



UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION III

PERMIT
FOR CORRECTIVE ACTION

FMC CORPORATION
BALTIMORE, MARYLAND
EPA ID NO. MDD0030781875

Permittee: FMC Corporation
Permit Number: MDD0030781875
Facility: 1701 East Patapsco Avenue, Baltimore, Maryland

INTRODUCTION

The United States Environmental Protection Agency (EPA) under the authority of the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976 (RCRA) and the Hazardous and Solid Waste Amendments of 1984 (HSWA), 42 U.S.C. § 6901 *et seq.*, and the regulations promulgated thereunder and set forth at 40 C.F.R. Parts 260-271, is hereby issuing this permit for corrective action (Permit) to FMC Corporation (Permittee) for its facility located at 1701 East Patapsco Avenue, Baltimore, Maryland (Facility).

The complete RCRA permit for purposes of Section 3005(c) of RCRA, 42 U.S.C. §6925(c), consists of two portions: this Permit and the Controlled Hazardous Substance permit (Permit Number A-023) issued by the Maryland Department of the Environment (MDE) on October 1, 2006 (MDE Permit). This Permit addresses the provisions of HSWA and will be enforced by EPA. The MDE Permit addresses the provisions of the Code of Maryland Regulations, (COMAR), Title 26, Subtitle 13, for which the State of Maryland (State) has received authorization under Section 3006(b) of RCRA, 42 U.S.C. § 6926(b), to carry out such program in lieu of the federal hazardous waste management program under RCRA. The MDE Permit will be enforced by MDE, but EPA may also exercise its enforcement discretion if and when appropriate.

This Permit is based on information provided to EPA by the Permittee and MDE. Section 3005(c)(3) of RCRA provides EPA the authority to review and amend the Permit at any time. Any inaccuracies found in the information submitted by the Permittee may be grounds for the termination, modification or revocation and reissuance of this Permit (see 40 C.F.R. §§ 270.41, 270.42 and 270.43). The Permittee must inform EPA of any deviation from or changes in the submitted information which would affect the Permittee's ability to comply with the applicable statutes, regulations or permit conditions.

The Permittee shall comply with all terms and conditions set forth in this Permit, including the attachments hereto. Additionally, the Permittee shall comply with all applicable federal regulations, including 40 C.F.R. Parts 260 through 264, Part 266, Part 268, Part 270, Part 273 and Part 124. Nothing in this Permit shall limit EPA's authority to undertake, or require any person to undertake, response action or corrective action under any law, including, but not limited to, Section 104 or 106 of CERCLA, 42 U.S.C. §§ 9604 and 9606, and Section 7003 of RCRA, 42 U.S.C. § 6973. Nor shall any permit condition relieve the Permittee of any obligations under any law, including, but not limited to, Section 103 of CERCLA, 42 U.S.C. § 9603 to report releases of hazardous wastes, constituents, or substances to, at, or from the Facility.

This Permit is effective on January 30, 2013 and shall remain in effect until January 30, 2023 unless revoked and reissued, modified or terminated in accordance with 40 C.F.R. §§270.41, 270.42, 270.43 or continued in accordance with 40 C.F.R. §270.51(a).

PART I - STANDARD CONDITIONS

A. DEFINITIONS

Pursuant to the authority granted by Section 3005(c)(3) of RCRA, 40 C.F.R. § 270.32(b)(2) and for the purposes of this Permit, terms used herein shall have the same meaning as those set forth in 40 C.F.R. Parts 260 through 264, 268 and 270, unless this permit specifically states otherwise. Where terms are not otherwise defined, the meaning associated with such terms shall be as defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the terms.

The following definitions also apply to this Permit:

1. Area of Concern - an area of concern is hereby defined for purposes of this Permit to mean an area at the facility or an off-site area, which is not at this time known to be a solid waste management unit, where hazardous waste and/or hazardous constituents are present or are suspected to be present as a result of a release from the Facility.
2. Days – except as otherwise provided herein, calendar days. If any requirement under the terms of this Permit would fall on a Saturday, Sunday or federal holiday, then the requirements shall be due on the following day.
3. Regional Administrator – the Regional Administrator for EPA Region III or his authorized representative.
4. Release - any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment.

