may include a Quality Assurance Project Plan, Field Sampling Plan and Health and Safety Plan. The purpose and content of these supporting plans are discussed in Section 4 of this SOW. The Five-Year Review Workplan must be reviewed

and approved by the Ohio EPA prior to initiation of field activities or proceeding with the five-year review.

The Five-Year Review Report will be reviewed by the Ohio EPA. If Ohio EPA's review indicates that corrections or amendments to the report are necessary, comments will be provided to the Respondent(s). The Respondent(s) shall submit a revised Five-Year Review Report based on Ohio EPA comments to the Ohio EPA within 30 days of receipt of those comments.

### **3.6 TASK VI: OPERATION AND MAINTENANCE/PERFORMANCE MONITORING**

The Respondent(s) shall implement performance monitoring and operation and maintenance procedures as required by the approved Performance Standard Verification Plan and approved Operation and Monitoring (O&M) Plan for the RA once it is demonstrated that the RA components are operational and functional.

#### **3.6.1 Reporting During Operation and Maintenance**

##### **3.6.1.1 Operation and Maintenance Sampling and Analysis Data**

Unless otherwise specified in the approved O&M Plan, sampling, analysis, and system performance data for any treatment system or other engineering systems required to be monitored during the O&M Phase shall be submitted by the Respondent(s) to the Ohio EPA on a monthly basis. These monthly submittals will form the basis for the annual progress report described below in Section 3.6.1.2

##### **3.6.1.2 Progress Reports During Operation and Maintenance**

The Respondent(s) shall prepare and submit annual progress reports during the operation and maintenance/performance monitoring phase of the RA. When appropriate, the RD/RA Work Plan shall specify progress reports during O&M to be submitted more frequently.

The O&M progress reports shall contain the same information as required for the monthly progress reports for the RD and RA construction phases, as specified in Section 3.6.1 of this SOW. It shall also include an evaluation of the effectiveness of any treatment and engineering systems in meeting the cleanup standards, performance standards and other goals of the RA as defined in the Orders, this SOW, the RD/RA Work Plan and the approved Final Design.

### **3.6.2 Completion of Remedial Action Report**

At the completion of the remedial action, the Respondent(s) shall submit a Completion of Remedial Action Report to the Ohio EPA. The RA shall be considered complete when the all of the goals, performance standards and cleanup standards for the RA as stated in the Decision Document, this SOW, and the approved Final Design (including changes approved during construction) have been met. The report shall document that the project is consistent with the design specifications, and that the RA was performed to meet or exceed all required goals, cleanup standards and performance standards. The report shall include, but not be limited to the following elements:

- 1) Synopsis of the remedial action and certification of the design and construction;
- 2) Listing of the cleanup and performance standards as established in the Decision Document and the Orders, any amendments to those standards with an explanation for adopting the amendments;
- 3) Summary and explanation of any changes to the approved plans and specifications. An explanation of why the changes were necessary should be included and, where necessary, Ohio EPA approval of the changes should be documented;
- 4) Summary of operation of treatment systems including monitoring data, indicating that the remedial action met or exceeded the performance standards or cleanup criteria;
- 5) Explanation of any monitoring and maintenance activities to be undertaken at the site in the future as outlined in Section 3.0 of this RD/RA SOW.

### **3.7 TASK VII: REPORTING REQUIREMENTS**

The Respondent(s) shall prepare and submit work plans, design plans, specifications, and reports as set forth in Tasks I through V of this SOW to document the design, construction, operation, maintenance, and performance monitoring of the remedial action. Monthly progress reports shall be prepared, as described below, to enable the Ohio EPA to track project progress.

#### **3.7.1 Monthly Progress Reports during RD and RA Construction**

The Respondent(s) shall at a minimum provide the Ohio EPA with monthly progress reports during the design and construction phases of the remedial action containing the information listed below. When appropriate, the RD/RA Work Plan shall specify progress reports to be submitted more frequently.

- 1) A description of the work performed during the reporting period and estimate of the percentage of the RD/RA completed
- 2) Summaries of all findings and sampling during the reporting period
- 3) Summaries of all changes made in the RD/RA during the reporting period,

- indicating consultation with Ohio EPA and approval by the Ohio EPA of those changes, when necessary
- 4) Summaries of all contacts with representatives of the local community, public interest groups or government agencies during the reporting period
  - 5) Summaries of all problems or potential problems encountered during the reporting period, including those which delay or threaten to delay completion of project milestones with respect to the approved work plan schedule or RAIP schedule
  - 6) Summaries of actions taken and being taken to rectify problems
  - 7) Summaries of actions taken to achieve and maintain cleanup standards and performance standards
  - 8) Changes in personnel during the reporting period
  - 9) Projected work for the next reporting period
  - 10) Copies of daily reports, inspection reports, sampling data, laboratory/monitoring data, etc.

### 3.7.2 Summary of Reports and Submittals

A summary of the information reporting requirements contained in this RD/RA SOW is presented below:

- **Draft RD/RA Work Plan**  
Health and Safety Plan (HSP)  
Regulatory Compliance Plan
- **Final RD/RA Work Plan**  
HSP  
Regulatory Compliance Plan
- **Draft Pre-Design Studies Plan**  
Quality Assurance Project Plan (QAPP)  
Field Sampling Plan (FSP)
- **Final Pre-Design Studies Plan**  
QAPP  
FSP
- **Pre-Design Studies Reports - Draft**
- **Preliminary Design Documents**
- **Pre-Design Studies Reports - Final**
- **Intermediate Design Documents**  
Draft Construction Quality Assurance Plan (CQAP)  
Draft Performance Standard Verification Plan (PSVP)  
Draft O & M Plan  
Health and Safety Plan
- **Prefinal Design Documents**  
CQAP  
PSVP  
O & M Plan

- Draft Remedial Action Implementation Plan (RAIP)
  - Health and Safety Plan
- **Final Design Documents**
  - CQAP
  - PSVP
  - O & M Plan
  - Draft RAIP
  - Health and Safety Plan
- **Preconstruction Inspection and Conference Report**
- **Monthly Progress Reports During RD/RA**
- **Notification of Preliminary Completion of Construction**
- **Final O & M Plan**
- **Prefinal Inspection Report**
- **Notification for Final Inspection**
- **Construction Completion Report**
- **O & M Sampling Data**
- **Progress Reports during O&M/Performance Monitoring period**
- **Completion of Remedial Action Report**
- **Five-Year Review Workplan**
- **Five-Year Review Report**

#### **4.0 CONTENT OF SUPPORTING PLANS**

The documents listed in this section shall be prepared and submitted as outlined in Section 3.0 of this SOW to support the activities necessary to design and fully implement the RA. These supporting documents include a Quality Assurance Project Plan (QAPP), a Field Sampling Plan (FSP), a Health and Safety Plan (HSP), a Construction Quality Assurance Plan (CQAP) and a Performance Standard Verification Plan (PSVP). The following sections describe the required contents of each of these supporting documents.

