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Transmitted Via Email and U.S. Mail

February 26, 2016

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Re: FMC Corporation, Middleport, NY
AOC Docket No. II-RCRA-90-3008(h)-0209
EPA ID No. NYD002126845
DER Site No. 932014
Application No. 9-2936-00017/02004
Amended Part 373 Permit Application

Dear Ms. Gardell and Mr. Freeman:

As identified in the draft revised schedule that FMC Corporation submitted to the New York State Department of Environmental Conservation (NYSDEC) by letter dated January 29, 2016, FMC submits the following documents associated with the draft Amended Part 373 Permit Application for FMC's Middleport, New York facility:

1. Attachment R – Waste Analysis Plan
2. Attachment S – Security and Facility Inspection Plan
3. Attachment T – Personnel Training Program Plan

If you have questions or would like additional information, please contact me directly by telephone at (215) 299-6554 or by email at shawn.tollin@fmc.com.

Sincerely,

Shawn J. Tollin
Manager, Environmental Remediation

Enclosures

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ATTACHMENT R

Waste Analysis Plan



FMC Corporation
Middleport, New York

WASTE ANALYSIS PLAN

USEPA ID # NYD002126845
NYSDEC Site # 932014

DRAFT February 2016

**FMC Corporation
Middleport, New York**

**USEPA ID # NYD002126845
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WASTE ANALYSIS PLAN

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WASTE ANALYSIS PLAN

The purpose of this Waste Analysis Plan is to describe waste analysis procedures utilized by the FMC Corporation (FMC) Middleport, New York facility to ensure compliance with 6 NYCRR Part 373-2.2(e). This Waste Analysis Plan is applicable to activities associated with facility units (i.e., Western Surface Impoundment [WSI] and Eastern Surface Impoundment [ESI]) subject to Part 373 permitting requirements, and hazardous waste management activities associated with RCRA corrective actions subject to the Part 373 Permit. Included in this document are descriptions of hazardous waste currently generated in association with the WSI and ESI.

This Waste Analysis Plan is incorporated by reference into the Part 373 Permit for the FMC Middleport, New York facility. In the event that changes are made to the facility that affect the content of this plan, this plan will be updated in accordance with the requirements of Condition D of Module 1.

1.0 FACILITY DESCRIPTION

1.1 Background

In May 1986, FMC submitted an application to the New York State Department of Environmental Conservation (NYSDEC) for a hazardous waste management facility permit (under Title 6 of the New York Codes, Rules and Regulations [6 NYCRR] Part 373) for its Agricultural Products Group facility located in the Village of Middleport and Town of Royalton, New York. After that application was submitted, NYSDEC designated the facility as being in “interim status” under Part 373 and Title 40 of the Code of Federal Regulations [40 CFR] Part 270. FMC agreed in June 1987 to suspend the time limits imposed on NYSDEC by 6 NYCRR Part 621 regarding review and processing of the application for a final Part 373 permit.

At the time of the 1986 application, FMC managed hazardous wastes in five container storage areas and managed contaminated stormwater as hazardous waste in three surface impoundments (Western, Central, and Eastern Surface Impoundments). FMC closed the five regulated container storage areas by 1996 and the Central Surface Impoundment (CSI) in 1989. FMC partially closed the WSI in 1988. Since then, the WSI has been used to manage non-hazardous stormwater runoff, operating as part of an interim corrective measure (ICM) under an Administrative Order on Consent (AOC: Docket No. II RCRA-90-3008(h)-0209) entered into between FMC, NYSDEC, and the United States Environmental Protection Agency (USEPA)

(NYSDEC and USEPA together “the Agencies”) in July 1991. FMC ceased receiving contaminated stormwater in the ESI as of 1988; the ESI no longer serves as a surface impoundment. With NYSDEC’s approval, soil generated from off-site interim corrective actions has been placed in the footprint of the former ESI.

The WSI and ESI are subject to the AOC and the Part 373 Permit, which specify that final closure of the WSI and ESI is subject to the results of the RCRA Facility Investigation and Corrective Measures Study (RFI/CMS) for the facility. FMC has been conducting the RFI since 1991 to: 1) characterize the nature and extent of Site-related constituents in the environment at the facility and in off-Site areas affected by releases of hazardous waste or hazardous constituents from regulated units, Solid Waste Management Units (SWMUs), and other potential sources at the facility; and 2) gather data to support a CMS. FMC is addressing constituents in soil and other environmental media at the facility and in off-site areas in a phased approach in which separate study areas and/or environmental media have been organized by the Agencies into operable units (OUs).

Currently, hazardous waste is not actively treated, stored or disposed at the facility in units subject to Part 373 permitting requirements (i.e., ESI and WSI). Hazardous wastes generated at the facility are accumulated in containers or tanks prior to off-site disposal within 90 days of generation or are managed in water treatment units exempt from RCRA permitting requirements pursuant to Paragraph 373-1.1(d)(1)(xii).

