FMC CORPORATION

DRAFT PERMIT

TABLE OF CONTENTS

PERMIT

Under the Environmental Conservation Law (ECL)

Permittee and Facility Information

Permit Issued To:
FMC CORP
1735 MARKET ST
PHILADELPHIA, PA 19103
(215) 299-6000

Facility:
FMC - AGRICULTURAL PRODUCTS
100 NIAGARA ST
MIDDLEPORT, NY 14105

Facility Location: in ROYALTON in NIAGARA COUNTY
Facility Principal Reference Point: NYTM-E: 218.03 NYTM-N: 4789.758
Latitude: 43°12'28.6" Longitude: 78°28'15.6"

Authorized Activity: The facility has three surface impoundments at the facility: The Eastern Surface Impoundment is an inactive surface impoundment with a temporary soil cover. FMC will be required to close this unit as per the requirements in the draft permit and closure plan. The Western Surface Impoundment has been repurposed as a lined collection pond for contaminated surface water run-off from the North site cover and groundwater prior to treatment at the on-site waste water treatment plant as part of an Interim Corrective Measure. The Central Surface Impoundment has been closed and must operate according to the post closure plan. The permit has a schedule for on and off-site corrective actions.

Permit Authorizations

Resource Conservation and Recovery Act - Under Article 27, Title 9
Permit ID 9-2936-00017/02004
New Permit Proposed Effective Date: _____ Proposed Expiration Date: No Exp. Date

NYSDEC Approval

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, and all conditions included as part of this permit.

Permit Administrator: DAVID S DENK, Regional Permit Administrator
Address: NYSDEC Region 9 Headquarters
270 Michigan Ave
Buffalo, NY 14203 -2915

Authorized Signature: _____ Date ___/____/____

Permit Components

RESOURCE CONSERVATION AND RECOVERY ACT PERMIT CONDITIONS

GENERAL CONDITIONS, APPLY TO ALL AUTHORIZED PERMITS

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

RESOURCE CONSERVATION AND RECOVERY ACT PERMIT CONDITIONS

1. **Conformance with Approved Plans** All activities authorized by this permit must be in strict conformance with the approved plans submitted by FMC Corporation as part of the permit renewal application.

2. **Permit Assumes that Permit Renewal Application is Complete and Accurate** The permit is based on the information submitted in the permit application submitted by FMC Corporation in May 2015 and all subsequent revisions. The permit is based on the assumption that the information submitted by FMC Corporation in the application documents is complete and accurate and the facility will be operated as specified in the application. Any inaccuracies or incompleteness found in the information may be grounds for the termination or modification of this permit and potential enforcement action.

3. **Permittee Shall Comply with Permit** The permittee must comply with all terms and conditions of this permit. This permit consists of the conditions contained herein (including those in any attachments and incorporated documents) and the applicable regulations contained in 6 NYCRR (Parts 370 through 373-2, 376, 621 and 624).

4. **Notify the Department of any Deviations** The Permittee shall immediately notify the Department of any deviation from or changes in the information contained in the application which would affect the Permittee's ability to comply with the regulations or permit conditions.

5. **Potential Conflicts with Permit** In the event of a discrepancy between this Permit and any regulation, order on consent or any other Permit, the more stringent requirement applies.

6. Modules, Attachments and Incorporated Documents The Permittee shall operate the facility in strict accordance with the modules, attachments and incorporated documents to this permit as specified below:

Modules:

I - General Conditions

Schedule 1 of Module I
Exhibit A - Supplement to Module I – General Provisions
Exhibit B - Supplement to Module II – Corrective Action
Exhibit C - Supplement to Module V – Surface Impoundments
Exhibit D - Closure/Post-Closure Care

II - Corrective Action Requirements

V - Surface Impoundments

Attachments:
A EPA Part A Application
B Engineering Drawings
C Closure Plan, Post-Closure Plan and Financial Assurance
D Permit Modification Log

Documents Incorporated by Reference

1. FMC Corporation, Middleport, New York, Amended Application Hazardous Waste Management Facility Permit (6 NYCRR PART 373) USEPA ID # NYD002126845 NYSDEC Site # 932014 Amended May 18, 2015 and subsequent updates.

2. Attachments to FMC Corporation, Middleport, New York, Amended Application Hazardous Waste Management Facility Permit (6 NYCRR PART 373) USEPA ID # NYD002126845 NYSDEC Site # 932014 Amended May 18, 2015 D002126845 NYSDEC Site # 932014 Amended May 18, 2015 and subsequent updates.

    a. Attachment B - FMC Middleport RCRA Contingency Plan May 13, 2016

    b. Attachment C - Western Surface Impoundment (WSI) Operations Plan[1] DRAFT April 2016

    c. Attachment D - North Site Cover Operations and Maintenance (O&M) Plan DRAFT September 2016

    d. Attachment E - Groundwater Extraction System Operation and Maintenance (O&M) Plan DRAFT September 2016

e. Attachment F - Operation Maintenance and Monitoring (OM&M) Plan for North Rail Phase I Interim Corrective Measures June 2011

f. Attachment G - Operation Maintenance and Monitoring (OM&M) Plan for North Rail Phase II Interim Corrective Measures March 2012

g. Attachment H - North Commercial/Industrial Area Wooded Parcel Site Management plan (SMO) June 2011

h. Attachment I - Culvert 105 Sediment Chamber Manhole Number 9 (MH-N9) at Margaret Droman Park Maintenance and Monitoring (M&M) Plan June 2011

i. Attachment J - Health and Safety Plan (HASP) DRAFT May 2015

j. Attachment M - Groundwater Monitoring Program (GMP) for Remedial Systems Effectiveness Monitoring DRAFT May 2015

k. Attachment N - Quality Assurance Project Plan (QAPP) DRAFT May 2015

l. Attachment P - Topographic Map original 05.18.2015

m. Attachment R - Waste Analysis Plan DRAFT February 2016

n. Attachment S - Security and Facility Inspection Plan DRAFT February 2016

o. Attachment T - Personnel Training Program Plan DRAFT February 2016

3. FMC Corporation, Middleport, New York, RCRA Facility Investigation (RFI) Report Volume I Background and Related Information Revised September 2009 FINAL

4. FMC Corporation, Middleport. New York, RCRA Facility Investigation (RFI) Report Volume II - Suspected Air Deposition Study Area 1 (South of the Erie Canal and West of the Niagara/Orleans County Line) and Culvert 105 Study Area South of the Erie Canal September 2009 FINAL

5. FMC Corporation, Middleport. New York, RCRA Facility Investigation (RFI) Report Volume IV - Culvert 105 and Flood Zone September 2009 FINAL