B. DUTIES AND REQUIREMENTS

1. Duty to Comply

The Permittee shall comply with all conditions of this Permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit issued under 40 C.F.R. § 270.61 or the analogous provisions of the State's authorized hazardous waste management regulations. Any other permit noncompliance constitutes a violation of RCRA and is grounds for enforcement action; permit termination, revocation and reissuance, or modification, or for denial

of a permit renewal application. (40 C.F.R. § 270.30(a))

2. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, the Permittee must apply for and obtain a new permit. (40 C.F.R. § 270.30(b))

3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit. (40 C.F.R. § 270.30(c))

4. Duty to Mitigate

In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment. (40 C.F.R. § 270.30(d))

5. Duty to Properly Operate and Maintain

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit (40 C.F.R. § 270.30(e))

6. Duty to Monitor and Record Results

Pursuant to 40 C.F.R. § 270.30(j), the Permittee shall comply with the following requirements:

- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. All sampling and analyses shall be of adequate quality, scientifically valid, of known precision and accuracy, and of acceptable completeness, representativeness and comparability. Laboratory analysis of each sample must be performed using an appropriate method for testing the parameter(s) of interest taking into account the sample matrix. The test methods found in the EPA publication Test Methods for

Evaluating Solid Waste. Physical/Chemical Methods (SW-846), 3rd Edition, as updated, shall be used for: the Toxicity Characteristic analytes (40 C.F.R. § 261.24); the Free Liquids Test (Method 9095) used to determine if free liquid is a component of a waste as a specific requirement for bulk and containerized wastes (40 C.F.R. § 264.314(c)); and the chemical analysis of wastes for hazardous waste incineration permits. (40 C.F.R. § 270.62(b)(2)(i)(C))

- b. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this Permit, the certification required by 40 C.F.R. § 264.73(b)(9) and records of all data used to complete the application for this Permit for a period of at least three (3) years from the date of the sample, measurement, report, certification or application. This period may be extended by request of the Regional Administrator at any time and are automatically extended during the course of any unresolved enforcement action regarding this Facility. (40 C.F.R. § 264.74) The Permittee shall maintain records from all groundwater monitoring wells and associated groundwater surface elevations for the active life of the Facility, and for disposal facilities, for the post-closure care period as well. (40 C.F.R. § 270.30(j))
- c. Records of monitoring information shall specify:
 - (1) The date, exact place, and time of sampling or measurements;
 - (2) The individual(s) who performed the sampling or measurements;
 - (3) The date(s) analyses were performed;
 - (4) The individual(s) who performed the analyses;
 - (5) The analytical techniques or methods used; and
 - (6) The results of such analyses.

7. Duty to Provide Information

The Permittee shall furnish, within a reasonable specified time, any relevant information which the Regional Administrator may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Permittee shall also furnish to the Regional Administrator upon request, copies of records required to be kept by this Permit. (40 C.F.R. §§ 270.30(h) and 264.74(a))

8. Duty to Allow Inspection and Entry

Pursuant to 40 C.F.R. § 270.30(i), the Permittee shall allow the Regional Administrator, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- a. Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and
- d. Sample or monitor, at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by RCRA, any substances or parameters at any location.

9. Duty to Submit Certified Documents

- a. Except for submissions for which the Permittee is asserting a business confidentiality claim pursuant to Paragraph 9.d. and e., below, 1 hardcopy and 1 electronic copy of all draft and final plans, reports, notifications or other documents which are required by this Permit to be submitted to the Regional Administrator, shall be sent Certified Mail, Return Receipt Requested, overnight mail, or hand-carried to:

Office of Remediation (3LC20)
EPA Region III
1650 Arch Street
Philadelphia, Pennsylvania 19103

In addition, one copy of such submission shall be sent to:

Maryland Department of the Environment
Waste Diversion and Utilization Program (LMA)
1800 Washington Blvd., Suite 610
Baltimore, MD 21230-1719

- b. Each report, notification or other submission shall reference the Permittee's name, permit number and Facility address.