1.2 Description of Facility

The facility comprises approximately 103 acres, including:

Portion	Year FMC Acquired	Approximate Area (Acres)
1. Main Plant property (all buildings)	1946	67.1
2. Eastern Parcel	1965	24.3
3. Overhead electric lines corridor	1987	4.0
4. North Railroad Property (along railroad tracks)	2002	8.0

The Plant security fence encloses approximately 83 acres, including all operations facilities. The facility is bounded (clockwise, beginning to the southwest) by: 1) vacant commercial land (FMC's Former Research and Development Property) to the southwest; 2) residential properties and South Vernon Street to the west; 3) a commercial business, vacant commercial/industrial land, Alfred Street, the Royaltown-Hartland school district property, agricultural land, and railroad tracks to the north; 4) agricultural land to the east; 5) an electrical substation and commercial businesses to the southeast; and 6) State Route 31 to the south. A drive-in theater, a church, a park, commercial businesses, and residential properties are located south of Route 31.

The facility has been used for the manufacturing and/or formulation of pesticide products since the 1920s, when Niagara Sprayer Company began operations, producing primarily sulfur-, lime-, arsenic-, and lead-based pesticides. FMC purchased the facility in 1946 and continued operations, with primary manufacturing also including dinitroresol, karbutilate, carbofuran, and dithiocarbamate pesticides. FMC ceased pesticide manufacturing operations at the facility in 1985, and since that time has conducted only formulating (i.e., mixing and blending) and packaging operations at the facility. Major crop protection products currently formulated or packaged at the facility include Furadan® (carbofuran), Talstar® (bifenthrin), and Command® (clomazone).

A comprehensive review of chemicals used and/or produced historically at the facility, as well as degradation products and impurities, was conducted in 1985-1988 and resulted in the Site-Specific Parameter List (SSPL) for use in conducting environmental studies relative to the facility. Development of the SSPL is presented in the Master Compound List and Various Related Lists for Environmental Studies, FMC Corporation, Middleport, New York (1988), which is provided in Appendix 2A of *RCRA Facility Investigation (RFI) Report Volume I – Background and Related Information* (2009) (RFI Volume I). The SSPL has been used in conducting RFI activities for the facility and off-site areas, which include a total of eleven OUs, organized by geography and environmental media (i.e., soil, sediment, surface water and groundwater).

The majority of the northern portion of the facility is covered with buildings and a low-permeability surficial cover (North Site Cover), made of either asphalt or clay overlain with a vegetative layer, which is designed to cover potentially impacted surface areas on the northern portion of the facility. The North Site Cover was installed in 1987-1988 as part of pre-closure activities for the three surface impoundments (WSI, CSI, and ESI), along with installation of underdrains/sumps to intercept shallow groundwater that might otherwise exfiltrate to surface water, and a series of asphalt-lined swales to direct surface water runoff from the northern portion of the facility to the WSI. In addition to the underdrains, groundwater on the northern

portion of the facility is collected in a series of blast-fractured bedrock recovery trenches. Surface water collected in the WSI and groundwater collected in the underdrain sumps and bedrock recovery trenches is treated at the facility's water treatment plant (WTP) and discharged to Tributary One of Jeddo Creek in accordance with the facility's State Pollutant Discharge Elimination System (SPDES) permit. Operation and maintenance of the North Site Cover, underdrains/sumps, and bedrock recovery trenches are conducted as Interim Corrective Measures (ICMs) under the AOC.

1.3 Description of Facility Processes and Activities

Descriptions of the WSI and ESI are provided below.

The original WSI was constructed in 1977 as a lined surface water impoundment with an available storage capacity of approximately 1.4 million gallons. In constructing the WSI, the underlying shallow bedrock was excavated and underdrain piping was installed to intercept groundwater. Underdrain piping is connected to a manhole sump (Sump 3). Water is pumped from Sump 3 to control the groundwater elevation under the WSI and minimize the hydrostatic uplift on the liner. Groundwater from Sump 3 and other collected groundwater from facility ICMs are managed in tanks and treated at the facility WTP (exempt from Part 373).

The WSI was partially closed in 1988 by removal of any hazardous wastes in the impoundment (i.e., water, sediments and ballast) and the liner. The WSI was then re-lined and has been used for equalization and storage of non-hazardous stormwater runoff from the northern portion of the Facility as an ICM, as described in the WSI Operations Plan. In 2015, FMC increased the available storage capacity of the WSI to approximately 2 million gallons. Water in the WSI is treated at the facility WTP and discharged pursuant to the facility SPDES permit.

The continued use of the WSI for management of nonhazardous waste stormwater and collection of contaminated groundwater in the underdrains and Sump 3 have been subject to requirements specified in the WSI Operations Plan, including sampling and analysis of the WSI contents (i.e., water and accumulated sediment) and inflow (i.e., runoff water) to the WSI. Any wastes that may be generated as part of the final closure of the WSI or other corrective actions at the facility will be addressed in accordance with the final approved closure plan for the WSI and/or other related facility corrective action plans.