6. FMC Corporation, Middleport. New York, RCRA Facility Investigation (RFI) Report Volume V - Tributary One and Flood Plain South of Pearson/Stone Roads June 2010 FINAL

7. FMC Corporation, Middleport. New York, Draft Corrective Measures Study (CMS) Report - Suspected Air Deposition and Culvert 105 Study Areas May 16, 2011

8. NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION FINAL STATEMENT OF BASIS FOR AIR DEPOSITION AREA #1 (OU2 AND OU4) AND CULVERT 105 (OU5) FMC CORPORATION MIDDLEPORT, NEW YORK USEPA ID NO.: NYD002126845 DER SITE NO. 932014 May 2013

9. FMC Corporation Middleport, New York, RCRA Facility Investigation Report (RFI) Volume X - Suspected Air Deposition Study Area 2 (North of the Erie Canal and East of the Niagara/Orleans County Line) October 2012 FINAL

10. FMC Corporation Middleport, New York, RCRA Facility Investigation (RFI) Report Volume III - Former Research and Development Property - Operable Unit 9 (OU-9) September 2013

11. FMC Corporation Middleport, New York, RCRA Facility Investigation (RFI) Volume IX.b - Eastern Parcel (Operable Unit 11) - October 2016

12. FMC Corporation Agricultural Chemical Division Middleport, New York, EPA ID #NYD002126845 - RCRA Facility Assessment, Preliminary Review Revised October 7, 1988

7. QA/QC Procedures The Permittee is responsible for verifying that the Quality Assurance/Quality Control Program (QA/QC) followed by laboratories used by the Permittee to carry out analysis of the waste streams, conform to the QA/QC procedures approved in the permit and thus ensure the validity of the analytical data provided by the laboratories.

8. Laboratories Shall be ELAP Certified As required by ECL 03-0119, any laboratory (Permittee or contract), used by the Permittee to perform analysis pursuant to this Permit shall be certified by the New York State Department of Health Environmental Laboratory Approval Program (ELAP) in the appropriate categories of analysis, if ELAP issues certifications in such categories. If the Permittee uses an ELAP approved contract laboratory to perform the analysis required by this Permit, then the Permittee shall inform the laboratory in writing that it must operate under the waste analysis and quality assurance provisions of this Permit.

GENERAL CONDITIONS - Apply to ALL Authorized Permits:

1. Facility Inspection by The Department The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71- 0301 and SAPA 401(3).

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

2. Relationship of this Permit to Other Department Orders and Determinations Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

3. Applications For Permit Renewals, Modifications or Transfers The permittee must submit a separate written application to the Department for permit renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing. Submission of applications for permit renewal, modification or transfer are to be submitted to:

Regional Permit Administrator
NYSDEC Region 9 Headquarters
270 Michigan Ave
Buffalo, NY14203 -2915

4. Submission of Renewal Application The permittee must submit a renewal application at least 180 days before permit expiration for the following permit authorizations: Resource Conservation and Recovery Act.

5. Permit Modifications, Suspensions and Revocations by the Department The Department reserves the right to exercise all available authority to modify, suspend or revoke this permit. The grounds for modification, suspension or revocation include:

a. materially false or inaccurate statements in the permit application or supporting papers;

b. failure by the permittee to comply with any terms or conditions of the permit;

c. exceeding the scope of the project as described in the permit application;

d. newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit;

e. noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

6. Permit Transfer Permits are transferrable unless specifically prohibited by statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification
The permittee, excepting state or federal agencies, expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees, and agents ("DEC") for all claims, suits, actions, and damages, to the extent attributable to the permittee's acts or omissions in connection with the permittee's undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in compliance or not in compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under Article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

Item B: Permittee's Contractors to Comply with Permit
The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

Item C: Permittee Responsible for Obtaining Other Required Permits
The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.

Item D: No Right to Trespass or Interfere with Riparian Rights
This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

NEW YORK STATE
DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

6 NYCRR PART 373
HAZARDOUS WASTE MANAGEMENT PERMIT

FOR

FMC Corporation
Middleport, NY
NIAGARA COUNTY

DEC PERMIT No. 9-2936-00017/02004
EPA ID No. NYD002126845

Table of Contents

Documents Incorporated by Reference

1. FMC Corporation, Middleport, New York, Amended Application Hazardous Waste Management Facility Permit (6 NYCRR PART 373) USEPA ID # NYD002126845 NYSDEC Site # 932014 Amended May 18, 2015 and subsequent updates.

2. Attachments to FMC Corporation, Middleport, New York, Amended Application Hazardous Waste Management Facility Permit (6 NYCRR PART 373) USEPA ID # NYD002126845 NYSDEC Site # 932014 Amended May 18, 2015 D002126845 NYSDEC Site # 932014 Amended May 18, 2015 and subsequent updates.

    a. Attachment B - FMC Middleport RCRA Contingency Plan[1] May 13, 2016

    b. Attachment C - Western Surface Impoundment (WSI) Operations Plan[1] DRAFT April 2016

    c. Attachment D - North Site Cover Operations and Maintenance (O&M) Plan[1] DRAFT September 2016

    d. Attachment E - Groundwater Extraction System Operation and Maintenance (O&M) Plan[1] DRAFT September 2016

    e. Attachment F - Operation Maintenance and Monitoring (OM&M) Plan for North Rail Phase I Interim Corrective Measures[1] June 2011

    f. Attachment G - Operation Maintenance and Monitoring (OM&M) Plan for North Rail Phase II Interim Corrective Measures[1] March 2012

    g. Attachment H - North Commercial/Industrial Area Wooded Parcel Site Management plan (SMO)[1] June 2011

    h. Attachment I - Culvert 105 Sediment Chamber Manhole Number 9 (MH-N9) at Margaret Droman Park Maintenance and Monitoring (M&M) Plan[1] June 2011

    i. Attachment J - Health and Safety Plan (HASP) [1,2] DRAFT May 2015

    j. Attachment M - Groundwater Monitoring Program (GMP) for Remedial Systems Effectiveness Monitoring[1,3] DRAFT May 2015

    k. Attachment N - Quality Assurance Project Plan (QAPP) [1,3] DRAFT May 2015

    l. Attachment P - Topographic Map[1] original 05.18.2015

    m. Attachment R - Waste Analysis Plan[1,3] DRAFT February 2016

    n. Attachment S - Security and Facility Inspection Plan[1] DRAFT February 2016

o. Attachment T - Personnel Training Program Plan[1] DRAFT February 2016

3. FMC Corporation, Middleport, New York, RCRA Facility Investigation (RFI) Report Volume I Background and Related Information Revised September 2009 FINAL