- c. All applications, reports or other information submitted to the Regional Administrator shall be signed and certified as described in 40 C.F.R. §§ 270.11 and 270.30(k).
- d. The Permittee may assert a business confidentiality claim covering all or part of any information submitted to EPA pursuant to this Permit in the manner described in 40 C.F.R. § 2.203(b). Any assertion of confidentiality shall be adequately substantiated by the Permittee when the assertion is made in accordance with 40 C.F.R. § 2.204(e)(4). Information subject to a confidentiality claim shall be disclosed only to the extent allowed by, and in accordance with, the procedures set forth in 40 C.F.R. Part 2, Subpart B. If no such confidentiality claim accompanies the information when it is submitted to EPA, it may be made available to the public by EPA without further notice to the Permittee. The Permittee shall not assert any confidentiality claim with regard to any physical, sampling, monitoring, or analytical data.
- e. One hardcopy of all submissions for which the Permittee is asserting a business confidentiality claim pursuant to Paragraph 9.d, above, shall be sent Certified Mail, Return Receipt Requested, overnight mail, or hand-carried to:

Office of Remediation (3LC20)
EPA Region III
1650 Arch Street
Philadelphia, Pennsylvania 19103

10. Duty to Maintain Documents at the Facility

Pursuant to 40 C.F.R. § 264.73, the Permittee shall maintain at the Facility (or other location approved by the Regional Administrator) during the term of this Permit, including any reissued permit, all documents and raw data, such as laboratory reports, drilling logs, and other supporting information generated from investigations required by this permit including amendments, revisions and modifications to these documents.

11. Duty to Minimize Waste

The Permittee shall certify no less often than annually that the Permittee has a program in place to reduce the volume and toxicity of hazardous waste that the Permittee generates to the degree determined by the Permittee to be economically practicable; and the proposed method of treatment, storage or disposal is the practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment. The Permittee shall maintain

each such certification of waste minimization at the Facility until closure of such Facility. (40 C.F.R. §264.73(b)(9))

12. Duty to Comply with the Land Disposal Restrictions

All activities of the Permittee which involve the land disposal of hazardous waste are subject to the provisions of RCRA § 3004(b)-(m), 42 U.S.C. § 6924(b)-(m), and applicable regulations thereunder at 40 C.F.R. Part 268.

13. Reporting Requirements

a. Planned Changes

The Permittee shall give notice to the Regional Administrator, as soon as possible, of any planned physical alterations or additions to the Facility. (40 C.F.R. § 270.30(l)(1))

b. Anticipated Noncompliance

The Permittee shall give advance notice to the Regional Administrator of any planned changes in the Facility or activity which may result in noncompliance with permit requirements. (40 C.F.R. § 270.30(l)(2))

c. Monitoring Reports

Monitoring reports shall be reported at the intervals specified elsewhere in this Permit. (40 C.F.R. § 270.30(l)(4))

d. Noncompliance with Schedules for Interim and Final Requirements

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than fourteen (14) days following each schedule date. (40 C.F.R. § 270.30(l)(5))

e. Twenty-four Hour Reporting

The Permittee shall report to the Regional Administrator any noncompliance which may endanger health or the environment within 24 hours from the time the Permittee becomes aware of the circumstances. The report shall contain the information listed in 40 C.F.R. § 270.30(l)(6).

f. Manifest Discrepancy Report

If a significant discrepancy in a manifest is discovered, the Permittee must attempt to reconcile the discrepancy. If not resolved within fifteen (15) days, the Permittee shall submit a letter report including a copy of the manifest, to the Regional Administrator. (40 C.F.R. § 270.30(1)(7))

g. Unmanifested Waste Report

The Permittee shall submit a report to the Regional Administrator within 15 days of receipt of unmanifested waste. (40 C.F.R. § 270.30(1)(8))

h. Biennial Report

The Permittee shall submit a biennial report covering Facility activities during odd numbered calendar years. (40 C.F.R. § 270.30(1)(9))

i. Other Noncompliance

The Permittee shall report all other instances of noncompliance not otherwise required to be reported above, at the time monitoring reports are submitted. The reports shall contain the information listed in 40 C.F.R. § 270.30(1)(6). (40 C.F.R. § 270.30(1)(10))

j. Failure to Submit Relevant and/or Accurate Information

Whenever the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Regional Administrator, the Permittee shall notify the Regional Administrator of such failure within seven (7) days of becoming aware of such deficiency or inaccuracy. The Permittee shall submit the correct or additional information to the Regional Administrator within fourteen (14) days of becoming aware of the deficiency or inaccuracy (40 C.F.R. § 270.30(1)(11)). Failure to submit the information required in this Permit or misrepresentation of any submitted information is grounds for termination of this Permit. (40 C.F.R. § 270.43)

C. APPROVAL/DISAPPROVAL OF SUBMISSIONS

EPA will review the plans, reports, schedules and other documents (hereinafter collectively referred to as "submissions") submitted by the Permittee which require EPA approval. EPA will notify the Permittee in writing of EPA's approval or disapproval of each submission.