#### **4.1 QUALITY ASSURANCE PROJECT PLAN**

The Respondent(s) shall prepare a site-specific Quality Assurance Project Plan (QAPP) to cover sample analysis and data handling based on guidance provided by the Ohio EPA. Refer to the list of Ohio EPA and U.S. EPA guidance documents in Appendix B attached to the Orders.

A QAPP shall be developed for any sampling and analysis activities to be conducted as predesign studies and submitted with the Pre-Design Studies Plan for Ohio EPA review and approval.

During the remedial design phase the Respondent(s) shall review all remedial design information and modify or amend the QAPP developed for the Pre-Design Studies Plan, as necessary, to address the sampling and analysis activities to be conducted during

implementation of the Remedial Action, including activities covered by the PSVP and O&M Plan. An amended QAPP shall be submitted with the Intermediate Design documents for review and comment by Ohio EPA. A final Quality Assurance Project Plan, which incorporates comments made by the Ohio EPA, shall be submitted for approval with the Final Design documents. Upon agreement of the Site Coordinator, the Respondent(s) may submit only the amended portions of the QAPP developed for the PDSP with the Intermediate, Pre-Final and Final Design documents.

The Respondent(s) shall schedule and attend a pre-QAPP meeting with representatives of Ohio EPA to discuss the scope and format of the QAPP. For sites where the Site Coordinator and Project Manager agree that a pre-QAPP meeting is not needed, this meeting may be omitted. The QAPP shall, at a minimum, include:

1. Data Collection Strategy - The strategy section of the QAPP shall include but not be limited to the following:
  - a. Description of the types and intended uses for the data, relevance to remediation or restoration goals, and the necessary level of precision, accuracy, and statistical validity for these intended uses;
  - b. Description of methods and procedures to be used to assess the precision, accuracy and completeness of the measurement data;
  - c. Description of the rationale used to assure that the data accurately and precisely represent a characteristic of a population, variation of physical or chemical parameters throughout the Site, a process condition or an environmental condition. Factors which shall be considered and discussed include, but are not limited to:
    - i) Environmental conditions at the time of sampling;
    - ii) Sampling design (including number, location and distribution);
    - iii) Representativeness of selected media, exposure pathways, or receptors; and
    - iv) Representativeness of selected analytical parameters.
    - v) Representativeness of testing procedures and conditions; and
    - vi) Independence of background or baseline from site influences.
  - d. Description of the measures to be taken to assure that the following data sets can be compared quantitatively or qualitatively to each other:
    - i) RD/RA data collected by the Respondent over some time period;
    - ii) RD/RA data generated by an outside laboratory or consultant employed by the Respondent versus data collected by the Respondent, and;
    - iii) Data generated by separate consultants or laboratories over some time period not necessarily related to the RD/RA effort.
    - iv) Data generated by Ohio EPA or by an outside laboratory or consultant employed by Ohio EPA;

- e. Details relating to the schedule and information to be provided in quality assurance reports. These reports should include but not be limited to:
    - i) Periodic assessment of measurement data accuracy, precision and completeness;
    - ii) Results of performance audits;
    - iii) Results of system audits;
    - iv) Significant quality assurance problems and recommended solutions; and
    - v) Resolutions of previously stated problems.
2. Sample Analysis - The Sample Analysis section of the Quality Assurance Project Plan shall specify the following:
- a. Chain-of-custody procedures, including:
    - i) Identification of a responsible party to act as sample custodian at the laboratory facility authorized to sign for incoming field samples, obtain documents of shipment and verify the data entered onto the sample custody records;
    - ii) Provision for a laboratory sample custody log consisting of serially numbered lab-tracking report sheets; and
    - iii) Specification of laboratory sample custody procedures for sample handling, storage and dispersement for analysis.
  - b. Sample storage procedures and storage times;
  - c. Sample preparation methods;
  - d. Analytical procedures, including:
    - i) Scope and application of the procedure;
    - ii) Sample matrix;
    - iii) Potential interferences;
    - iv) Precision and accuracy of the methodology;
    - v) Method detection limits;
    - vi) Special analytical services required to ensure contract required detection limits do not exceed known toxicity criteria; and
    - vii) Verification and reporting of tentatively identified compounds.
  - e. Calibration procedures and frequency;
  - f. Data reduction, validation and reporting;
  - g. Internal quality control checks, laboratory performance and systems audits and frequency, including:
    - i) Method blank(s);
    - ii) Laboratory control sample(s);
    - iii) Calibration check sample(s);
    - iv) Replicate sample(s);
    - v) Matrix-spiked sample(s);
    - vi) "Blind" quality control sample(s);
    - vii) Control charts;
    - viii) Surrogate samples;

- ix) Zero and span gases; and
  - x) Reagent quality control checks.
  - h. Preventative maintenance procedures and schedules;
  - i. Corrective action (for laboratory problems); and
  - j. Turnaround time.
3. Modeling - The Modeling section of the Quality Assurance Project Plan shall apply to all models used to predict or describe fate, transport or transformation of contaminants in the environment and shall discuss:
- a. Model assumptions and operating conditions;
  - b. Input parameters; and
  - c. Verification and calibration procedures.
4. In Situ or Laboratory Toxicity Tests - The Toxicity Test section of the Quality Assurance Project Plan shall apply to all tests or bioassays used to predict or describe impacts of contaminants on a population, community, or ecosystem level.
5. Data Record - The QAPP shall also provide the format to be used to present the raw data and the conclusions of the investigation, as described in a, b, and c below:
- a. The data record shall include the following:
    - i) Unique sample or field measurement code;
    - ii) Sampling or field measurement location and sample or measurement type;
    - iii) Sampling or field measurement raw data;
    - iv) Laboratory analysis ID number;
    - v) Property or component measured; and
    - vi) Result of analysis (e.g., concentration).
  - b. Tabular Displays - The following data shall be presented in tabular displays:
    - i) Unsorted (raw) data;
    - ii) Results for each medium, organism, or for each constituent measured;
    - iii) Data reduction for statistical analysis;
    - iv) Sorting of data by potential stratification factors (e.g., location, soil layer, topography, vegetation form);
    - v) Summary data (i.e., mean, standard deviation, min/max values, and sample number); and
    - vi) Comparisons with background or reference data.
  - c. Graphical Displays - The following data shall be presented in graphical formats (e.g., bar graphs, line graphs, area or plan maps, isopleth plots, cross-sectional plots or transects, three dimensional graphs, etc.):
    - i) Display sampling locations and sampling grid;

- ii) Indicate boundaries of sampling area, and areas where more data are required;
- iii) Display levels of contamination at each sampling location or location from which organism was taken;
- iv) Display geographical extent of contamination;
- v) Display contamination levels, averages and maxima;
- vi) Illustrate changes in concentration in relation to distance from the source, time, depth or other parameters;
- vii) Indicate features affecting intramedia transport and show potential receptors;
- viii) Compare nature and extent of contamination with results of ecological or biological sampling or measurements; and
- ix) Display comparisons with background or reference analyses or measurements.