4. FMC Corporation, Middleport. New York, RCRA Facility Investigation (RFI) Report Volume II – Suspected Air Deposition Study Area 1 (South of the Erie Canal and West of the Niagara/Orleans County Line) and Culvert 105 Study Area South of the Erie Canal September 2009 FINAL

5. FMC Corporation, Middleport. New York, RCRA Facility Investigation (RFI) Report Volume IV – Culvert 105 and Flood Zone September 2009 FINAL

6. FMC Corporation, Middleport. New York, RCRA Facility Investigation (RFI) Report Volume V – Tributary One and Flood Plain South of Pearson/Stone Roads June 2010 FINAL

7. FMC Corporation, Middleport. New York, Draft Corrective Measures Study (CMS) Report - Suspected Air Deposition and Culvert 105 Study Areas May 16, 2011

8. NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION FINAL STATEMENT OF BASIS FOR AIR DEPOSITION AREA #1 (OU2 AND OU4) AND CULVERT 105 (OU5) FMC CORPORATION MIDDLEPORT, NEW YORK USEPA ID NO.: NYD002126845 DER SITE NO. 932014 May 2013

9. FMC Corporation Middleport, New York, RCRA Facility Investigation Report (RFI) Volume X - Suspected Air Deposition Study Area 2 (North of the Erie Canal and East of the Niagara/Orleans County Line) October 2012 FINAL

10. FMC Corporation Middleport, New York, RCRA Facility Investigation (RFI) Report Volume III - Former Research and Development Property – Operable Unit 9 (OU-9) September 2013

11. FMC Corporation Middleport, New York, RCRA Facility Investigation (RFI) Volume IX.b – Eastern Parcel (Operable Unit 11) – October 2016

12. FMC Corporation Agricultural Chemical Division Middleport, New York, EPA ID #NYD002126845 – RCRA Facility Assessment, Preliminary Review Revised October 7, 1988

Footnotes

[1] *Each document referenced by this footnote includes the referenced document and any subsequent Department approved replacement.*

[2] *This is a generic HASP. A specific HASP will be developed using the generic plan as a starting point for each remedial project, closure or corrective action performed by FMC or their contractors.*

[3] *This document has been revised by the Department.*

ACRONYMS

Acronyms for Part 373 Permit

A

AOC - Areas of Concern

B

C

CMI - Corrective Measures Implementation
CMS - Corrective Measures Study
CPP – Citizen Participation Plan

D

DEC - Department of Environmental Conservation
DER - Division of Environmental Remediation
DUSR - Data Usability Summary Report

E

EC - Emergency Coordinator
ECL - Environmental Conservation Law
EDS - Electronic Document Standards
ELAP - Environmental Laboratory Approval Program

F

FER - Final Engineering Report
FS - Feasibility Study

G

GOL - General Obligations Law

H

Hr - Hour

I

ICM - Interim Corrective Measures
ISMP - Interim Site Management Plan

K

L

LDR - Land Disposal Restrictions

M

MCL - Maximum Contaminant Level
MNA - Monitored Natural Attenuation

N

NFPA - National Fire Protection Association
NYCRR - New York State Codes, Rules & Regulations
NYSDEC - New York State Department of Environmental Conservation
NYSDOH - New York State Department of Health

O

O&M - Operation & Maintenance
OM&M – Operation, Maintenance & Monitoring
OSHA - Occupational Safety & Health Administration
OU – Operable Unit

P

PDF - Portable Document Format
P&ID - Process and Instrumentation Drawing/Diagram
PR - Preliminary Review
PRR - Periodic Review Report
PR - Preliminary Review

Q

QA/QC - Quality Assurance/Quality Control

R

RA - Remedial Action
RCRA - Resource Conservation & Recovery Act
RD - Remedial Design
RD/RA - Remedial Design/Remedial Action
RFA - RCRA Facility Assessment
RFI - RCRA Facility Investigation
RI - Remedial Investigation
ROD - Record of Decision
RPL - Real Property Law
RSO - Remedial System Optimization

S

SAPA - State Administrative Procedures Act
SC - Site Characterization
SCADA - Supervisory Control And Data Acquisition
SEQR - State Environmental Quality Review
SM - Site Management
SMP - Site Management Plan
SB - Statement of Basis
SPDES - State Pollutant Discharge Elimination System
SWMU - Solid Waste Management Unit
SV - Sampling Visit

T

TSDF - Treatment, Storage & Disposal Facility

U

UL - Underwriters Laboratories
USDOT - United States Department of Transportation
USEPA - United States Environmental Protection Agency
UV - Ultraviolet

V

VSI - Visual Site Inspection

W

WAP - Waste Analysis Plan

MODULE I

General Conditions

PART 373 PERMIT

MODULE I – GENERAL CONDITIONS

The Permittee is hereby authorized to operate only the hazardous waste units identified in Schedule 1 of Module I of this Permit. This Permit does not authorize the use of any other units to operate other than those identified in Schedule 1 of Module I.

A. EFFECT OF PART 373 PERMIT

1. This Permit consists of the general and special conditions contained in this and the attached Modules, including **Schedule 1 of Module I**; including the Attachments and documents incorporated by reference; and the applicable requirements of the New York State Environmental Conservation Law (ECL) Article 27, Title 9, Section 27-0900 et seq., and the following regulations:

   - 6 NYCRR 370 - Hazardous Waste Management System-General;
   - 6 NYCRR 371 - Identification and Listing of Hazardous Wastes;
   - 6 NYCRR 372 - Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities;
   - 6 NYCRR 373 - Hazardous Waste Management Facilities;
   - 6 NYCRR 374 - Management of Specific Hazardous Waste;
   - 6 NYCRR 376 - Land Disposal Restrictions;
   - 6 NYCRR 621 - Uniform Procedures; and,
   - 6 NYCRR 624 - Permit Hearing Procedures.

2. The following Remediation Guidance Documents are potentially relevant to this Permit. The Permittee shall consider applicable Department guidance when conducting activities required by this Permit.

   DER-10 Technical Guidance for Site Investigation and Remediation

   DER-23 Citizen Participation Handbook for Remedial Programs

   DER-31 Green Remediation

   DER-33 Institutional Controls: A Guide to Drafting and Recording Institutional Controls

3. The following Commissioner Policies are potentially relevant to this Permit. The Permittee shall consider applicable Department policies when conducting activities required by this Permit.