Each submission required by this Permit is, upon approval by the Regional Administrator, incorporated into this Permit. Any noncompliance with such EPA-approved submission shall be deemed noncompliance with this Permit.

In the event of EPA disapproval in whole or in part of any submission, EPA shall specify the deficiencies in writing. Such disapproval shall not be subject to the Dispute Resolution provision set forth in permit condition I.D., immediately below, of this Permit. The Permittee shall modify the submission to correct/address the specified deficiencies within a reasonable time period established by EPA taking into account the tasks to be performed, and submit the revised submission to EPA for approval. If the revised submission is disapproved, EPA will notify the Permittee of the deficiencies in writing and specify a schedule for the Permittee to correct the deficiencies and resubmit the submission to EPA. The Permittee shall correct the deficiencies as directed by EPA and forward the revised submission to EPA within the time period specified by EPA. In the event the Permittee disagrees with EPA's disapproval of the revised submission the Permittee shall notify EPA in writing and the disagreement shall be resolved in accordance with the Dispute Resolution provision in permit condition I.D. of the Permit.

D. DISPUTE RESOLUTION

Except as otherwise provided in this Permit, in the event the Permittee disagrees, in whole or in part, with EPA disapproval of any submission required by this Permit, the Permittee shall notify EPA in writing of its objections, and the basis therefore, within twenty-one (21) days of receipt of EPA's disapproval.

Such notice shall set forth the specific matters in dispute, the basis for the Permittee's belief that its position is consistent with the permit requirements, and any supporting documentation.

EPA and the Permittee shall have an additional twenty-one (21) days from EPA receipt of the notification to meet or confer to resolve any dispute. In the event agreement is reached, the Permittee shall submit the revised submission and implement the same in accordance with such agreement.

In the event EPA and the Permittee are not able to reach agreement within this twenty-one (21)-day period, the Permittee shall have the opportunity to submit written comments regarding EPA's disapproval, and receive a written decision from the EPA Regional Administrator or his delegate (e.g., the Division Director or the Office Director) regarding the Permittee's objection. EPA will notify the Permittee in writing of its decision and the Permittee shall comply with the terms and conditions of EPA's decision. The Permittee does not waive its right to assert any and all available defenses in a proceeding to enforce this permit, nor does it waive any statutory or regulatory rights it may have, if any, to affirmatively challenge EPA's decision in the dispute.

E. EFFECT OF PERMIT

1. This Permit authorizes only the management of hazardous waste expressly described in this Permit and does not authorize any other management of hazardous waste.
2. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege, nor does it authorize any injury to persons or property, or invasion of other private rights, or any infringement of State or local laws or regulations. (40 C.F.R. §§ 270.30(g) and 270.4(b) and (c)). Compliance with this Permit during its term constitutes compliance with Subtitle C of RCRA, except for those requirements not included in the Permit which are described in 40 C.F.R. § 270.4(a)(1)(i)-(iv). However, compliance with the terms of this Permit does not constitute a defense to any action brought under Section 7003 of RCRA, 42 U.S.C. § 6973, Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended 42 U.S.C. §9606(a) (commonly known as Superfund), or any other law governing protection of public health or welfare or the environment.
3. Nothing contained herein shall in any way be deemed to waive the Permittee's obligation to comply with 40 C.F.R. Part 270, Subpart C, and applicable regulations set forth at 40 C.F.R. Part 124.

