ATTACHMENT A

Public Comments and EPA Responses

The comments received from FMC Corporation and EPA's Responses are set forth below:

1. Comment No. 1 - Page 4, Section IV.A.1 Restoration of Groundwater to Drinking Water Standards.

EPA proposes to require that FMC expand the existing Groundwater Recovery System by installing additional ground water recovery and monitoring wells, as an initial step towards restoration of ground water to drinking water standards. EPA states that the data from the October/November 2008 comprehensive site-wide ground water sampling event will be used as a baseline to approve the locations and number of additional wells.

FMC proposes that the findings from the proposed Comprehensive Groundwater Recovery and Treatment Study (Comprehensive Study), as described in Section IV.A.2 of the Statement of Basis (i.e., sediment and pore water sampling and the three years of ground water monitoring) be used to determine whether the existing recovery system needs to be expanded. Therefore, FMC requests that in the FDRTC document expansion of the recovery system be linked to the findings from the Comprehensive Study, rather than defaulting to an initial expansion of the recovery system based on limited available information, and then potentially reconfiguring the system again after the Comprehensive Study is completed in three years. Additionally, the results of the Comprehensive Study should be included in a Corrective Measures Study (CMS), and the CMS process should be used to determine the scope of the final remedy (i.e., alternative corrective measures evaluated against EPA's effectiveness criteria).

EPA Response to Comment No. 1

EPA agrees with this comment. The data from the Comprehensive Study should be used to evaluate the effectiveness of the existing Groundwater Recovery System and to determine whether additional recovery wells should be installed. Therefore, EPA has incorporated language into the Final Decision to state that after the completion of the Comprehensive Study, which consists of groundwater sampling and sediment and pore water sampling, EPA will evaluate whether additional recovery wells are necessary. EPA has also modified the length of the groundwater sampling to be conducted as part of the Comprehensive Study from three years to two years.

2. Comment No. 2 - Page 4, Section IV.A.1 Restoration of Groundwater to Drinking Water Standards.

The Statement of Basis states that based on the ongoing investigation of the North Parcel, EPA will determine the location and number of additional recovery wells necessary to capture the contaminated ground water plume under the North Parcel.

FMC requests that the FDRTC include flexibility to address the North Parcel contamination using applicable remedial technologies identified in an EPA approved FMC 10/11/2010 CMS. In accordance with the September 2009 EPA-approved document titled Sampling and Analysis Plan for the Ground Water Investigation on the North Parcel, FMC is evaluating the feasibility of using in-situ remedial approaches to address the soil and ground water impacts on the North Parcel. The option of capturing ground water and managing this water in the existing recovery system or in a separate recovery system can be evaluated in a CMS for the North Parcel. In any event, FMC is not waiting until the results of the Comprehensive Study are available after three years for development and evaluation of proposed remedial actions for the North Parcel, as implied in Section V.3, fourth sentence of the Statement of Basis. Instead, FMC will move forward with a field pilot test of one of the in-situ remedial approaches in 2011 based on the results of the treatability testing.

EPA Response to Comment No. 2

EPA agrees with this comment and has incorporated language into Section IV. "Final Remedy" of the FDRTC to provide FMC flexibility in investigating the North Parcel. FMC may implement additional corrective measures, such as in-situ chemical and/or biological treatments of source areas, subject to EPA approval, at any time. Once any such corrective measures are implemented, additional sampling will be required to evaluate the effectiveness of those measures.

3. Comment No. 3 - Page 5, Section IV.A.1 Restoration of Groundwater to Drinking Water Standards, 2) Sediment and Pore Water Sampling

The Statement of Basis states that FMC will develop and conduct sediment and pore water sampling relative to the potential impacts of Facility-related contaminated ground water on Stonehouse Cove and Curtis Bay in accordance with an EPA and MDE-approved "Comprehensive Sediment and Pore Water Sampling and Analyses Plan."