## 4.2 FIELD SAMPLING PLAN

1. Sampling - The Sampling section of the Field Sampling Plan shall discuss:
  - a. Sufficient preliminary sampling to ensure the proper planning of items b. through o. below;
  - b. Selecting appropriate sampling locations, depths, vegetation strata, organism age, etc. and documenting relevance of sample for intended biological toxicity tests or analyses;
  - c. Providing a sufficient number of samples to meet statistical or other data useability objectives;
  - d. Measuring all necessary ancillary data such as ambient conditions, baseline monitoring, etc.;
  - e. Determining environmental conditions under which sampling should be conducted;
  - f. Determining which media, pathways, or receptors are to be sampled (e.g., ground water, air, soil, sediment, biota, etc.);
  - g. Determining which parameters are to be measured and where;
  - h. Selecting the frequency and length of sampling period;
  - i. Selecting the sample design (e.g., composites, grabs, random, repeated, etc.);
  - j. Selecting the number, location, media or organisms for determining background conditions or reference conditions (refer to Risk Assessment Guidance for Superfund: Volume I - Human Health Evaluation Manual (Part A), Interim Final, EPA/540/1-89/002, December 1989);
  - k. Measures to be taken to prevent contamination of the sampling equipment and cross contamination between sampling points;
  - l. Documenting field sampling operations and procedures, including:
    - i) Documentation of procedures for preparation of reagents or supplies which become an integral part of the sample (e.g.,

- filters and adsorbing reagents);
- ii) Procedures and forms for recording the exact location and specific considerations associated with sample acquisition;
- iii) Documentation of specific sample preservation method;
- iv) Calibration of field devices;
- v) Collection of replicate and field duplicate samples;
- vi) Submission of field-biased and equipment blanks, where appropriate;
- vii) Potential interferences present at the site or facility;
- viii) Construction materials and techniques associated with monitoring wells and piezometers;
- ix) Field equipment listing and sample containers;
- x) Sampling order; and
- xi) Decontamination procedures.
- m. Selecting appropriate sample containers;
- n. Sample preservation; and
- o. Chain-of-custody, including:
  - i) Standardized field tracking reporting forms to establish sample custody in the field prior to and during shipment;
  - ii) Sample sealing, storing and shipping procedures to protect the integrity of the sample; and,
  - iii) Pre-prepared sample labels containing all information necessary for effective sample tracking.

2. Field Measurements - The Field Measurements section of the Field Sampling Plan shall discuss:

- a. Selecting appropriate field measurement locations, depths, organism age etc.;
- b. Providing a sufficient number of field measurements that meet statistical or data useability objectives;
- c. Measuring all necessary ancillary data such as ambient or baseline environmental conditions;
- d. Determining conditions under which field measurement should be conducted;
- e. Determining which media, pathways, or receptors are to be addressed by appropriate field measurements (e.g., ground water, air, soil, sediment, biota, etc.);
- f. Determining which physical, chemical, or biological parameters are to be measured and where;
- g. Selecting the frequency and duration of field measurement; and
- h. Documenting field measurement operations and procedures, including:
  - i) Procedures and forms for recording raw data and the exact location, time and Site specific considerations associated with the data acquisition;

- ii) Calibration of field devices;
- iii) Collection of replicate measurements;
- iv) Submission of field-biased blanks, where appropriate;
- v) Potential interferences present at the Site;
- vi) Construction materials and techniques associated with monitoring wells and piezometers used to collect field data;
- vii) Field equipment listing;
- viii) Order in which field measurements were made; and
- ix) Decontamination procedures; and
- i) Selecting the number, location, media, and organisms for determining background or reference conditions.

#### **4.3 SITE HEALTH AND SAFETY PLAN**

The Respondent(s) shall submit a Health and Safety Plan (HSP) to the Ohio EPA with the RD/RA Work Plan for any on-site activities taking place during the design phase. The Respondent(s) shall review the remedial design information and modify the HSP developed for the RD/RA Work Plan, as necessary, to address the activities to be conducted on the site during implementation of the Remedial Action. It shall be designed to protect on-site personnel and area residents from physical, chemical and other hazards posed by the construction, operation and maintenance activities of the Remedial Action.

The Respondent(s) shall prepare a site HSP which is designed to protect on-site personnel and area residents from physical, chemical and all other hazards posed by RD/RA activities. The HSP shall address the following topics:

1. Major elements of the Health and Safety Plan shall include:
  - a. Facility or site description including availability of resources such as roads, water supply, electricity and telephone service;
  - b. Description of the known hazards and an evaluation of the risks associated with the incident and with each activity conducted;
  - c. Listing of key personnel (including the site safety and health officer) and alternates responsible for site safety, response operations, and for protection of public health;
  - d. Delineation of work area, including a map;
  - e. Description of levels of protection to be worn by personnel in the work area;
  - f. Description of the medical monitoring program for on-site responders;
  - g. Description of standard operating procedures established to assure the proper use and maintenance of personal protective equipment;
  - h. The establishment of procedures to control site access;
  - i. Description of decontamination procedures for personnel and equipment;
  - j. Establishment of site emergency procedures;
  - k. Availability of emergency medical care for injuries and toxicological

- problems;
  - l. Description of requirements for an environmental monitoring program. (This should include a description of the frequency and type of air and personnel monitoring, environmental sampling techniques and a description of the calibration and maintenance of the instrumentation used.);
  - m. Specification of any routine and special training required for responders; and
  - n. Establishment of procedures for protecting workers from weather related problems.
2. The Health and Safety Plan shall be consistent with:
- a. NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);
  - b. CERCLA Sections 104(f) and 111(c)(6)
  - c. EPA Order 1440.3 -- Respiratory Protection;
  - d. EPA Order 1440.2 -- Health and Safety Requirements for Employees Engaged in Field Activities;
  - e. EPA Occupational Health and Safety Manual;
  - f. EPA Interim Standard Operating Safety Procedures and other EPA guidance as developed by EPA;
  - g. OSHA regulations particularly in 29 CFR 1910 and 1926;
  - h. State and local regulations; and
  - i. Site or facility conditions.

#### **4.4 CONSTRUCTION QUALITY ASSURANCE PLAN**

The Respondent(s) shall develop a Construction Quality Assurance Plan (CQAP) based on the plans and specifications and performance standards for the RA. The CQAP is a site specific document that shall specify procedures to ensure that the completed remedial action work meets or exceeds all design criteria and specifications. A draft CQAP shall be submitted with the Intermediate Design submittal for review and comment by the Ohio EPA. Subsequent drafts shall be submitted with the Prefinal and Final Design submittals that incorporate comments made by the Ohio EPA. Certain aspects of the CQAP, for example personnel names and qualifications, may not be known at the time of design approval. A complete and final CQAP shall be submitted to Ohio EPA for approval prior to the start of construction. At a minimum, the CQAP shall address the elements listed below.

##### **4.4.1 Responsibility and Authority**

The responsibility and authority of all organizations (i.e. technical consultants, construction firms, etc.) and key personnel involved in the construction of the remedial action(s) shall be described fully in the CQAP. The Respondent(s) shall provide a copy of the approved CQAP to each organization with responsibility and

authority for implementing the CQAP. The Respondent(s) shall also identify a CQA officer and the necessary supporting inspection staff.