CP-29 Environmental Justice and Permitting

CP-39 Use of Enforcement Discretion for Discarded Mercury-containing Equipment

CP-43 Groundwater Monitoring Well Decommissioning

CP-44 Natural Resource Damages

CP-45 Procedure to Demonstrate Compliance with Financial Test Requirements (for financial assurance)

CP-51 Soil Cleanup Guidance

4. Compliance with this Permit during its term constitutes compliance, for purposes of enforcement, with 6 NYCRR Parts 370 through 374 and 376 except for the following requirements not included in the Permit:

   a. requirements which become effective by statute, including amendments thereto;

   b. requirements which are promulgated under 6 NYCRR 376 restricting the placement of hazardous wastes in or on the land;

   c. requirements which are promulgated under 6 NYCRR 373-2 regarding leak detection systems for new and replacement surface impoundment, waste pile, and landfill units, and lateral expansions of surface impoundment, waste pile, and landfill units. The leak detections system requirements include double liners, CQA programs, monitoring, action leakage rates, and response action plans, and will be implemented through the procedures of 6 NYCRR 373-1.7 for major modifications; or,

   d. requirements which are promulgated under 6 NYCRR 373-3.27, 373-3.28, and 373-3.29, limiting air emissions.

5. The Permittee is authorized to manage hazardous waste in the permitted units identified in **Schedule 1 of Module I** in accordance with the conditions of this Permit. Any storage, treatment or disposal of hazardous waste not authorized by this Permit is prohibited unless exempt under 6 NYCRR Part 373-1.1(d). Issuance of this Permit does not authorize any injury to persons or property, any invasion of other private rights, or any infringement of federal, State or local laws or regulations.

6. All plans, reports, specifications and schedules required by the terms of this Permit and all subsequent amendments to those documents are incorporated by reference into this Permit when specifically noted in any written approval and/or acceptance issued by the Department pursuant to 6 NYCRR 621.11 or 6 NYCRR 621.13. Upon incorporation, the provisions of each such document will be binding upon the Permittee and have the same legal force and effect as the requirements of this Permit.

7. Unless otherwise specified in this Permit, the Permittee must submit plans, reports, specifications, implementation schedules and any subsequent amendments to those documents required by this Permit to the Department for review and comment. Plans reports, specifications, implementation schedules and any subsequent amendments must be submitted in accordance with the timeframes specified within this condition unless an alternative schedule is contained within an approval letter, an approved submittal or within another submission schedule within this permit. Following its review of a document, if the document requires formal Department approval or acceptance (as determined by the Department), the Department may approve the document as submitted, issue a conditional approval with required revisions or additional requirements, or disapprove the submittal, with or without comments or revisions.

   a. Department Approval. For Department approved submittals, the Permittee must implement the submittal or initiate the next step in the program in accordance with the schedule contained in the approved submittal, the Department's approval letter, or a schedule for submission within this permit.

      Upon approval, the submittal will be incorporated into this Permit when specifically noted by the Department in such approval, pursuant to 6 NYCRR 621. If directed by the Department, the Permittee must place the submittal within the Facility's document repository within fifteen (15) calendar days of receipt of the Department's approval.

   b. Department Conditional Approval. Upon conditional approval of a submittal, the Permittee must take one of the actions listed below:

      i. The Permittee must, within thirty (30) calendar days of the conditional approval, revise the submittal in strict accordance with the Department required revisions and/or added requirements, resubmit the document in its final revised form, and implement the submittal or initiate the next step in the program in accordance with **Condition A.7.a** above; or

      ii. The Permittee must proceed in accordance with **Condition A.7.d** below.

   c. Department Disapproval. Upon disapproval of a submittal, the Permittee must take one of the actions listed below:

      i. The Permittee must, within thirty (30) calendar days of the disapproval, revise the submittal in strict accordance with the Department's revisions, comments and/or other requirements, and resubmit the document for Department approval. Upon Department approval of the resubmitted document, the Permittee must implement the submittal or initiate the next step in the program in accordance with **Condition A.7.a** above; or

      ii. The Permittee must proceed in accordance with **Condition A.7.d** below.

d. If the Permittee disagrees with the Department's conditional approval or disapproval of a submittal, the Permittee must, within fifteen (15) calendar days of the Permittee's receipt of the Department's conditional approval or disapproval, take one of the actions listed below:

i. The Permittee shall request a meeting with Department staff to discuss the Department's revisions, comments or other requirements as specified in the conditional approval or disapproval. If the Department grants the Permittee's meeting request, it shall be scheduled within a time period as specified by the Department, and subsequent to such a meeting, the Permittee must take action as required by **Condition A.7.e** below. If the Department denies the Permittee's meeting request, the Department, at its discretion, may proceed in accordance with **Condition A.7.f** below. Alternatively, for corrective action submittals required by or related to **Exhibit B of Schedule 1 of Module I or Module II** of this Permit ONLY, the Permittee may, within fifteen (15) calendar days of the Department's meeting denial, submit a Notice of Dispute in accordance with **Condition E.4 of Module II** of this Permit and subsequently proceed with the dispute resolution process in accordance with **Condition E.4 of Module II** of this Permit; or

ii. The Permittee shall provide the Department with a written notice of disagreement containing the specific points of disagreement and any supporting documentation. In response, the Department, at its discretion, may proceed in accordance with **Condition A.7.f** below; or

iii. For corrective action submittals required by or related to **Exhibit B of Schedule 1 of Module I or Module II** of this Permit ONLY, the Permittee may submit a Notice of Dispute in accordance with **Condition E.4 of Module II** of this Permit and subsequently proceed with the dispute resolution process in accordance with **Condition E.4 of Module II** of this Permit.

e. Subsequent to the meeting held in accordance with **Condition A.7.d.i** above, the Permittee must take one of the actions listed below within the specified time periods:

i. If the outcome of the meeting results in a documented agreement on all matters with respect to the submitted document, the Permittee must submit a revised document to the Department for approval within thirty (30) calendar days of the above described meeting, accurately reflecting all agreed upon revisions. Upon Department approval of the revised document, the Permittee must implement the submittal or initiate the next step in the program in accordance with **Condition A.7.a** above; or

ii. If the outcome of the meeting does not result, in an agreement on all matters with respect to the submitted document, the Permittee must, within fifteen (15) calendar days of said meeting, provide the Department with a written notice of

disagreement containing the specific remaining points of disagreement and any supporting documentation. In response, the Department, at its discretion, may proceed in accordance with **Condition A.7.f** below. Alternatively, for corrective action submittals required by or related to **Exhibit B of Schedule 1 of Module I or Module II** of this Permit ONLY, the Permittee may, within fifteen (15) calendar days of said meeting, submit a Notice of Dispute in accordance with **Condition E.4 of Module II** of this Permit and subsequently proceed with the dispute resolution process in accordance with **Condition E.4 of Module II** of this Permit.

f. If the submittal is not revised to the Department's satisfaction at any time during the process described by **Conditions A.7.b through A.7.e** above, the Department may, at its discretion, revise the document and send the Permittee a notice of intent to modify the Permit to incorporate the revised document into the Permit, pursuant to 6 NYCRR 621.13.