On 27 September 2010, FMC submitted to EPA the document titled Pore Water Sampling and Analysis Plan (Pore Water SAP). The Pore Water SAP describes FMC's proposed study of pore water in Stonehouse Cove and Curtis Bay adjacent to the western and southern boundaries of the Site, and is consistent with the approach discussed with EPA at a meeting on April 28, 2010. That approach provides for the collection of pore water samples and analysis of the samples for chlorobenzene as an indicator of ground water impacts, and does not prescribe the collection of sediment samples. Sediment will

only be investigated in a separate phase if determined by EPA to be necessary by the pore water results. FMC requests that the FDRTC include flexibility to implement this iterative approach that was discussed at the April 28 meeting.

EPA Response to Comment No. 3

EPA agrees with this comment and has incorporated language in Section IV. "Final Remedy" of the FDRTC to clarify that the analytical results of the pore water sampling will be used to determine whether sediment sampling is necessary.

4. Comment No. 4 - Page 6, Section IV.B Soil Management Strategy

Table 2 lists PCBs and Organochlorine pesticides (EPA Method 8081B) as chemicals to be included in the soil analysis in the Soil Management Plan (SMP).

First, FMC submitted to EPA a Soil Management Plan (SMP) on July 21, 2010 and EPA approved the SMP in a letter dated September 27, 2010. Although this SMP particularly deals with the 20-acre portion of the Site that Energy Answers will be leasing and redeveloping, it is intended to apply to future development across the Site. Second, the SMP does not include or propose analyses of soils for PCBs or organochlorine pesticides (EPA Method 8081B). These compounds were determined to not be present or not manufactured at the Site (this scan includes Aldrin, BHC, Chlordane, DDD, DDE, DDT, Dieldrin, Endosulfan, Endrin, Heptachlor, Kepone, Methoxychlor, and Toxaphene). Therefore, FMC requests that the FDRTC reflect the approach in the EPA-approved SMP and not include these compounds as part of the soil management strategy.

EPA Response to Comment No. 4

EPA agrees with this comment. PCBs and organochlorine pesticides are not Contaminants of Concern at the Facility. Therefore, EPA has removed those contaminants from Table 1: "Contaminants of Concern" in the Final Decision.

5. Comment No. 5 - Page 6, Section IV.B Soil Management Strategy

The Statement of Basis states that the SMP will also detail soil characterization and/or capping requirements for areas of undisturbed, but potentially contaminated soils, as well as areas that are currently covered with gravel, and that it "will include soil stabilization requirements to minimize contact between storm water runoff and the Site soils."

These items/requirements regarding capping of areas of undisturbed soils should be part of the selected final remedy and addressed in the Corrective Measures Implementation (CMI) Plan (in preparation), not the SMP. FMC did not include such items in the SMP for the 20-acre redevelopment parcel that was submitted to EPA on July 21, 2010 and approved by EPA on September 27, 2010. Additionally, the EPA approved SMP does not include soil characterization in undisturbed areas. FMC requests

that the FDRTC reflect the approach for addressing undisturbed soils described in the SMP and CMI Plan.

EPA Response to Comment No. 5

EPA agrees with this comment. Final capping and various surface water runoff controls should be addressed in the CMI Plan for the entire Facility. EPA has added language to Section IV. "Final Remedy" of the FDRTC to address this comment.

6. Comment No. 6 - Page 6, Section IV.C Installation of Vapor Mitigation Systems

The Statement of Basis states that EPA is waiting for the results of the soil gas survey and will use the results to determine the vapor controls necessary to eliminate the potential for vapor intrusion.

FMC requests that the FDRTC reflect the specific vapor controls to address vapor intrusion described in the CMS report (dated April 27, 2010) submitted for the Energy Answers Redevelopment Parcel (but also intended to be applicable to other development activities on the remainder of the Site) and approved by EPA in a letter dated June 7, 2010.

EPA Response to Comment No. 6

EPA agrees with this comment and has incorporated language in the FDRTC to reflect the fact that EPA has reviewed and approved the Vapor Control Plan as detailed in FMC's April 2010 Corrective Measures Study Report for the Redevelopment Parcel.

7. Comment No. 7 - Page 8, Section V.1 Protection of Human Heath and the Environment

The Statement of Basis states that FMC will operate the expanded Groundwater Recovery system until ground water is restored to drinking water standards.

FMC requests that the FDRTC allow for the evaluation of additional corrective measures to achieve this remedial objective through the CMS process.