#### **4.4.2 Construction Quality Assurance Personnel Qualifications**

The qualifications of the Construction Quality Assurance officer and supporting inspection personnel shall be presented in the CQAP to demonstrate that they possess the training and experience necessary to fulfill their identified responsibilities.

#### **4.4.3 Inspection Activities**

The observations and tests that will be used to monitor the construction and/or installation of the components of the remedial action shall be described in the CQAP. The plan shall include scope and frequency of each type of inspection. Inspections shall verify compliance with the design, applicable requirements of state and federal law and performance standards. Inspections shall also ensure compliance with all health and safety standards and procedures. The CQAP shall include provisions for conducting the preconstruction, prefinal and final inspections and associated meetings as described in Section 5.4 of this SOW.

#### **4.4.4 Sampling Requirements**

The sampling activities necessary to ensure that the design specifications and performance standards are achieved shall be presented in the CQAP. The description of these activities shall include sample sizes, sample locations, frequency of sampling, testing to be performed, acceptance and rejection criteria, and plans for correcting problems as addressed in the design specifications.

#### **4.4.5 Documentation**

Reporting requirements for CQA activities shall be described in detail in the CQAP. This shall include such items as daily summary reports, meeting reports, inspection data sheets, problem identification and corrective measures reports, design acceptance reports and final documentation. Provisions for the storage of all records shall be presented in the CQAP.

### **4.5 PERFORMANCE STANDARD VERIFICATION PLAN**

A Performance Standard Verification Plan (PSVP) shall be prepared to consolidate information for required testing, sampling and analyses to ensure that both short-term and longterm performance standards for the RA are met. Performance standards may include clean-up standards for contaminated environmental media as well as the measurement of the effectiveness of engineering controls or other controls used to control migration of or exposure to contaminants. For example, the containment of a plume of contaminated

ground water by pumping wells would be a performance standard requiring verification. The PSVP should describe the measurements to be taken, such as water levels in monitoring wells and piezometers, along with any analyses to be conducted on the data obtained, such as ground water modeling, to verify that the plume is contained. The PSVP shall include a FSP and a QAPP for any sampling and analyses to be conducted.

The Draft PSVP shall be submitted with the Intermediate Design for review and comment by the Ohio EPA. The final PSVP, which fully addresses comments made by the Ohio EPA must be submitted with and approved as part of the Final Design.

#### **4.6 OPERATION AND MAINTENANCE PLAN**

The Respondent(s) shall prepare an Operation and Maintenance Plan (O&M Plan) to cover long term operation and maintenance of the RA. Operation and maintenance for all components of the remedial action, shall begin after it is demonstrated that those components are operational and functional. The plan, at a minimum, shall be composed of the elements listed below.

1. Normal Operation and Maintenance
  - a. Description of tasks for operation
  - b. Description of tasks for maintenance
  - c. Description of prescribed treatment or operating conditions
  - d. Schedules showing the frequency of each O&M task
  
2. Potential Operating Problems
  - a. Description and analysis of potential operating problems
  - b. Sources of information regarding potential operating problems
  - c. Description of means of detecting problems in the operating systems
  - d. Common remedies for operating problems
  
3. Routine Monitoring and Laboratory Testing
  - a. Description of monitoring tasks
  - b. Description of required laboratory tests and interpretation of test results
  - c. Required QA/QC procedures to be followed
  - d. Schedule of monitoring frequency and provisions to discontinue, if appropriate

Note: Information on monitoring and testing that is presented in the PSVP should be referenced, as appropriate, but should not be duplicated in the O&M Plan.

4. Alternative O&M
  - a. Description of alternate procedures to prevent undue hazard, should systems fail

- b. Analysis of the vulnerability and additional resources requirements should a failure occur
- 5. Safety Plan
  - a. Description of safety procedures, necessary equipment, etc. for site personnel
  - b. Description of safety tasks required in the event of systems failure (may be linked to the Site Safety Plan developed for the RD/RA)
- 6. Equipment
  - a. Description of equipment necessary to the O&M Plan
  - b. Description of installation of monitoring components
  - c. Description of maintenance of site equipment
  - d. Replacement schedule for equipment and installed components
- 7. Annual O&M Budget
  - a. Costs for personnel
  - b. Costs for preventative and corrective maintenance
  - c. Costs of equipment and supplies, etc.
  - d. Costs of any contractual obligations (e.g., lab expenses)
  - e. Costs of operation (e.g., energy, other utilities, etc.)
- 8. Records and Reporting Mechanisms Required
  - a. Daily operating logs
  - b. Laboratory records
  - c. Records for operating costs
  - d. Mechanism for reporting emergencies
  - e. Personnel and maintenance records
  - f. Monthly/semi-annual reports to Ohio EPA

The Respondent(s) shall submit a draft O&M Plan to the Ohio EPA for review and comment with the Intermediate Design submittal. Subsequent drafts of the O&M Plan shall be submitted with the Prefinal and Final Design submittals, which reflect the refined plans and specifications of those submittals and any comments made by the Ohio EPA. The final O&M Plan shall be submitted by the Respondent(s) prior to or at the completion of construction of the remedial action and shall incorporate any modifications or corrections required by the Ohio EPA.

## ATTACHMENT C

### LIST OF GUIDANCE DOCUMENTS AND REFERENCES FOR USE WITH OHIO EPA DERR REMEDIAL RESPONSE PROGRAM REMEDIAL DESIGN/REMEDIAL ACTION STATEMENT OF WORK AND ORDERS

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#### **Statement of Purpose and Use of This Guidance Document List:**

The purpose of this list of Ohio EPA and U.S. EPA policies, directives and guidance documents is to provide a reference of the primary documents which provide direction and guidance for designing and implementing selected remedial actions at Remedial Response sites. The listed documents incorporate by reference any documents listed therein. Certain sites may have contaminants or conditions which are not fully addressed by the documents in this list. There is an evolving body of policy directives, guidance and research documentation which should be used, as needed, to address circumstances not encompassed by the documents in this list. For sites where activities are conducted in response to an administrative or judicial order, this list will be an attachment to the order and will govern the work conducted. When entering into or issuing an order for any site, Ohio EPA reserves the right to modify this list to fully address the site conditions.

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#### **Analytical Methods**

Compendium of Methods for Determination of Toxic Organic Compounds in Ambient Air, second edition, Compendium Method TO-14, EPA/625/R-96/010b, U.S. EPA, January 1999.

SW 846, Test Methods for Evaluating Solid Waste, 3rd Edition and updates (online), originally dated November 1986.

Standard Methods for the Examination of Water and Waste Water, American Public Health Association, 18th Edition 1992, and recent editions (online).

U.S. EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, U.S. EPA, EPA-540-R-04-004, OSWER 9240.1-45, October 2004.

U.S. EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, U.S. EPA, EPA-540-R-08-01, June 2008.

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Ohio EPA Rules (online).

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Methods for Evaluating the Attainment of Cleanup Standards, Volume 1: Soils and Solid Media, U.S. EPA, February 1989. EPA 230/02-89-042.