F. PERMIT MODIFICATION, REVOCATION AND REISSUANCE

1. This Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request for a permit modification, revocation and reissuance, or termination or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay any permit condition. (40 C.F.R. § 270.30(f)). Review of any application for a permit renewal shall consider improvements in the state of control and measurement technology, as well as changes in applicable regulations and laws. (RCRA § 3005(c)(3), 42 U.S.C. § 6925(c)(3))
2. The Regional Administrator will modify the Permit in accordance with 40 C.F.R. § 270.41 and Section 3005(c) of RCRA in the event that investigations required in this Permit, or any other information available to the Regional Administrator, identify solid waste management units (SWMUs) that require corrective measures. The modified permit will include assurances of financial responsibility for completing such corrective action. (40 C.F.R. § 264.101(b)). This paragraph does not limit the Regional Administrator's authority to otherwise modify this Permit in accordance with 40 C.F.R. Part 270, Subpart D.
3. This Permit may be modified if the Regional Administrator determines good cause exists for modification as set forth in 40 C.F.R. § 270.41.

G. PERMIT EXPIRATION AND CONTINUANCE

1. Pursuant to 40 C.F.R. § 270.50, this Permit shall be effective for a fixed term not to exceed ten years. Pursuant to 40 C.F.R. § 270.51, this Permit and all conditions herein will remain in effect beyond the Permit's expiration date if the Permittee has submitted a timely and complete application for a new permit (see 40 C.F.R. §§ 270.10 and 270.13 - 270.29) and, through no fault of the Permittee, the Regional Administrator has not issued a new permit under 40 C.F.R. § 124.15 on or before the expiration date of this Permit. In addition, each permit for a land disposal facility shall be reviewed by the Regional Administrator five years after the date of permit issuance or reissuance and shall be modified as necessary, as provided in 40 C.F.R. § 270.41. (40 C.F.R. § 270.50(d))
2. If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, the Permittee must submit a complete application for a new permit at least 180 days before this Permit expires, unless permission for a later date has been granted by the Regional Administrator. (40 C.F.R. §§ 270.10(h) and 270.30(b))
3. The corrective action obligations contained in this Permit shall continue regardless of whether the Permittee continues to operate or ceases operation and closes the Facility. The Permittee is obligated to complete Facility-wide corrective action under the conditions of a RCRA permit regardless of the operational status of the Facility. The Permittee must submit an application for a new permit at least 180 days before this permit expires pursuant to 40 C.F.R. § 270.10(h), unless the permit has been modified to terminate the corrective action schedule of compliance and the Permittee has been released from the requirements for financial assurance for corrective action.

H. TRANSFER OF PERMIT

1. This Permit is not transferable to any person, except after notice to the Regional Administrator. (40 C.F.R. § 270.30(1)(3)). The Permit may be transferred by the Permittee to a new owner or operator only if the Permit has been modified or revoked and reissued under 40 C.F.R. § 270.40(b) and 270.42(a) to identify the new Permittee and incorporate such other requirements as may be necessary under the appropriate Act. (40 C.F.R. § 270.40). The Regional Administrator may require modification or revocation and reissuance of the Permit to change the name of the Permittee and incorporate such other requirements as may be necessary under RCRA. (40 C.F.R. § 270.30(1)(3))
2. Before transferring ownership or operation of the Facility during its operating life, the Permittee transferring its interest in the Facility shall notify the new owner or operator in writing of the requirements of 40 C.F.R. Parts 264 and 270. (40 C.F.R. § 264.12(c))

I. SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby. (40 C.F.R. § 124.16(a)(2))

PART II – SPECIFIC FACILITY CONDITIONS

A. CORRECTIVE ACTION FOR CONTINUING RELEASES; PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT

1. Section 3004(u) of RCRA, 42 U.S.C. § 6924(u), and regulations codified at 40 C.F.R. §264.101, provide that all permits issued after November 8, 1984 must require corrective action as necessary to protect human health and the environment for all releases of hazardous waste or hazardous constituents from any solid waste management unit (SWMU), regardless of when waste was placed in the unit.
2. Under Section 3004(v) of RCRA, 42 U.S.C. § 6924(v), and 40 C.F.R. §264.101(c), EPA may require that corrective action at a permitted facility be taken beyond the facility boundary where necessary to protect human health and the environment, unless the owner or operator of the facility concerned demonstrates to the satisfaction of EPA that, despite the owner or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action.
3. Section 3005(c)(3) of RCRA, 42 U.S.C. § 6925(c)(3), and 40 C.F.R. § 270.32(b) provide that each permit shall contain such terms and conditions as EPA determines necessary to protect human health and the environment.