EPA Response to Comment No. 7

EPA agrees with this comment. FMC is encouraged to identify and implement remedial actions that may accelerate groundwater remediation. However, until groundwater is restored to drinking water standards, FMC will be required to operate the Groundwater Recovery System to prevent the off-site migration of contaminated groundwater.

8. Comment No. 8 - Page 9, Section V.3 Remediating Sources of Releases

The Statement of Basis states that as part of the Comprehensive Study, FMC will identify source areas and propose various remedies to address those source areas.

This reference to the scope of the Comprehensive Study is inconsistent with the

description provided in Section IV.A.2. The identification of possible source areas and the identification and evaluation of corrective measures alternatives for such areas should be undertaken through a RCRA Facility Investigation, or supplemental investigation, and a CMS. FMC requests that the FDRTC include provisions for such an investigation and for the evaluation of corrective measures in a CMS depending on the findings of the investigation.

EPA Response to Comment No. 8

EPA agrees with this comment. EPA has incorporated language into Section V. "Final Remedy" of the FDRTC to allow for additional investigation of the North Parcel. The FDRTC also allows for the application of in-situ treatment at identified source areas anytime that FMC concludes that it would accelerate the remediation process. A separate CMS will not be necessary for these activities. FMC must notify EPA before undertaking such activities.

UNITED STATES

ENVIRONMENTAL PROTECTION AGENCY

REGION III

FINAL DECISION AND RESPONSE TO COMMENTS

FMC Corporation

Baltimore, Maryland

EPA ID NO. MDD0030781875

Table of Contents

I. Introduction

The United States Environmental Protection Agency (EPA) is issuing this Final Decision and Response to Comments (FDRTC or Final Decision) in connection with the FMC Facility located at 1701 East Potapsco Avenue, Baltimore, Maryland (Facility or Site).

The Facility is subject to the Corrective Action program under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) of 1976, and the Hazardous and Solid Waste Amendments (HSWA) of 11984, 42 U.S.C. Sections 6901 et seq. The Corrective Action program is designed to ensure that certain facilities subject to RCRA have investigated and addressed releases of hazardous waste and hazardous constituents that have occurred at their property.

On September 9, 2010, EPA issued a Statement of Basis (SB) in which EPA proposed the remedy for the Facility. EPA held a thirty (30)-day public comment period which began on September 9, 2010, and ended on October 11, 2010. All of the comments received by EPA during the public comment period were carefully reviewed by EPA, and EPA's responses are set forth in Attachment A, Public Comments and EPA Responses.

Based on comments received during the public comment period, EPA has determined that it is not necessary to make significant modifications to the proposed remedy as set forth in the SB. EPA is, however, making minor modifications to and clarifying certain aspects of the proposed remedy as described in more detail in Attachment A, Public Comments and EPA Responses. This Final Decision incorporates those minor modifications and clarifications.

II. Facility Background

The Facility is owned by FMC Corporation (FMC). It is located on approximately 90 acres in Baltimore, Maryland and is bordered by Curtis Bay to the south, by Stonehouse Cove to the west and by both industrial and commercial properties to the north and east.

U.S. Industrial Chemicals Inc. began manufacturing ethanol and acetone at the Facility in 1915. In 1954, FMC purchased the Facility from U.S. Industrial Chemicals Inc. From 1954 until May 2008, FMC manufactured pesticides and herbicides at the Facility. Throughout the Facility's history, a number of chemical waste residuals were managed and/or disposed of at several locations at the Facility.

In May 2008, FMC stopped its manufacturing operations at the Facility and began dismantling the plant. The Facility is no longer operating and approximately 90 percent of the manufacturing buildings and equipment has been dismantled. Seven buildings remain for possible future use. FMC remains the owner of the Facility.

III. Summary of Environmental History

In January 1986, the Maryland Department of Health and Mental Hygiene Waste Management Administration (DWMA), which subsequently changed its name to the Maryland Department of the Environment (MDE), entered into an Administrative Consent Order, CO-85-498, (Consent Order) with FMC. Pursuant to the Consent Order, FMC submitted to DWMA for review and approval a Groundwater Report. The Groundwater Report summarized groundwater studies conducted by FMC at the Facility from 1981 to 1985.