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Data Quality Objectives Decision Error Feasibility Trials Software (DEFT) – Users Guide, U.S. EPA, EPA QA/G-4D, EPA/240/B-01/007, September 2001.

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Guidance for Data Quality Assessment: Practical Methods for Data Analysis, U.S. EPA, EPA/600/R-96/084 (EPA QA/G-9), QAOO Update, July 2000.

Guidance on Systematic Planning Using the Data Quality Objectives Process, U.S. EPA, EPA QA/G-4, February 2006. EPA/240/B-06/001.

## **Health and Safety Plan**

American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices, ISBN: 1-882417-46-1, 2002.

NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, October 1985, DHHS (NIOSH) Publication No. 85-115.

NIOSH Pocket Guide to Chemical Hazards (DHHS-NIOSH Publication No. 2005-149, November 2005)

OSHA Regulations particularly in 29 CFR 1910 and 1926

OSHA Regulation 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response; U.S. Department of Labor (OSHA).

OSHA Regulation 29 CFR 1910.134, Respiratory Protection Standard;

U.S. EPA Standard Operating Safety Guides (Publication 9285.1-03, PB92-963414, June 1992 (chapters 1-3, 4-7, 8-11))

Section 111(c)(6) of CERCLA

**Landfills**

Conducting Remedial Investigations/Feasibility Studies for CERCLA Municipal Landfill Sites, OSWER Directive 9355.3-11, EPA/540/P-91/001, February 1991.

Presumptive Remedy for CERCLA Municipal Landfill Sites, U.S. EPA, EPA 540-F-93-035, September 1993.

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Land Use in the CERCLA Remedy Selection Process, U.S. EPA, OSWER 9355.7-04, May 25, 1995.

Reuse Assessments: A Tool To Implement The Superfund Land Use Directive, U.S. EPA, OSWER 9355.7-06P, June 4, 2001.

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Superfund Lead-Contaminated Residential Sites Handbook, U.S. EPA, OSWER 9285.7-50, August 2003.

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Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents In Ground Water, U.S. EPA, EPA/600/R-98/128, September 1998.

Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action and Underground Storage Tank Sites, U.S. EPA, OSWER Directive 9200.4-17P, April 1999.

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## Presumptive Remedies

Presumptive Remedies: Site Characterization and Technology Selection for CERCLA Sites with Volatile Organic Compounds in Soil, U.S. EPA, OSWER 9355.4-048FS, September 1993.

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Presumptive Response Strategy and Ex-Situ Treatment Technologies for Contaminated Ground Water at CERCLA Sites, U.S. EPA, EPA 540/R-96/023, OSWER 9283.1-12, October, 1996, final guidance.

User's Guide to the VOCs in Soils Presumptive Remedy, U.S. EPA, OSWER 9355.0-63FS; EPA 540/F-96/008; PB 96-963308, July, 1996.

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Data Quality Assessment: A Reviewer's Guide, (QA/G-9R), U.S. EPA, EPA/240/B-06/002, February, 2006.

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Guidance on Environmental Data Verification and Data Validation, U.S. EPA, EPA/240/R-02/004, November 2002.

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## RD/RA – General Guidance

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General Protocol for Demonstration of In Situ Bioremediation Technologies, ITRC Workgroup – In Situ Bioremediation Work Team, September 1998.

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Pump-and-Treat Ground-Water Remediation: A Guide for Decision Makers and Practitioners, U.S. EPA ORD, EPA/625/R-95/005, July, 1996.

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Technical Requirements for On-site Low Temperature Thermal Treatment of Non-Hazardous Soils Contaminated with Petroleum/Coal Tar/ Gas

Plant Wastes, Interstate Technology Regulatory Council (ITRC) Low Temperature Thermal Desorption Work Team, Final, May 1996.

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## **Sampling and Analysis**

A Rationale for the Assessment of Errors in the Sampling of Soils, U.S. EPA – Environmental Monitoring Systems Laboratory, EPA/600/4-90/013, July 1990.

Compendium of ERT Soil Sampling and Surface Geophysics Procedures, U.S. EPA, OSWER 9360.4-02, January 1991.

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### **Treatability Studies**

Guide for Conducting Treatability Studies Under CERCLA, U.S. EPA OSWER/ORD, EPA/540/R-92/071a, Final, October 1992.

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Guide for Conducting Treatability Studies Under CERCLA: Aerobic Biodegradation Remedy Screening, U.S. EPA Office of Research and Development, EPA/540/2-91/013A, Interim, July 1991.

Guidance on Specific Types of Treatability Studies, U.S. EPA (online).

### **Vapor Intrusion**

Methodology for Vapor Intrusion Assessment, Technical Decision Compendium, Ohio EPA DERR Remedial Response Program, April 2005.

Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance), U.S. EPA, EPA530-F-02-052, November 2002.

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### **Wetland (and Stream) Delineation and Restoration**

Addendum to Biological Criteria for the Protection of Aquatic Life: Volume II. Users Manual for Biological Field Assessment of Ohio Surface Waters. Ohio EPA, Division of Surface Water, 1989.

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Disclaimer: Please note that web links are not maintained.

March 15, 2010 updates

## **ATTACHMENT D**

**To be recorded with Deed  
Records – ORC § 317.08**

### **ENVIRONMENTAL COVENANT**

This Environmental Covenant is entered into by Marathon Oil Company (“Marathon” or “Owner”) and the Ohio Environmental Protection Agency (“Ohio EPA”) pursuant to Ohio Revised Code (“ORC”) §§ 5301.80 to 5301.92 for the purpose of subjecting the Property to the activity and use limitations set forth herein.

Whereas, this Environmental Covenant concerns property known as the former Marathon Oil Bulk Plant site, at 2300 West State Street, Fremont, Sandusky County, Ohio, Parcel # 34-50-00-6411-00. The property encompasses some 1.63 acres of land unoccupied and unused since this plant (#0279) was decommissioned in 1991.

Whereas, plant operations included the storage of leaded and unleaded gasoline, diesel fuel, heating oil and lubricating oil in seven above ground storage tanks (ASTs). Marathon arranged for the removal of all ASTs at the Site as part of the decommissioning process.

Whereas, Marathon entered into an administrative order on consent (“Consent Order”) with Ohio EPA on January 23, 1995 for the company to perform a remedial investigation/feasibility study (RI/FS) at the property. The Consent Order established cleanup levels for benzene, toluene, ethylbenzene, and total xylenes in both soil and ground water and lead in ground water.

Whereas, Marathon completed the RI/FS process with Ohio EPA’s oversight and in compliance with the Consent Order. Ohio EPA approved Marathon’s RI report on November 12, 2003 and FS on October 20, 2004. The RI/FS were the basis for the selection of the Ohio EPA’s preferred remedial alternative.

Whereas, the RI/FS revealed that releases of hazardous substances and petroleum detected in soil and ground water at the property appear to originate from one source area, which is within or near the area where the ASTs were located. Shallow ground water occurs within two to four feet below ground surface at the property.