8. The documents listed in **Condition B of Schedule 1 of Module I** are made part of this Permit, are binding upon the Permittee and have the same legal force and effect as the requirements of this Permit.

9. Informal advice, guidance, suggestion, or comment by the Department must not be construed as relieving the Permittee of the Permittee's obligation to obtain such formal approvals as may be required by this Permit. The Permittee consents to and agrees not to contest the authority and jurisdiction of the Department to enter into or enforce this Permit.

10. The Permittee must also comply with the following:

- 6 NYCRR 373-1.1(f) – Uniform Procedures
- 6 NYCRR 373-1.1(g) – Enforcement
- 6 NYCRR 373-1.1(h) – Severability

11. The Permittee must maintain a current and complete paper copy of this Permit, including all Modules, Attachments and documents incorporated by reference, in at least one location at the Facility for review by the Department upon request.

12. For any Environmental Monitor(s) assigned to the Facility, the Permittee must maintain a complete set of paper copies of all submittals required by this Permit in the office of the Environmental Monitor or as otherwise directed by the Environmental Monitor(s).

B. DEFINITIONS

1. For the purposes of this Permit, the terms used herein shall have the same meanings as those provided in 6 NYCRR 370 through 376, and the terms defined in **Condition B.2** of this Module, unless this Permit specifically states otherwise. Where the terms are

not otherwise defined, the meanings associated with such terms shall be as defined by a standard dictionary reference or the generally accepted scientific or industry meaning of the term.

2. The following additional terms used in this Permit are defined as such:

   a. Action Levels. For the purposes of this Permit, "action levels" are hazardous constituent concentrations for a specific environmental medium which if exceeded indicate a potential threat to human health or the environment. The exceedance of action levels may trigger further investigations, studies and corrective measures. Where available, action levels are based on appropriate promulgated standards established for a specific environmental medium. When promulgated standards are not available, action levels can be media-specific hazardous constituent concentrations derived from non-promulgated human health risk data or environmental risk data with the latter levels being protective of aquatic life or wildlife. An action level may be set at the background level for a hazardous constituent for which data are inadequate to set a human health or environmental health-based level. The action levels for groundwater are the more stringent of the following for each compound or constituent: 6 NYCRR 703.5, New York State Department of Health's Drinking Water Standards and the United States Environmental Protection Agency's Maximum Contaminant Levels (MCLs).

   b. Areas of Concern (AOC). Pursuant to the authority granted by 6 NYCRR 373-1.6(c)(2), an "area of concern" has been 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 (SWMU), where hazardous waste and/or hazardous constituents are present, or are suspected to be present, as a result of a release from the facility. The term shall include areas of potential or suspected contamination as well as actual contamination. Such area(s) may require study and a determination of what, if any, corrective action may be necessary. All Permit references to and conditions for SWMUs shall apply to areas of concern.

   c. Corrective Action. For the purposes of this Permit, "corrective action" is a process that includes all activities related to the investigation, characterization and cleanup of a release of hazardous/mixed wastes or hazardous constituents from a solid waste management unit (SWMU) at a permitted or interim status treatment, storage and disposal facility (TSDF) to any environmental medium, including groundwater. **Module II** of this Permit contains a more detailed discussion of the corrective action process.

   d. Environment. Pursuant to ECL Article 27, Title 9, Section 27-0901, "environment" means any water; water vapor; land, including land surface or subsurface; air; and, fish, wildlife, biota and all other natural resources.

e. Hazardous Constituents. For the purposes of this Permit, "hazardous constituents" are those constituents listed in Appendix 23 of 6 NYCRR 371 or any constituent listed in Appendix 33 of 6 NYCRR 373-2.

f. Permittee. For the purposes of this Permit, "Permittee" herein refers to the party(ies) subject to this Permit. In addition, refer to **Conditions R.2 and R.3** of this Module.

g. Priority Pollutant. Pursuant to 6 NYCRR 750-1.2(a)(67), "priority pollutant" means those pollutants listed in 40 CFR 122, Appendix D (see 6 NYCRR 750-1.24) as Organic Toxic Pollutants (volatiles, acid compounds, base/neutral compounds and pesticides), Metals, Cyanide and Total Phenols.

h. Release. For purposes of this Permit, "release" includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment of any hazardous waste, including hazardous constituents, unless expressly authorized under the terms of this Permit or otherwise permitted under law (e.g., SPDES permitted discharges).

i. Solid Waste Management Unit (SWMU). For purposes of this Permit, a "solid waste management unit" includes any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of hazardous or solid wastes. Such units include any area at the facility at which solid wastes have been routinely and systematically released. These units include certain areas associated with production processes that have become contaminated as a result of routine and systematic releases.

C. GENERAL PERMIT CONDITIONS [6 NYCRR 373-1.6]

1. 6 NYCRR 373-1.6(a) and 6 NYCRR 373-1.6(b) provide conditions applicable to all Part 373 Permits which are therefore incorporated into this Permit. The provisions are incorporated into, and made enforceable under this Permit.

2. Oral Reports: The Permittee must orally report any noncompliance that may endanger health or the environment within 24 hours from the time the Permittee becomes aware of the circumstances. This noncompliance includes:

   a. Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies

   b. Any information of a release or discharge of hazardous waste or of a fire or explosion from the HWM facility, which could threaten the environment or human health outside the facility.

The oral reports must be made to the Department using the New York State 24-hour oil and hazardous material spill notification number (800) 457-7362 and the National Response Center using its 24-hour number (800) 424-8802, or any designated telephone numbers which may subsequently replace those listed above. The Permittee must also provide such oral reports to Department staff that are on-site at the time of, or subsequent to, a reportable incident. The information reported must include that listed at 6 NYCRR 373-1.6(a)(12)(vi)('b').

For a fire, explosion or release to the environment, the Permittee must also comply with the reporting requirements in **Condition K.3** of this Module.