On December 13, 1989, EPA issued a RCRA Corrective Action Permit, EPA ID No. MDD003071875 (Permit), under RCRA Section 3004(u), 42 U.S.C. Section 6924(u), to FMC for the Facility. The Permit, which on its terms expired on December 13, 1999, has been administratively extended. The Permit requires, among other things, FMC to characterize the extent of groundwater contamination at the Facility and evaluate remedy options.

Based on EPA-approved groundwater characterization reports, EPA has identified the following Contaminants of Concern (COCs) in Facility groundwater:

Table 1: Contaminants of Concern

Volatile Organic Compounds (VOCs)	Semi-Volatile Organic Compounds (SVOCs)
Benzene	1,2,4-Trichlorobenzene
Bromoform	1,2-Dichlorobenzene
Chlorobenzene	1,3-Dichlorbenzene
Chloroethane	1,4-Dichlorobenzene
Choloform	2,4,6-Trichorophenol
Cis-1,3-Dichloropropene	2,4-Dinitrophenol
Ethylbenzene	2-Chlorophenol
Methylene Chloride	2-Methylphenol
Trans-1,3-Dichloropropene	2-Nitrophenol
Trichlorofluoromethane	4-Choloro-3-methylphenol
	Aniline
	Bis(2-cholroethoxy)methane
	Bis(2-chloroisopropyl)ether
	Bis(2-ethylhexyl)phthalate
	Butyl benzyl phthalate
	Chrysene
	Diethylphthalate
	Di-n-butylphthalate
	Pentachlorophenol
	Phenol

In September 1993, EPA approved a Supplemental Groundwater Characterization Report (Supplemental Report) submitted by FMC pursuant to the Permit. The Supplemental Report provided additional information necessary to characterize the groundwater conditions at the Facility and to assess any potential biological impacts to Curtis Bay. Three subsurface units were identified: surface fill; the Pleistocene Formation; and the Patapsco Formation. Shallow groundwater generally flows from north to south across the Facility, and becomes radial as it approaches Stonehouse Cove and Curtis Bay. Groundwater flow in the Patapsco Aquifer is to the southeast, consistent with the regional dip of the Patapsco Formation. Based on the results from aquifer performance tests which were completed as part of the Supplemental Report, groundwater collection appeared to be a viable remedial option.

In August 1994, EPA approved a Contaminant Characterization Report which described the nature and extent of contamination at the Facility and presented corrective measures for the biologic impacts to Curtis Bay associated with the discharge of contaminated groundwater from

the Facility. In August 1995, EPA conditionally approved a Corrective Measures Plan in which FMC identified groundwater recovery and treatment as the preferred remedial alternative for the Facility. In May 1996, EPA approved the Final Basis of Design for RCRA Corrective Measures/Stabilization which provided the design details for a groundwater recovery and treatment system (Groundwater Recovery System). In May 1997, pursuant to the interim measures provisions of the Permit, FMC installed the Groundwater Recovery System. At the request of EPA, FMC installed an additional recovery well in the Upper Patapsco in November 2005. Currently, FMC is operating the Groundwater Recovery System and is conducting groundwater monitoring at the Facility under the interim measures provisions of the Permit.

In November 1999 and, again in April 2003, the U.S. Army Corps of Engineers (Corps), on behalf of EPA, conducted Visualization of Groundwater Contamination studies to evaluate the effectiveness of the Groundwater Recovery System. Bioassay studies were also conducted at the Facility in 1985, 1992, 1999, and 2006, respectively, to evaluate the toxicity of groundwater discharging from the Site to aquatic organisms in Stonehouse Cove and Curtis Bay. Based on the findings of the various studies, EPA has determined that not all Facility-related contaminants are being captured by the Groundwater Recovery System.

In October and November 2008, FMC conducted Site-wide groundwater sampling. The sampling data revealed a source area(s) in the northern 23 acres at the Facility which is referred to as the North Parcel. Groundwater and soils at the North Parcel contain volatile organic compounds (VOCs) in concentrations above their respective 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-1, or Region III's Risk Based Concentrations (RBCs), if no MCL exists. Pursuant to the interim measures provisions in the Permit, FMC is currently investigating and delineating the plume and characterizing the soils at the North Parcel. FMC will be required to implement additional remedial actions at the North Parcel.