Whereas, in a Decision Document dated December 23, 2008, Ohio EPA identified the remedy to address the contamination. The remedy (revised herein) includes ground water monitoring until the clean-up standards are achieved, alternate risk derived numerical standards (RDNS) approved by the Ohio EPA are achieved, or an Ohio EPA approved statistical evaluation demonstrates that the concentrations are stable or decreasing. In addition, the remedy includes construction activity protections and the establishment of activity and use limitations at the property until contaminant levels in ground water meet site cleanup levels or Ohio EPA approved RDNS.

Now therefore, Owner and Ohio EPA agree to the following:

1. Environmental Covenant. This instrument is an environmental covenant developed and executed pursuant to ORC §§ 5301.80 to 5301.92.

2. Property. This Environmental Covenant concerns an approximately 1.63-acre tract of real property owned by Marathon, located at 2300 West State Street, Fremont, in Sandusky County, Ohio, and more particularly described in Exhibit A attached hereto and hereby incorporated by reference herein ("Property").

3. Owner. Marathon with its corporate office located at 539 South Main Street, Findlay, Ohio 45840, is the owner of the Property.

4. Holder. Owner, whose address is listed above, is the holder of this Environmental Covenant.

5. Activity and Use Limitations. As part of the remedial action described in the Decision Document, Owner hereby imposes and agrees to comply with the following activity and use limitations:

A. Limitation for Commercial or Industrial Land Uses. The Property is hereby limited to commercial or industrial land use only, as defined in OAC 3745-300-08(C)(2)(c)(ii) and (C)(2)(c)(iii) (effective March 1, 2009).

OAC 3745-300-08(C)(2)(c)(ii) defines *commercial land use* as "land use with potential exposure of adult workers during a business day and potential exposure of adults and children who are customers, patrons, or visitors to commercial facilities during the business day. Commercial land use has potential exposure of adults to dermal contact with soil, inhalation of vapors and particles from soil and ingestion of soil. Examples of commercial land uses include but are not limited to warehouses; retail gasoline stations; retail warehouses; repair and service establishments for appliances and other

goods; professional offices; hospitals and clinics; religious institutions; hotels; motels; and parking facilities.”

OAC 3745-300-08(C)(2)(c)(iii) defines *industrial land use* as “land use with potential exposure of adult workers during a business day and potential exposures of adults and children who are visitors to industrial facilities during the business day. Industrial land use has potential exposure of adults to dermal contact with soil, inhalation of vapors and particles from soil and ingestion of soil. Examples of industrial land uses include, but are not limited to: lumberyards; power plants; manufacturing facilities such as metalworking shops, plating shops, blast furnaces, coke plants, oil refineries, brick factories, chemical plants and plastics plants; assembly plants; non-public airport areas; limited access highways; railroad switching yards; and marine port facilities.”

- B. Limitation Prohibiting Ground Water Extraction and Use. Ground water underlying the Property shall not be extracted or used for any purpose, potable or otherwise, except for investigation, monitoring or remediation of the ground water, or in conjunction with construction or excavation activities or maintenance of subsurface utilities (including trench dewatering.)
- C. Restriction Applicable to Excavation or Construction. Excavation or construction at the Property at depths below four (4) feet of ground surface shall not be performed without implementation of an Ohio EPA-approved risk management plan to protect workers from exposure to contamination in subsurface media at the Property.

If any event or action by or on behalf of a person who owns an interest in or holds an encumbrance on the Property, identified in the Running with the Land paragraph below, constitutes a breach of the activity and use limitations, Owner or Transferee shall notify Ohio EPA within thirty (30) days of becoming aware of the event or action, and shall remedy the breach of the activity and use limitations within sixty (60) days of becoming aware of the event or action, or such other time frame as may be agreed to by the Owner or Transferee and Ohio EPA.

6. Running with the Land. This Environmental Covenant shall be binding upon the Owner and all assigns and successors in interest, including any Transferee, and shall run with the land, pursuant to ORC § 5301.85, subject to amendment or termination as set forth herein. The term “Transferee,” as used in this Environmental Covenant, shall mean any future owner of any interest in the Property or any portion thereof, including, but not limited to, owners of an interest in fee simple, mortgagees, easement holders, and/or lessees.

7. Compliance Enforcement. Compliance with this Environmental Covenant may be enforced pursuant to ORC § 5301.91. Failure to timely enforce compliance with

this Environmental Covenant or the activity and use limitations contained herein by any party shall not bar subsequent enforcement by such party and shall not be deemed a waiver of the party's right to take action to enforce any non-compliance. Nothing in this Environmental Covenant shall restrict the Director of Ohio EPA from exercising any authority under applicable law.

8. Rights of Access. Owner hereby grants to Ohio EPA, its agents, contractors, and employees the right of access to the Property for implementation or enforcement of this Environmental Covenant.

9. Compliance Reporting. Owner or any Transferee shall submit to Ohio EPA, upon written request by Ohio EPA, written documentation verifying that the activity and use limitations remain in place and are being complied with.

10. Notice upon Conveyance. Each instrument hereafter conveying any interest in the Property or any portion of the Property shall contain a notice of the activity and use limitations set forth in this Environmental Covenant, and provide the recorded location of this Environmental Covenant. The notice shall be substantially in the following form:

THE INTEREST CONVEYED HEREBY IS SUBJECT TO AN ENVIRONMENTAL COVENANT, DATED \_\_\_\_\_, 20\_\_, RECORDED IN THE DEED OR OFFICIAL RECORDS OF THE SANDUSKY COUNTY RECORDER ON \_\_\_\_\_, 20\_\_, IN [DOCUMENT \_\_\_\_, or BOOK \_\_\_\_, PAGE \_\_\_\_]. THE ENVIRONMENTAL COVENANT LIMITS THE PROPERTY TO: COMMERCIAL OR INDUSTRIAL LAND USES, PROHIBITS GROUND WATER EXTRACTION AND USE, AND CONTAINS A RESTRICTION APPLICABLE TO EXCAVATION OR CONSTRUCTION, AS FURTHER DESCRIBED IN THE ENVIRONMENTAL COVENANT.]

Owner shall notify Ohio EPA within ten (10) days after each conveyance of an interest in any portion of the Property. Owner's notice shall include the name, address, and telephone number of the Transferee, a copy of the deed or other documentation evidencing the conveyance, and a survey map that shows the boundaries of the property being transferred.

11. Representations and Warranties. Owner hereby represents and warrants to the other signatories hereto:

- A. that Owner is the sole owner of the Property;
- B. that Owner holds fee simple title to the Property which is subject to the interests or encumbrances identified in Exhibit B attached hereto and incorporated by reference herein;

- C. that Owner has the power and authority to enter into this Environmental Covenant, to grant the rights and interests herein provided and to carry out all obligations hereunder;
- D. that Owner has identified all other persons that own an interest in or hold an encumbrance on the Property and notified such persons of the Owner's intention to enter into this Environmental Covenant; and
- E. that this Environmental Covenant will not materially violate or contravene or constitute a material default under any other agreement, document or instrument to which Owner is a party or by which Owner may be bound or affected.