B. REMEDY IMPLEMENTATION

This Permit requires the implementation and maintenance of the Final Remedy for the Facility as selected by and described in the Final Decision and Response to Comments (FDRTC) issued by EPA on April 14, 2011. The FDRTC is attached hereto as Attachment A, and is incorporated into and made a part hereof.

1. Groundwater
 - a. As of the Effective Date of this Permit and thereafter, the Permittee shall operate and maintain the Groundwater Recovery System at the Facility until drinking water standards established by the Maximum Contaminant Levels (MCLs) promulgated at 40 C.F.R. Part 141 pursuant to Section 1412 of the Safe Drinking Water Act, 42 U.S.C. Section 300g-1s or the Risk Screening Level for a contaminant if no MCL for that contaminant exists, are restored.
 - b. As of the Effective Date of this Permit and thereafter, the Permittee shall continue to implement the EPA-approved Sampling and Analysis Plan for Site-Wide Ground Water Sampling (July 7, 2011), as amended (February 3, 2012) (Site-Wide Ground Water Sampling Plan), attached hereto as Attachment B.
 - c. As of the Effective Date of this Permit and thereafter, the Permittee shall continue to implement the EPA-approved Comprehensive Sediment and Pore Water Sampling

and Analysis Plan (July 12, 2011), as amended (February 29, 2012) (Pore Water Sampling Plan), attached hereto as Attachment C.

- d. Within one hundred twenty (120) days after both the Site-Wide Ground Water Sampling and the Pore Water Sampling Plans are fully implemented, the Permittee shall submit to EPA for approval a Comprehensive Groundwater Recovery and Treatment Study Report (Comprehensive Groundwater Study Report) including relevant supporting data and findings of the Site-Wide Ground Water Sampling and the Pore Water Sampling Plans.
 - e. Within sixty (60) days of receipt of EPA's approval of the Comprehensive Groundwater Study Report, if the results of the Comprehensive Groundwater Study Report show that site-related contamination continues to enter Stonehouse Cove, Curtis Bay, or site-adjacent properties at unacceptable concentrations, Permittee shall submit to EPA for approval a Corrective Measures Study. The Corrective Measures Study shall:
 - 1) evaluate the existing Groundwater Recovery System;
 - 2) identify alternative corrective measures to improve the Groundwater Recovery System to control Facility-related groundwater contamination from entering Stonehouse Cove, Curtis Bay, and site-adjacent properties, and
 - 3) provide a schedule for submitting a Corrective Measures Implementation (CMI) Work Plan.
 - f. Within the time period specified in the EPA-approved Corrective Measures Study, Permittee shall submit to EPA for approval a detailed CMI Work Plan. The CMI Work Plan shall include but not be limited to the following:
 - 1) a description of the remedial action recommended by Permittee to improve the Groundwater Recovery System;
 - 2) the rationale for the recommended corrective measures, and
 - 3) a schedule for implementing the recommended corrective measures.
 - g. Upon receipt of approval from EPA of the CMI Work Plan, Permittee shall implement the CMI Work Plan in accordance with the schedule contained therein.
2. Soils
- a. As of the Effective Date of this Permit and thereafter, Permittee shall comply with the EPA-approved Soil Management Plan dated July 21, 2010, attached hereto as Attachment D, for all earth moving activities, including construction and drilling, on Facility property.

3. Soil Vapor

- a. As of the Effective Date of this Permit and thereafter, Permittee shall comply with the EPA-approved Vapor Control Plan, attached hereto as Attachment E, as detailed in the EPA-approved Revised Version CMI Work Plan for the Energy Answers Redevelopment Parcel (50 Percent Design Submittal), dated February 17, 2011.