IV. EPA's Remedy for the Facility

EPA's Remedy for the Facility is summarized below. EPA will require FMC to implement the Remedy through the issuance of a Permit Modification.

A. Groundwater Remediation Strategy

EPA's corrective action goals for Facility groundwater are 1) to restore groundwater to drinking water standards established by the MCLs or RBCs, if there are no MCLs, and 2) to control Site-related groundwater contamination from entering Stonehouse Cove, Curtis Bay, and site-adjacent properties. In addition, FMC is required to conduct a Comprehensive Groundwater Recovery and Treatment Study (Comprehensive Study), described in more detail below. FMC has submitted to EPA for approval a Comprehensive Sediment and Pore Water Sampling and Analyses Plan (Sediment and Pore Water Plan) to measure the impacts of Facility-related contaminated groundwater on Stonehouse Cove and Curtis Bay. The results of the EPA-approved Sediment and Pore Water Plan will be used in the Comprehensive Study.

1. **Restoration of Groundwater to Drinking Water Standards**

FMC will be required to operate and, as necessary, to expand the Groundwater Recovery System until drinking water standards established by the MCLs or RBCs, if no MCLs exist, are restored. Once the Comprehensive Study is completed and all data are evaluated, FMC will evaluate the existing Groundwater Recovery System and make improvements, as required by EPA. In order to accelerate the groundwater restoration process, FMC will evaluate additional remedial actions such as chemical and biological treatment at identified source areas in soils and/or groundwater, including but not limited to the North Parcel. Subject to EPA review and approval, FMC may be required to implement such additional remedial actions at identified source areas at the Site.

2. **Control Contamination From Entering Stonehouse Cove and/or Curtis Bay or Site-adjacent Properties.**

As part of the Remedy, FMC will be required to conduct a Comprehensive Study to evaluate the short-term and long-term effectiveness of the Groundwater Recovery System in controlling site-related groundwater contamination from entering Stonehouse Cove, Curtis Bay, and site-adjacent properties. If the results of the Comprehensive Study show that groundwater is not being effectively controlled and Site-related contamination continues to enter Stonehouse Cove, Curtis Bay, and/or site-adjacent properties at unacceptable concentrations, EPA will require FMC to improve the Groundwater Recovery System. Additional remedial improvements may include the use of chemical and/or bio-remediation technologies at identified source areas, including but not limited to the North Parcel, and/or the construction of a physical barrier to contain contaminated groundwater.

The Comprehensive Study shall include the following components:

a. Two years of semi-annual groundwater sampling

FMC shall conduct two years of semi-annual groundwater sampling. The parameters to be analyzed will be the 10 VOCs and 20 SVOCs identified in Table 1: "Contaminants of Concern," above, that are currently required to be sampled annually under the Permit and any compound whose concentration was equal to or exceeded its respective EPA Screening Level during the Site-wide groundwater sampling program implemented in the fall of 2008.

b. Sediment and Pore Water Sampling

FMC has submitted for EPA approval a Sediment and Pore Water Sampling Plan. Upon EPA approval, EPA will require FMC to implement the approved Sediment and Pore Water Sampling Plan. The sampling data will be used to measure the impacts of Facility-related contaminated groundwater on Stonehouse Cove and Curtis Bay. Implementation of the Sediment and Pore Water Sampling Plan may be conducted in an iterative approach with the initial sampling and analysis of pore water. Based on the analytical results of the pore water sampling, EPA will determine if sediment sampling and analysis will be necessary. Further, based on the results of the pore water sampling and, if necessary, the sediment sampling, EPA will determine if benthic studies will be necessary.

Once the results of the semi-annual groundwater sampling and Sediment and Pore Water sampling are evaluated, EPA will determine whether the installation of additional recovery wells is necessary.