The ESI was an unlined, bermed stormwater detention area (approximately 4.8 acres) with a maximum holding capacity of approximately 2 million gallons. The ESI received surface water runoff from adjacent areas of the facility. The ESI was taken out of service and ceased to receive any stormwater requiring

management as a hazardous waste in 1988. The AOC acknowledged the inactive status of the ESI and deferred closure pending the results of an RFI and, if one is undertaken, the CMS. With approval of the Agencies, FMC conducted ICMs between 1996 and 2011 under the AOC, which resulted in the removal of arsenic-contaminated soils and placement of those soils within the footprint of the ESI and an adjacent area (collectively referred to as the “ESI Fill Area”). The ESI and soil within the footprint of the ESI will be subject to the results of the RFI/CMS process and will be addressed in accordance with the final approved closure plan for the ESI and/or other related facility corrective action plans.

1.4 Identification/EPA Classification and Quantities of Hazardous Wastes Generated

The WSI and ESI do not currently actively manage hazardous wastes. Prior to partial closure of the WSI and ceasing use of the ESI, both impoundments managed hazardous waste stormwater, which exhibited the hazardous waste characteristic for arsenic (D004).

The continued use of the WSI for management of nonhazardous waste stormwater and collection of contaminated groundwater in the underdrains and Sump 3 are subject to requirements specified in the WSI Operations Plan.

Any wastes that may be generated as part of the final closure of the WSI, ESI and/or other corrective actions at the facility will be addressed and characterized in accordance with the final approved closure plans and/or other related facility corrective action plans.

1.5 Description of Hazardous Waste Management Units

The WSI and ESI do not currently actively manage hazardous wastes. The continued use of the WSI for management of nonhazardous waste stormwater and collection of contaminated groundwater in the underdrains and Sump 3 are subject to requirements specified in the WSI Operations Plan, including sampling and analysis of the WSI contents (i.e., water and accumulated sediment) and inflow (i.e., runoff water) to the WSI.

2.0 WASTE ANALYSIS PARAMETERS

The continued use of the WSI for management of nonhazardous waste stormwater and collection of contaminated groundwater in the underdrains and Sump 3 are subject to requirements specified in the WSI Operations Plan, including sampling and analysis of the WSI contents (i.e., water and accumulated sediment) and inflow (i.e., runoff water) to the WSI. Sampling procedures and analytical parameters and methods are further described in the Quality Assurance Project Plan (QAPP).

Any wastes that may be generated as part of the final closure of the WSI, ESI and/or other corrective actions at the facility will be addressed in accordance with the final approved closure plans and/or other related facility corrective action plans.

3.0 SAMPLING PROCEDURES

The WSI Operations Plan and the QAPP specify sampling procedures and analysis requirements associated with the continued use of the WSI as an ICM.

The sampling and analysis of any wastes that may be generated as part of the final closure of the WSI, ESI and/or other corrective actions at the facility will be addressed in accordance with the final approved closure plans and/or other related facility corrective action plans.

Health and safety considerations are addressed in the facility Health and Safety Plan (HASP).

4.0 LABORATORY TESTING AND ANALYTICAL METHODS

The WSI Operations Plan and the QAPP specify analysis requirements (including laboratory certification and testing and analytical methods) associated with the continued use of the WSI as an ICM. Unless otherwise noted, the methods for analyzing each parameter are derived from the document entitled, “Test Methods for Evaluating Solid Waste, United States Environmental Protection Agency (SW-846), Third Edition, First Update 1990” or latest approved revisions. The rationale for choosing the parameters to be analyzed is based on past laboratory analyses of the waste stream, knowledge of the constituents of the waste stream and the processes that generate the waste stream. It should be noted that in the absence of USEPA or NYSDEC-approved methods listed in this Waste Analysis Plan, alternate analytical methods may be utilized.

The sampling and analysis of any wastes that may be generated as part of the final closure of the WSI, ESI and/or other corrective actions at the facility will be addressed in accordance with the final approved closure plans and/or other related facility corrective action plans.

5.0 GLOSSARY

<u>Term</u>	<u>Definition</u>
40 CFR	Title 40 of the Code of Federal Regulations
6 NYCRR	Title 6 of the New York Codes, Rules and Regulations
AOC	Administrative Order on Consent
Agencies	NYSDEC and USEPA
CMS	Corrective Measures Study
CSI	Central Surface Impoundment
ESI	Eastern Surface Impoundment
FMC	FMC Corporation
HASP	Health and Safety Plan
ICM	Interim Corrective Measure
NYSDEC	New York State Department of Environmental Conservation
OU	Operable Unit
QAPP	Quality Assurance Project Plan
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
SPDES	State Pollutant Discharge Elimination System
SSPL	Site Specific Parameter List
SWMU	Solid Waste Management Unit
USEPA	United States Environmental Protection Agency
WSI	Western Surface Impoundment
WTP	Water Treatment Plant