4. Institutional Controls

- a. As of the Effective Date of this Permit and thereafter, Permittee shall comply with the following use controls at the Facility:
 - 1) groundwater beneath the Facility shall not be used for potable purposes or any other use that could result in human exposure, unless such use is required by the Final Remedy selected by EPA in the FDRTC,
 - 2) well drilling is prohibited at the Facility without prior EPA approval, to prevent inadvertent exposure to the contaminated groundwater and adverse affects to the Final Remedy selected by EPA in the FDRTC,
 - 3) the Facility shall not be used for any purpose other than industrial unless it is demonstrated to EPA that another use will not pose a threat to human health or the environment and EPA provides prior written approval for such use;
 - 4) all earth moving activities on Facility property, including construction and drilling, shall be done in accordance with the EPA-approved Soil Management Plan, dated July 21, 2010, and
 - 5) a vapor control system, the design of which shall be approved in advance by EPA, shall be installed in each existing structure and each new structure constructed at the Facility, not including existing structures that are idle or will not be reused.
- b. Permittee shall comply with each use control listed immediately above until EPA, in its sole discretion, determines and notifies the Permittee in writing that the use control is no longer necessary for the protection of human health or the environment.
- c. Within ninety (90) days after the Effective Date of this Permit, Permittee shall submit to EPA for approval, a plan to implement, monitor and enforce the above-listed use controls so that they bind future property owners. At a minimum, the Use Control Plan shall include: (a) the specific steps required to implement, monitor, and enforce the above-listed use controls and (b) a schedule for implementation of the use controls and submission of a report on such implementation to EPA.
- d. Upon modification and/or approval by EPA, in accordance with Part 1.C.

(Approval/Disapproval of Submissions) of this Permit, the final Use Control Plan shall be enforceable under this Permit. Permittee shall implement the EPA-approved final Use Control Plan according to the requirements, schedules, and procedures contained therein until EPA, in its sole discretion, determines and notifies the Permittee in writing that it, in its entirety or in part, is no longer necessary for the protection of human health or the environment.

C. EVALUATION OF THE SELECTED REMEDY

Commencing one year from the Effective Date of this Permit and continuing thereafter, the Permittee shall submit an annual progress report on the corrective measure(s) remedy performance and continue to submit annual groundwater monitoring and remedial measures reports until remediation cleanup standards have been met. If EPA determines that the selected remedy will not comply with the remediation cleanup standards, EPA may require the Permittee to perform additional studies and/or perform modifications to the existing Corrective Action remedy. If necessary, EPA or the Permittee may seek modification of this Permit pursuant to 40 CFR § 270.41 or § 270.42 and § 124.5 to implement modifications to the existing Final Remedy.

D. OTHER APPLICABLE LAWS

Nothing in this Permit shall limit EPA's authority to undertake or require any person to undertake response action or corrective action under any law, including but not limited to, Sections 104 or 106 of CERCLA, 42 USC § 9604 or 9606, and Section 7003 of RCRA, 42 USC § 6973. Nothing in this Permit shall relieve the Permittee of any obligation it may have under any law, including, but not limited to, Section 103 of CERCLA, to report releases of hazardous waste, hazardous constituents or hazardous substances to, at or from the Facility.

E. GUIDANCE DOCUMENTS

All corrective action performed at the Facility shall be developed and performed, as appropriate and approved by EPA, in accordance with: the Scope of Work for Interim Measure(s); the Scope of Work for a RCRA Facility Investigation; the Scope of Work for a Corrective Measures Study; the Scope of Work for Corrective Measures Implementation (IM Scope of Work), the Scope of Work for Health and Safety Plan; and RCRA, its implementing regulations and relevant EPA guidance documents. EPA's Scopes of Work and relevant guidance are available at:

http://www.epa.gov/reg3wcmd/ca/ca_resources.htm.

F. INTERIM MEASURES

1. In the event Permittee identifies a newly discovered solid waste management unit (SWMU) or new releases of hazardous waste and/or hazardous constituents at or from the

Facility not previously identified, or discovers an immediate or potential threat to human health and/or the environment at the Facility, Permittee shall notify the EPA Project Coordinator orally within forty-eight (48) hours of discovery and notify EPA in writing within three (3) calendar days of such discovery summarizing the potential for the migration or release of hazardous wastes, solid wastes and/or hazardous constituents at and/or from the Facility and the immediacy and magnitude of the potential threat(s) to human health and/or the environment, as applicable. Upon written request of EPA, Permittee shall submit to EPA for approval an IM Workplan in accordance with the IM Scope of Work that identifies interim measures which will mitigate the migration or release of hazardous wastes, solid wastes and/or hazardous constituents at and/or from the Facility and mitigate any threat to human health and/or the environment. If EPA determines that immediate action is required, the EPA Project Coordinator may orally authorize Permittee to act prior to EPA's receipt of the IM Workplan.