B. Soil Management Strategy

FMC has developed a Soil Management Plan that has been approved by EPA and MDE and will be implemented during earth moving activities, including construction and drilling on Facility property. The Soil Management Plan details how all excavated soils will be handled and disposed. All excavated soils will be analyzed for the following groups of chemicals by the following methods:

Table 2: Analytical Methods

Chemicals	Method
VOCs	EPA Method 8260B
SVOCs	EPA Method 8270D
EPA Contract Laboratory Program Target Analyte List for Metals and Cyanide, except for calcium, magnesium, potassium and sodium. (The list can be found at: http://www.epa.gov/superfund/programs/clp/ismtarget.htm)	EPA Contract Laboratory Program Method

Soil remediation cleanup standards will be determined by EPA and MDE using EPA Region III's Risk-Based Concentrations (RBCs) for industrial screening levels. In addition, any excavated soils that are stockpiled will be sampled and analyzed using the Toxicity Characteristic Leaching Procedure (TCLP) and will be disposed off-site as necessary.

With respect to soils that remain undisturbed at the Facility, such soils will be capped and surface water runoff controls will be implemented. The capping of undisturbed soils and the implementation of surface water runoff controls will be included in a Facility-wide Corrective Measures Implementation Plan.

C. Installation of Vapor Mitigation Systems

Buildings located above a contaminated groundwater plume are vulnerable to subsurface vapor intrusion coming from the plume and entering through cracks, joints and utilities openings. Therefore, to address potential vapor intrusion, as part of the Remedy, EPA will require that vapor control systems be installed in all existing buildings and each newly constructed building

in accordance with the EPA-approved Vapor Control Plan as detailed in FMC's April 2010 Corrective Measures Study Report for the Redevelopment Parcel.

D. Implementation of Institutional Controls

EPA's Remedy requires that institutional controls be implemented in order to prevent any activities which would interfere with or adversely affect the integrity and protectiveness of the Remedy. The institutional controls are necessary to ensure that (1) contaminated groundwater is not used for potable purposes or any other use that could result in human exposure until cleanup levels are achieved; (2) the integrity and protectiveness of the Groundwater Recovery System is maintained; (3) the Facility is not used for residential purposes, (4) subsequent purchasers of the Facility property are informed of the environmental conditions at the Facility and of EPA's Remedy for the Facility and (5) exposure to vapor intrusion and contaminated soils is limited.

Institutional controls will include, but may not be limited to, an environmental covenant to be entered pursuant to the Maryland Uniform Environmental Covenants Act, Maryland Environment Code, Sections 1-801 to 1-815 (UECA) and to be recorded with the deed for the Facility property. The Environmental Covenant will be required to include the following:

i. a restriction on the use of groundwater beneath the Facility for potable purposes or any other use that could result in human exposure until cleanup levels are achieved, unless such use is required by the Remedy,
ii. a restriction on well drilling at the Facility without prior EPA approval, to prevent inadvertent exposure to the contaminated groundwater and adverse affects to the Remedy,
iii. a restriction that the Facility 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;
iv. a requirement that any earth moving activities by any entity on Facility property, including construction and drilling, be done in accordance with the EPA-approved Soil Management Plan, and
v. a requirement that a vapor control system, the design of which shall be approved in advance by EPA, is installed in any existing and all new structures constructed at the Facility.

V. Evaluation of EPA's Remedy

This section provides a description of the criteria EPA uses to evaluate remedies under the Corrective Action Program. The criteria are applied in two phases. In the first phase, EPA evaluates three criteria, known as Threshold Criteria. In the second phase, EPA uses seven balancing criteria to select among alternative solutions, if more than one solution is proposed. The Facility has demonstrated that the current conditions meet the threshold criteria established

by EPA and because EPA is not selecting among alternatives, an evaluation of the balancing criteria is not necessary.

The following is a summary of EPA's evaluation of the Threshold Criteria:

1. Protect Human Health and the Environment

The components of the Remedy described in Section IV protect human health and the environment from exposure to contamination in groundwater and soils for current and anticipated land use.

There are no current known human health threats associated with domestic uses of the contaminated groundwater originating from the Facility because groundwater is not currently used for potable purposes. The properties in the vicinity of the Facility are serviced by public water from a source not affected by Facility related contamination and there are no private wells located in the area.