3. Entry Upon Facility:

   a. The Permittee must allow, pursuant to 6 NYCRR 373-1.6(a)(9), entry upon the Facility (or areas in the vicinity of the Facility which may be under the control of the Permittee) at reasonable times by any duly designated officer or employee of the United States Environmental Protection Agency (USEPA), the Department or any State agency having jurisdiction with respect to matters addressed pursuant to this Permit, and by any agent, consultant, contractor or other person so authorized by the Department, upon presenting identification, for inspecting, sampling, copying records that must be maintained by this Permit, testing, and any other activities necessary to evaluate the Permittee's compliance with this Permit.

   b. Upon request, the Permittee must: (i) provide the Department with suitable work space at the Facility, including access to a telephone, to the extent available; and, (ii) allow the Department full access to all records relating to matters addressed by this Permit. Raw data must be provided to the Department upon request.

   c. The Department shall have the right to take its own photographs, samples and scientific measurements and to obtain split samples, duplicate samples or both, as necessary to evaluate the Permittee's compliance with this Permit. The Department shall make the results available to the Permittee in accordance with Department policy. At the request of the Permittee, the Department will allow the Permittee's authorized representatives to take splits or duplicates of any samples collected by the Department.

4. Reservation of Rights

   a. Nothing contained in this Permit shall be construed as barring, diminishing, adjudicating, or in any way affecting any of the Department's rights or authorities, including, but not limited to, the right to require performance of further investigations and/or response action(s), the right to, at any time, issue a notice of intent to modify, suspend or revoke this Permit in accordance with 6 NYCRR 621.13 and/or to exercise any summary abatement powers with respect to any person, including the Permittee.

b. Except as otherwise provided in this Permit, the Permittee specifically reserves all rights and defenses under applicable law, and further reserves all rights respecting the enforcement of this Permit, including the rights to notice, to be heard, to appeal, and to any other due process. The existence of this Permit or the Permittee's compliance with it shall not be construed as an admission of liability, fault, wrongdoing, or breach of standard of care by the Permittee, and shall not give rise to any presumption of law or finding of fact, or create any rights, or grant any cause of action, which shall inure to the benefit of any third party.

D. PERMIT MODIFICATION AND PERMIT TRANSFER [6 NYCRR 373-1.7 and 621]

1. Proposed modifications to this Permit, including modifications to the Attachments and documents incorporated by reference into this Permit, must be addressed in accordance with 6 NYCRR 373-1.7 and 621.

2. The Permittee must contact the Department (or its representative) with respect to any and all proposed permit modifications requested by the Permittee. The Department shall make the determination as to whether a proposed permit modification is a minor or major modification in accordance with 6 NYCRR 373-1.7. For the purposes of this Permit, as described in **Condition D.2.a** of this Module, the Department will entertain proposed administrative modifications to this Permit that would not otherwise be required to follow the requirements of **Conditions D.2.b and/or D.2.c** of this Module. Administrative changes generally include in-kind replacements or minor updates to plans attached to this Permit or incorporated by reference. However, the Department must determine whether any and all changes are administrative modifications to this Permit.

   a. For modifications determined by the Department to be administrative, the Permittee shall make the change in the Permittee's copy of all affected Attachment(s) and/or document(s) incorporated by reference. Submittal to the Department of a change that the Department has determined is administrative in nature is not necessary. However, at the time of Permit renewal, the Permittee must incorporate all administrative changes into this Permit. The Permittee must record all administrative changes in the Permit Modification Log provided as Attachment D of this Permit in accordance with **Condition D.3** of this Module. Note: The Department reserves the right to have its project manager, environmental monitor and/or permit writer request proposed administrative changes in writing by the Permittee's submission of a cover letter, written description of the proposed administrative modification and a clean copy of the modified affected pages for the Department's review and approval.

   b. For modifications determined by the Department to be minor pursuant to 6 NYCRR 373-1.7(c) and 40 CFR 270.42(a), the Permittee must receive written approval from the Department before implementing the modification into this Permit, and subsequently follow the requirements of 6 NYCRR 373-1.7(e) and Department guidance for minor modifications.

c. For modifications determined by the Department to be major, the Permittee must treat the modification as a new application in accordance with 6 NYCRR 621.11 and follow the applicable requirements of 6 NYCRR 621.

3. The Permittee must maintain a log of all modifications requested and made to this Permit, including modifications made to the Attachments and documents incorporated by reference into this Permit. The log must conform to the Department-approved format presented in Attachment D of this Permit and must be submitted with each modification request. The log must be filled out in its entirety, except for the issuance date. Upon issuance of each Permit modification, the Permittee must place the updated log in Attachment D of this Permit along with a copy of the Department's approval letters, when applicable, and replace all affected pages in the Modules, Attachments and/or documents incorporated by reference with the modified pages.

4. The Department may at any time, at its discretion, modify this Permit under the terms of 6 NYCRR 621.13 in accordance with the requirements contained therein.

5. Permit Transfer: The Permittee must process all changes in Facility ownership and/or operational control in accordance with the requirements of 6 NYCRR 373-1.7(a), by submitting a revised permit application no later than 90 days prior to the scheduled change(s). Prior to undertaking a change in Facility ownership and/or operational control, the Permittee must provide written notification to the Department and receive written approval from the Department to allow transfer of this Permit. The Permittee must demonstrate to the Department's satisfaction that the prospective transferee will be able to comply with all applicable laws and regulations, Permit conditions, financial assurance and other requirements to which the Permittee is subject. The written notification must include the identity of the transferee and of the nature and proposed date of the conveyance, and must notify the transferee in writing, with a copy to the Department, of the applicability of this Permit including the corrective action program, as appropriate. The Department will determine whether transfer of this Permit is acceptable and will require either a minor or major modification.

E. EXPIRATION AND CONTINUATION OF PERMITS [6 NYCRR 373-1.8]

1. Requests for continuation of this Permit must be submitted in accordance with 6 NYCRR 373-1.8 and 621.11.

2. No sooner than one (1) year and no later than 180 days before the expiration of this Permit, the Permittee must provide the Department with a report regarding the matters identified in ECL 27-0913(3) occurring within two years of the date of the report. The report must include any such matters involving the permitted Facility, all other facilities owned or operated by the Permittee and any duly incorporated parent or subsidiary managing hazardous wastes within the United States. The Permittee must supply such documents and pertinent details regarding the matters in the report as may be requested by the Department.

3. The Permittee must schedule a "Pre-Application" meeting with the Department at least 270 days prior to the expiration date of this Permit. Renewal applications with a significant change (as defined at 6 NYCRR 373-1.10(a)(1)) are subject to the requirements of 6 NYCRR 373-1.10.

4. Complete applications for permit renewal must be submitted at least 180 days before the expiration date of this Permit pursuant to 6 NYCRR 373-1.8(b).

5. At any time during the review of the renewal application, the Department may request that the Permittee submit any additional information in writing which is necessary for determining the completeness of the application. Failure to provide such information by the date specified in the request may be grounds for denial of the application and the extension allowed pursuant to Section 401(2) of the State Administrative Procedures Act.