2. If EPA identifies a newly discovered SWMU or new releases of hazardous waste and/or hazardous constituents at or from the Facility not previously identified, or discovers an immediate or potential threat to human health and/or the environment at the Facility, EPA will notify Permittee in writing. Within ten (10) days of receiving EPA's written notification, Permittee shall submit to EPA for approval an IM Workplan in accordance with the IM Scope of Work, that identifies interim measures which will mitigate the migration or release of hazardous wastes, solid wastes and/or hazardous constituents at and/or from the Facility and mitigate any threat to human health and/or the environment. If EPA determines that immediate action is required, the EPA Project Coordinator may orally require Permittee to act prior to Permittee's receipt of EPA's written notification.

3. All IM Workplans shall ensure that the interim measures are designed to mitigate the migration or release of hazardous wastes, solid wastes and/or hazardous constituents at and/or from the Facility and mitigate any immediate or potential threat(s) to human health and/or the environment, and should be consistent with the objectives of, and contribute to the performance of any long-term remedy which may be required at the Facility.

4. Each IM Workplan shall include the following sections as appropriate and approved by EPA: Interim Measures Objectives, Public Involvement Plan, Data Collection Quality Assurance, Data Management, Design Plans and Specifications, Operation and Maintenance, Project Schedule, Interim Measures Construction Quality Assurance, and Reporting Requirements.

5. Concurrent with submission of an IM Workplan, Permittee shall submit to EPA an IM Health and Safety Plan.

G. FINANCIAL ASSURANCE

1. Within ninety (90) days after the Effective Date of this Permit, Permittee shall submit to EPA for approval detailed written estimates, in net present value (NPV) for the term of this permit, of the cost of hiring a third party to perform the work required under Part II "Remedy Implementation" (Cost Estimate). The Cost Estimate must account for the

costs of all foreseeable work, including all investigations and reports, construction work, monitoring, and other long term care work, etc. All Cost Estimates shall be consistent with the requirements of 40 C.F.R. § 264.142 and § 264.144. References in these regulations to closure and post-closure shall mean the corrective actions performed under Part II of this Permit.

2. Permittee shall annually adjust the Cost Estimate for inflation and for changes in the corrective actions required under Part II "Remedy Implementation" until such corrective actions are completed. By January 31st of each year, Permittee shall submit each annual Cost Estimate to EPA for review.

3. By March 31st of each year, the Permittee shall demonstrate compliance with financial assurance to EPA in accordance with 40 C.F.R. § 264.143 for completing the Final Remedy in accordance with 40 C.F.R. § 264.101(b). Within thirty (30) calendar days of approval of any revised cost estimate, the Permittee shall demonstrate to EPA financial assurance for the updated cost estimates.

4. Permittee's inability or failure to establish or maintain financial assurance for completion of the Final Remedy shall in no way excuse performance of any other requirements of this Permit.

H. RECORDKEEPING

Upon completion of closure of any current or future SWMU, the Permittee shall maintain in the Facility operating record, documentation of the closure measures taken.

I. ACCESS FOR CORRECTIVE ACTION OVERSIGHT

The EPA and its authorized representatives shall have access to the Facility at all reasonable times for the purpose of monitoring compliance with the provisions of this Permit. The Permittee shall use its best efforts to obtain access to property beyond the boundaries of the Facility at which corrective action is required by this Permit (see Section 3004(v) of RCRA, 42 U.S.C. § 6924(v) and 40 C.F.R. § 264.101(c)); (1) for itself and any contractor of the Permittee for the purpose of taking corrective action required by this Permit, and (2) for EPA and its authorized representatives for the purposes described in this paragraph.

J. LIST OF ATTACHMENTS

The following Attachments are incorporated, in their entirety, by reference into this Permit. These incorporated attachments contain enforceable conditions of this Permit.

- Attachment A: Final Decision and Response to Comments
- Attachment B: Sampling and Analysis Plan for Site-Wide Ground Water Sampling
- Attachment C: Comprehensive Sediment and Pore Water Sampling and Analysis Plan
- Attachment D: Soil Management Plan
- Attachment E: Vapor Control Plan

1.30.13

Date Signed



John A. Armstead, Director
Land and Chemicals Division
EPA Region III