12. Amendment or Termination. This Environmental Covenant may be amended or terminated by consent of all of the following: the Owner or a Transferee, and the Ohio EPA, pursuant to ORC § 5301.90 and other applicable law. The term, "Amendment," as used in this Environmental Covenant, shall mean any changes to the Environmental Covenant, including the activity and use limitations set forth herein, or the elimination of one or more activity and use limitations when there is at least one limitation remaining. The term, "Termination," as used in this Environmental Covenant, shall mean the elimination of all activity and use limitations set forth herein and all other obligations under this Environmental Covenant.

This Environmental Covenant may be amended or terminated only by a written instrument duly executed by the Director of Ohio EPA and the Owner or Transferee of the Property or portion thereof, as applicable. Within thirty (30) days of signature by all requisite parties on any amendment or termination of this Environmental Covenant, Owner or Transferee shall file such instrument for recording with the Sandusky County Recorder's Office, and shall provide a file- and date-stamped copy of the recorded instrument to Ohio EPA.

13. Severability. If any provision of this Environmental Covenant is found to be unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired.

14. Governing Law. This Environmental Covenant shall be governed by and interpreted in accordance with the laws of the State of Ohio.

15. Recordation. Within thirty (30) days after the date of the final required signature upon this Environmental Covenant, Owner shall file this Environmental Covenant for recording, in the same manner as a deed to the Property, with the Sandusky County Recorder's Office.

16. Effective Date. The effective date of this Environmental Covenant shall be the date upon which the fully executed Environmental Covenant has been recorded as a deed record for the Property with the Sandusky County Recorder.

17. Distribution of Environmental Covenant. Owner shall distribute a file- and date-stamped copy of the recorded Environmental Covenant to: Ohio EPA and the city of Fremont.

18. Notice. Unless otherwise notified in writing by or on behalf of the current owner of Ohio EPA, any document or communication required by this Environmental Covenant shall be submitted to:

As to Ohio EPA:

Division of Emergency and Remedial Response  
Ohio EPA  
P.O. Box 1049  
Columbus, OH 43216-1049  
Attn.: Coordinator for Former Marathon Bulk Plant site

Division of Emergency and Remedial Response  
Ohio EPA – Northwest District Office  
347 North Dunbridge Road  
Bowling Green, OH 43402  
Attn.: Coordinator for Former Marathon Bulk Plant site

As to Marathon:

Brice Birkhofer  
Marathon Petroleum Company LP  
539 South Main Street  
Findlay, Ohio 45840-3295

With copies to:  
Sherry L. Hesselbein, Attorney  
Marathon Petroleum Company LP  
539 South Main Street  
Findlay, Ohio 45840





EXHIBIT A

DESCRIPTION

Situated in the City of Fremont, County of Sandusky and State of Ohio: and being Inlot 6411 and being Inlot 6410 excepting the southerly 200 feet of Inlot 6410.

2300 West State St.; Fremont, OH  
PPN: 34-50-00-6411-00

## EXHIBIT B

### ENCUMBRANCES

Terms and provisions of restrictions, easements, setbacks and other conditions of record in Volume 18 of Maps, Page 57 of the Sandusky County Records.

Easement of record in Volume 132, Page 410, of the Sandusky County Records.

Easement of record in Volume 279, Page 497, of the Sandusky County Records.

Annex Agreement of record in Volume 392, Page 927, of the Sandusky County Records.

**To be recorded with Deed  
Records – ORC § 317.08**

### **ENVIRONMENTAL COVENANT**

This Environmental Covenant is entered into by Marathon Oil Company (“Marathon” or “Owner”) and the Ohio Environmental Protection Agency (“Ohio EPA”) pursuant to Ohio Revised Code (“ORC”) §§ 5301.80 to 5301.92 for the purpose of subjecting the Property to the activity and use limitations set forth herein.

Whereas, this Environmental Covenant concerns property known as the former Marathon Oil Bulk Plant site, at 2300 West State Street, Fremont, Sandusky County, Ohio, Parcel # 34-50-00-6411-00. The property encompasses some 1.63 acres of land unoccupied and unused since this plant (#0279) was decommissioned in 1991.

Whereas, plant operations included the storage of leaded and unleaded gasoline, diesel fuel, heating oil and lubricating oil in seven above ground storage tanks (ASTs). Marathon arranged for the removal of all ASTs at the Site as part of the decommissioning process.

Whereas, Marathon entered into an administrative order on consent (“Consent Order”) with Ohio EPA on January 23, 1995 for the company to perform a remedial investigation/feasibility study (RI/FS) at the property. The Consent Order established cleanup levels for benzene, toluene, ethylbenzene, and total xylenes in both soil and ground water and lead in ground water.

Whereas, Marathon completed the RI/FS process with Ohio EPA’s oversight and in compliance with the Consent Order. Ohio EPA approved Marathon’s RI report on November 12, 2003 and FS on October 20, 2004. The RI/FS were the basis for the selection of the Ohio EPA’s preferred remedial alternative.

Whereas, the RI/FS revealed that releases of hazardous substances and petroleum detected in soil and ground water at the property appear to originate from one source area, which is within or near the area where the ASTs were located. Shallow ground water occurs within two to four feet below ground surface at the property.

Whereas, in a Decision Document dated December 23, 2008, Ohio EPA identified the remedy to address the contamination. The remedy (revised herein) includes ground water monitoring until the clean-up standards are achieved, alternate risk derived numerical standards (RDNS) approved by the Ohio EPA are achieved, or an Ohio EPA approved statistical evaluation demonstrates that the concentrations are stable or decreasing. In addition, the remedy includes construction activity protections and the establishment of activity and use limitations at the property until contaminant levels in ground water meet site cleanup levels or Ohio EPA approved RDNS.

Now therefore, Owner and Ohio EPA agree to the following:

1. Environmental Covenant. This instrument is an environmental covenant developed and executed pursuant to ORC §§ 5301.80 to 5301.92.

2. Property. This Environmental Covenant concerns an approximately 1.63-acre tract of real property owned by Marathon, located at 2300 West State Street, Fremont, in Sandusky County, Ohio, and more particularly described in Exhibit A attached hereto and hereby incorporated by reference herein ("Property").

3. Owner. Marathon with its corporate office located at 539 South Main Street, Findlay, Ohio 45840, is the owner of the Property.

4. Holder. Owner, whose address is listed above, is the holder of this Environmental Covenant.

5. Activity and Use Limitations. As part of the remedial action described in the Decision Document, Owner hereby imposes and agrees to comply with the following activity and use limitations:

A. Limitation for Commercial or Industrial Land Uses. The Property is hereby limited to commercial or industrial land use only, as defined in OAC 3745-300-08(C)(2)(c)(ii) and (C)(2)(c)(iii) (effective March 1, 2009).

OAC 3745-300-08(C)(2)(c)(ii) defines *commercial land use* as "land use with potential exposure of adult workers during a business day and potential exposure of adults and children who are customers, patrons, or visitors to commercial facilities during the business day. Commercial land use has potential exposure of adults to dermal contact with soil, inhalation of vapors and particles from soil and ingestion of soil. Examples of commercial land uses include but are not limited to warehouses; retail gasoline stations; retail warehouses; repair and service establishments for appliances and other

goods; professional offices; hospitals and clinics; religious institutions; hotels; motels; and parking facilities.”