F. TERMINATION OF PERMIT ACTIVITIES

1. Should the Permittee cease the hazardous waste management activities allowed by this Permit prior to the expiration of this Permit, then, pursuant to 6 NYCRR 373-1.6(d), the Permittee must continue to comply with the applicable closure, post-closure and corrective action conditions and requirements stipulated in this Permit.

2. If the Permittee certifies closure of all hazardous waste management units at the Facility, and the Department accepts these closure certifications during the term of this Permit, and post-closure care or corrective action is determined to be necessary by the Department, the Permittee may request to enter into another enforceable commitment document which is appropriate, pursuant to Environmental Conservation Law (ECL) Section 71-2727(3) in lieu of this permit. The Permittee must enter into the appropriate enforceable commitment prior to the expiration of this Permit.

G. FACILITY OPERATION

1. In accordance with 6 NYCRR 373-2.3(b), the facility must be designed, constructed, maintained and operated to minimize the possibility of fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste(s) or hazardous waste constituents to air, soil, surface water or groundwater that could threaten human health or the environment.

2. The Permittee must at all times construct, operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee as designed in accordance with this Permit including **Schedule 1 of Module I**.

3. The Permittee must inspect the Facility to prevent malfunctions and deterioration, operator errors, and discharges that may cause or lead to the release of hazardous waste(s) or hazardous waste constituents to the environment, or a threat to human health pursuant to 6 NYCRR 373-2.2(g).

H. COMPLIANCE SCHEDULE

1. The Permittee must complete any activities referenced in **Condition C of Schedule 1 of Module I** within the timeframes set forth therein and in accordance with 6 NYCRR 373-1.6(d).

2. The Permittee must submit reports in a Department-approved format no later than 14 days following each interim and the final compliance date that summarize the status of each of the activities listed in **Condition C of Schedule 1 of Module I**. These reports must be signed and certified pursuant to 373-1.6(a)(11) and 373-1.4(a)(5).

I. WASTE ANALYSIS [6 NYCRR 373-2.2(e)]

1. The Permittee must perform general waste analysis in accordance with the requirements of 6 NYCRR 373-2.2(e) and this Permit, including the Department-approved Waste Analysis Plan incorporated by reference into this Permit by **Condition B of Schedule 1 of Module I**.

2. All laboratories utilized for the analysis of any closure, post-closure and/or corrective action samples must be certified under the New York State Department of Health's Environmental Laboratory Approval Program (ELAP). Any laboratory tests or sample analyses for which the commissioner of the New York State Department of Health (NYSDOH) issues certificates of approval must be performed by a laboratory certified to perform such tests or analyses pursuant to the NYSDOH Environmental Laboratory Approval Program.

J. PERSONNEL TRAINING PROGRAM [6 NYCRR 373-2.2(h)]

1. The Permittee must conduct personnel training in accordance with 6 NYCRR 373-2.2(h)(1), (2) and (3), and this Permit, including the Department-approved Personnel Training Program incorporated by reference into this Permit by **Condition B of Schedule 1 of Module I**.

2. The Permittee must maintain training documents in accordance with 6 NYCRR 373-2.2(h)(4) and (5), and this Permit, including the Department-approved Personnel Training Program incorporated by reference into this Permit by **Condition B of Schedule 1 of Module I**.

K. PREPAREDNESS AND PREVENTION, CONTINGENCY PLAN AND EMERGENCY PROCEDURES [6 NYCRR 373-2.3 and 2.4]

1. The Permittee must comply with the preparedness and prevention requirements in accordance with 6 NYCRR 373-2.3 and this Permit, including **Schedule 1 of Module I**.

2. The Permittee must comply with contingency plan and emergency procedure requirements in accordance with 6 NYCRR 373-2.4 and this Permit.

3. Reporting of Fires, Explosions or Releases to the Environment

   a. Oral Reports: For fires, explosions or releases which could threaten human health or the environment outside of the facility, the Facility's Emergency Coordinator must immediately notify the Department and the local governmental official designated as the on-scene coordinator for that governmental area. This notification must be made in accordance with, and include the information required by 6 NYCRR 373-2.4(g)(4)(ii).

   b. Written Report: For any fire, explosion or release to the environment, except if the release is less than or equal to one (1) pound and immediately cleaned up, the Permittee must, within fifteen (15) calendar days of the incident, submit a written report to the Department in accordance with, and include the information required by 6 NYCRR 373-2.4(g)(10).

L. WASTE REDUCTION REQUIREMENTS

1. The Permittee must comply with the requirements of Article 27, Title 9, Section 27-0908 of the ECL and 6 NYCRR 373-2.5(c)(2)(ix) relative to waste reduction requirements.

M. REQUIREMENTS FOR RECORDING AND REPORTING OF MONITORING RESULTS [6 NYCRR 373-1.6(b)]

1. The Permittee must comply with the recording, reporting and monitoring requirements listed in this Permit.

2. The Permittee must install, use and maintain monitoring equipment, utilize the approved methods, and report monitoring results as specified in 6 NYCRR 373-2 and this Permit, including **Schedule 1 of Module I**.

N. DATA AND DOCUMENT STANDARDS

1. All analytical data required by this Permit, as well as all analytical data requested by the Department, must be submitted to the Department in the standardized format in accordance with the Department's Electronic Data Deliverable guidance within 30 days of receipt from the laboratory (see http://www.dec.ny.gov/chemical/62440.html). The Permittee may obtain Category A deliverables for routine sampling activities. At decision points the Permittee must obtain Category B deliverables and have all data validated by a third party prior to submission to the Department. The individual performing the third-party validation must prepare a Data Usability Summary Report (DUSR) consistent with the guidelines of the Department's Technical Guidance for Site Investigation and Remediation (DER-10). The DUSR must be submitted with the report containing the data in accordance with **Condition N.2** of this Module. The data deliverable submitted to the Department must include the results of the data validation.

2. The Permittee must deliver to the Department preliminary or final reports, specifications or drawings prepared pursuant to this Permit in an electronic format that complies with the Department's Electronic Document Standards (EDS) or as otherwise directed by the Department. All final documents are to be submitted in an electronic format that complies with the most recent DER EDS. Until such time as the Department establishes an EDS, final documents are to be submitted as a PDF document (see http://www.dec.ny.gov/regulations/2586.html). Also, the Permittee must, at the request of the Department, provide electronic versions of technical documents in MS Word and/or MS Excel, and plan drawings and/or other site drawings in AutoCAD, or other format suitable to the Department.