FMC will be operating the Groundwater Recovery System (with additional recovery wells if necessary) until groundwater is restored to drinking water standards. Until those standards are met, EPA is requiring institutional controls, as necessary, to restrict use of groundwater beneath the Facility for potable purposes or any other use that could result in human exposure. EPA's Remedy also requires the implementation of institutional controls to prevent any activities which would interfere with or adversely affect the integrity or effectiveness of the remedial actions performed at the Facility.

A primary concern associated with the contaminated groundwater under current conditions is the discharge of site-related contamination into the Stonehouse Cove and Curtis Bay. If EPA determines that the groundwater is not being effectively controlled and site-related contamination in excess of acceptable concentrations continues to enter Stonehouse Cove and/or Curtis Bay, EPA will require FMC to evaluate additional remedial actions, including the construction of physical barriers, to contain site-related groundwater contamination to protect the sediments, surface waters, and biota of Stonehouse Cove and Curtis Bay. In addition, based on the results of the sediment and pore water sampling, and subsequent benthic studies as applicable, sediment remediation may be required.

There is also concern that contaminated groundwater from the plume can volatilize and migrate vertically through soil into buildings through cracks, joints and utilities openings. The Remedy will require the installation of a vapor control system in all existing buildings and each newly constructed building.

Based on sampling conducted in the summer of 2009, EPA will determine the specific engineering controls necessary for the vapor control systems to eliminate the potential for vapor intrusion.

With respect to soil contamination, a Soil Management Plan was submitted to EPA in July 2010 and approved by EPA in September 2010. All construction activities or other

activities that might disturb contaminated soil will be completed in accordance with the approved Soil Management Plan.

With respect to soils that remain undisturbed at the Facility, such soils will be capped and surface water runoff controls will be implemented. The capping of undisturbed soils and the implementation of surface water runoff controls will be included in a Facility-wide Corrective Measures Implementation Plan.

2. Achieve Media Cleanup Standards

The Groundwater Recovery System will be operated until groundwater is restored to drinking water standards. Through additional groundwater sampling and analyses, EPA will also have FMC evaluate whether the Groundwater Recovery System is preventing site-related groundwater contamination from entering Stonehouse Cove, Curtis Bay, and site-adjacent properties. If the evaluation shows that site-related contamination continues to enter Stonehouse Cove, Curtis Bay, and/or site-adjacent properties at unacceptable concentrations, EPA will require FMC to evaluate additional remedial actions including construction of a barrier wall to contain Site-related groundwater contamination to protect the sediments, surface waters, and biota of Stonehouse Cove, Curtis Bay, and site-adjacent properties. In addition, based on the results of the sediment and pore water sampling, and subsequent benthic studies as applicable, sediment remediation may be required.

3. Remediating the Source of Releases

In all remedy decisions, EPA seeks to eliminate or reduce further releases of hazardous wastes or hazardous constituents that may pose a threat to human health and the environment. FMC is presently conducting a hydrogeologic study on an approximately 23-acre portion of land referred to as the North Parcel at the Facility. FMC discovered significant groundwater contamination at this parcel during a site-wide groundwater sampling effort in the autumn of 2008. Once FMC completes the hydrogeological study on the North Parcel, FMC will submit to EPA for review and approval, a RCRA Facility Investigation, and if appropriate, a Corrective Measures Study evaluating remedial alternatives.

FMC will continue to operate the Groundwater Recovery System to reduce the mass of VOC contamination in the groundwater and minimize the future migration of contaminants into Stonehouse Cove, Curtis Bay, and site-adjacent properties. The Soil Management Plan will require the proper removal and off-site disposal of contaminated soils that are disturbed during any earth moving activities conducted on-Site, thereby removing the source of contaminants from Facility soils as well as a source of groundwater contamination.

VI. Financial Assurance

EPA will require FMC to provide assurances of financial responsibility for completing the Remedy. Financial Assurance details will be provided in the Permit Modification.

VII. Declaration

Based on the Administrative Record, I have determined that the Remedy as set forth in this Final Decision is appropriate and will be protective of human health and the environment.

Date: 4/14/11

Abraham Ferdas, Director
Land and Chemicals Division
U.S. Environmental Protection Agency, Region III