OAC 3745-300-08(C)(2)(c)(iii) defines *industrial land use* as “land use with potential exposure of adult workers during a business day and potential exposures of adults and children who are visitors to industrial facilities during the business day. Industrial land use has potential exposure of adults to dermal contact with soil, inhalation of vapors and particles from soil and ingestion of soil. Examples of industrial land uses include, but are not limited to: lumberyards; power plants; manufacturing facilities such as metalworking shops, plating shops, blast furnaces, coke plants, oil refineries, brick factories, chemical plants and plastics plants; assembly plants; non-public airport areas; limited access highways; railroad switching yards; and marine port facilities.”

- B. Limitation Prohibiting Ground Water Extraction and Use. Ground water underlying the Property shall not be extracted or used for any purpose, potable or otherwise, except for investigation, monitoring or remediation of the ground water, or in conjunction with construction or excavation activities or maintenance of subsurface utilities (including trench dewatering.)
- C. Restriction Applicable to Excavation or Construction. Excavation or construction at the Property at depths below four (4) feet of ground surface shall not be performed without implementation of an Ohio EPA-approved risk management plan to protect workers from exposure to contamination in subsurface media at the Property.

If any event or action by or on behalf of a person who owns an interest in or holds an encumbrance on the Property, identified in the Running with the Land paragraph below, constitutes a breach of the activity and use limitations, Owner or Transferee shall notify Ohio EPA within thirty (30) days of becoming aware of the event or action, and shall remedy the breach of the activity and use limitations within sixty (60) days of becoming aware of the event or action, or such other time frame as may be agreed to by the Owner or Transferee and Ohio EPA.

6. Running with the Land. This Environmental Covenant shall be binding upon the Owner and all assigns and successors in interest, including any Transferee, and shall run with the land, pursuant to ORC § 5301.85, subject to amendment or termination as set forth herein. The term “Transferee,” as used in this Environmental Covenant, shall mean any future owner of any interest in the Property or any portion thereof, including, but not limited to, owners of an interest in fee simple, mortgagees, easement holders, and/or lessees.

7. Compliance Enforcement. Compliance with this Environmental Covenant may be enforced pursuant to ORC § 5301.91. Failure to timely enforce compliance with

this Environmental Covenant or the activity and use limitations contained herein by any party shall not bar subsequent enforcement by such party and shall not be deemed a waiver of the party's right to take action to enforce any non-compliance. Nothing in this Environmental Covenant shall restrict the Director of Ohio EPA from exercising any authority under applicable law.

8. Rights of Access. Owner hereby grants to Ohio EPA, its agents, contractors, and employees the right of access to the Property for implementation or enforcement of this Environmental Covenant.

9. Compliance Reporting. Owner or any Transferee shall submit to Ohio EPA, upon written request by Ohio EPA, written documentation verifying that the activity and use limitations remain in place and are being complied with.

10. Notice upon Conveyance. Each instrument hereafter conveying any interest in the Property or any portion of the Property shall contain a notice of the activity and use limitations set forth in this Environmental Covenant, and provide the recorded location of this Environmental Covenant. The notice shall be substantially in the following form:

THE INTEREST CONVEYED HEREBY IS SUBJECT TO AN ENVIRONMENTAL COVENANT, DATED\_\_\_\_\_, 20\_\_\_, RECORDED IN THE DEED OR OFFICIAL RECORDS OF THE SANDUSKY COUNTY RECORDER ON \_\_\_\_\_, 20\_\_\_, IN [DOCUMENT \_\_\_\_, or BOOK\_\_\_, PAGE \_\_\_\_]. THE ENVIRONMENTAL COVENANT LIMITS THE PROPERTY TO: COMMERCIAL OR INDUSTRIAL LAND USES, PROHIBITS GROUND WATER EXTRACTION AND USE, AND CONTAINS A RESTRICTION APPLICABLE TO EXCAVATION OR CONSTRUCTION, AS FURTHER DESCRIBED IN THE ENVIRONMENTAL COVENANT.]

Owner shall notify Ohio EPA within ten (10) days after each conveyance of an interest in any portion of the Property. Owner's notice shall include the name, address, and telephone number of the Transferee, a copy of the deed or other documentation evidencing the conveyance, and a survey map that shows the boundaries of the property being transferred.

11. Representations and Warranties. Owner hereby represents and warrants to the other signatories hereto:

- A. that Owner is the sole owner of the Property;
- B. that Owner holds fee simple title to the Property which is subject to the interests or encumbrances identified in Exhibit B attached hereto and incorporated by reference herein;

- C. that Owner has the power and authority to enter into this Environmental Covenant, to grant the rights and interests herein provided and to carry out all obligations hereunder;
- D. that Owner has identified all other persons that own an interest in or hold an encumbrance on the Property and notified such persons of the Owner's intention to enter into this Environmental Covenant; and
- E. that this Environmental Covenant will not materially violate or contravene or constitute a material default under any other agreement, document or instrument to which Owner is a party or by which Owner may be bound or affected.

12. Amendment or Termination. This Environmental Covenant may be amended or terminated by consent of all of the following: the Owner or a Transferee, and the Ohio EPA, pursuant to ORC § 5301.90 and other applicable law. The term, "Amendment," as used in this Environmental Covenant, shall mean any changes to the Environmental Covenant, including the activity and use limitations set forth herein, or the elimination of one or more activity and use limitations when there is at least one limitation remaining. The term, "Termination," as used in this Environmental Covenant, shall mean the elimination of all activity and use limitations set forth herein and all other obligations under this Environmental Covenant.

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15. Recordation. Within thirty (30) days after the date of the final required signature upon this Environmental Covenant, Owner shall file this Environmental Covenant for recording, in the same manner as a deed to the Property, with the Sandusky County Recorder's Office.

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17. Distribution of Environmental Covenant. Owner shall distribute a file- and date-stamped copy of the recorded Environmental Covenant to: Ohio EPA and the city of Fremont.

18. Notice. Unless otherwise notified in writing by or on behalf of the current owner or Ohio EPA, any document or communication required by this Environmental Covenant shall be submitted to:

As to Ohio EPA:

Division of Emergency and Remedial Response  
Ohio EPA – Central Office  
P.O. Box 1049  
Columbus, OH 43216-1049  
Attn.: Coordinator for Former Marathon Bulk Plant site  
Or, file electronically at: [records@epa.state.oh.us](mailto:records@epa.state.oh.us)

Division of Emergency and Remedial Response  
Ohio EPA – Northwest District Office  
347 North Dunbridge Road  
Bowling Green, OH 43402  
Attn.: Coordinator for Former Marathon Bulk Plant site

As to Marathon:

Brice Birkhofer  
Marathon Petroleum Company LP  
539 South Main Street  
Findlay, Ohio 45840-3295

With copies to:  
Sherry L. Hesselbein, Attorney  
Marathon Petroleum Company LP  
539 South Main Street  
Findlay, Ohio 45840





EXHIBIT A

DESCRIPTION

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2300 West State St.; Fremont, OH  
PPN: 34-50-00-6411-00

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