3. In addition to electronic copies, the Permittee must provide paper copies of any document (e.g., reports, plans, data, specifications, drawings, etc.) requested by the Department in paper format or as may be specified in paper format in **Schedule 1 of Module I**.

4. All Permit Applications and Reports required by this permit and other information requested by the Department must be signed in accordance with the provisions of 6 NYCRR Part 373-1.4(a)(5), and include the following statement required by 373-1.4(a)(5)(iv): "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

O. FINANCIAL ASSURANCE

1. The Permittee must comply with all of the applicable requirements of 6 NYCRR 373-2.8 and this Permit. The definitions contained in 6 NYCRR 373-2.8(b) are applicable to the financial requirements within this Permit.

2. The Permittee must comply with this Permit and 6 NYCRR 373-2.6(l) for meeting the financial assurance requirements for corrective action for releases from any solid waste management unit located at the Facility, regardless of the time the waste was placed in the unit.

3. The Permittee must adjust for inflation all cost estimates required by 6 NYCRR 373-2.6(l), 373-2.8 and this Permit annually, and provide additional financial assurance for this adjustment in accordance with 6 NYCRR 373-2.8. These adjustments must be independent of any requests to decrease cost estimates, unless the Department has previously approved such a decrease (i.e., the inflationary adjustment must be made separately from any unapproved request for a decrease in the cost estimate). In addition, the total amount of any post-closure cost estimate must be established and

maintained throughout the life of this Permit in at least the amount derived by multiplying the annual post-closure cost estimate by a minimum of 30 years unless the Department has approved a decrease in the post-closure care period for a unit or the Facility in accordance with 6 NYCRR 373-2.7(g)(1)(ii).

4. The Department-approved closure, post-closure and corrective action cost estimates are incorporated by reference into this Permit by **Condition B of Schedule 1 of Module I** of this Permit. These cost estimates must be adjusted annually for inflation in accordance with **Condition O.3** of this Module.

5. The Permittee must obtain approval in writing from the Department prior to any reduction in the approved cost estimates and for any changes to the instrument(s) and/or mechanism(s) (e.g., type of instrument(s) and/or mechanism(s), the issuing company(ies)/institution(s) and/or a reduction in the dollar amount(s)).

6. Corrective Action Cost Estimates: For any and all corrective actions required under the authority of this Permit for any Solid Waste Management Units, both final and interim, the Permittee must submit for the Department's approval, written estimates, in current dollars, which reflect all costs involved in implementing corrective action through Department-approved completion. Such estimates must reflect the cost of hiring a third party to perform the corrective action in accordance with 6 NYCRR 373-2.8(e)(1)(i). For the final corrective measure(s), the Permittee must provide such estimates with the submission of the Corrective Measures Implementation (CMI) work plan. For Interim Corrective Measures (ICM) requiring work plans, the Permittee must provide such estimates with the submission of each ICM work plan required by this Permit.

7. Short-Term Corrective Measures: For financial assurance of final or interim corrective measures for any Solid Waste Management Units required by Department-approved work plans where the implementation schedule in the approved work plan(s) indicates anticipated completion of said action(s) within one (1) year, the Permittee must provide the Department with a letter certifying that the Permittee has sufficient liquid financial resources to perform and complete the approved corrective measure(s) based on the Department-approved cost estimate(s) required by **Condition O.6** of this Module. This letter must include a certification in accordance with 6 NYCRR 373-1.4(a)(5) and must be provided for the Department's acceptance with the Permittee's submission of a final or interim corrective measures work plan(s). If the Department notifies the Permittee that the certification is not acceptable, the Permittee must establish financial assurance for corrective measures in accordance with the requirements of financial assurance for Long-Term Corrective Measures as specified in **Condition O.8** of this Module within sixty (60) days of said notification. If the corrective action(s) are not completed within one year of the initial certification, the Permittee may request and the Department, at its discretion, may approve up to a one (1) year extension of the certification. If the corrective action(s) has not been completed to the Department's satisfaction at the end of the first year or a Department-approved extension, the Permittee must, within sixty (60) days, provide financial assurance in accordance with the requirements of financial

assurance for Long-Term Corrective Measures as specified in **Condition O.8** of this Module.

8. Long-Term Corrective Measures: For final or interim corrective measures required for any Solid Waste Management Units by a Department-approved work plan(s) where the implementation schedule in the approved work plan(s) indicates that the anticipated completion of the final or interim corrective action(s) will take longer than one (1) year, the Permittee must establish and maintain a Department-approved financial assurance instrument(s) in accordance with 6 NYCRR 373-2.8(f). This financial assurance must be equal to the current dollar amount of the most recent Department-approved final or interim corrective measures cost estimate(s) required by **Condition O.6** of this Module. The Department-approved financial assurance must be one, or an allowable combination, of the financial assurance instruments, specified in 6 NYCRR 373-2.8(f)(1) through (4) and these instruments must be issued by an entity, or entities, that are legally and fiscally separate and distinct from the Permittee and any parent or subsidiary thereof. If the Permittee chooses to use either 6 NYCRR 373-2.8(f)(2) or (3) (or a combination thereof), the Permittee must revise or establish a Standby Trust Fund in accordance with said regulations. The Permittee must submit the instrument(s), for the Department's approval, no later than sixty (60) days after the Department's approval of corrective measures work plan(s), or as required by the requirements of financial assurance for Short-Term Corrective Measures as specified in **Condition O.7** of this Module.

9. For any Permit modification request pertaining to the Closure Plan or Post-Closure Plan provided as Attachment C of this Permit involving an increase in cost, the Permittee must also submit a revised cost estimate, in current dollars, which includes the increase in these costs with appropriate third party justification. For any new or modified corrective measure required by this Permit and submitted by the Permittee subsequent to the issuance of this Permit which involves an increase in the cost of corrective action, the Permittee must also submit for Department approval, a revised cost estimate, in current dollars, which includes the cost increase associated with implementing the corrective measure with appropriate third party justification.

10. Within sixty (60) days of a modification of this Permit or Department approval of a new or modified corrective measure involving an increase in a cost estimate, the Permittee must establish additional financial assurance to cover the amount of the increase in the cost estimate in accordance with the requirements of 6 NYCRR 373-2.8.

11. The Permittee must maintain the Department-approved financial assurance instruments for closure, post-closure, and corrective action, which shall be those incorporated by reference into this Permit by **Schedule 1 of Module I**. Changes in existing financial assurance instruments or replacement of existing financial assurance instruments must be approved by the Department. The Permittee must provide annual evidence to the Department within thirty (30) days prior to the anniversary on which the initial approved financial assurance instrument was established, that all required instruments have been maintained and not allowed to lapse.

12. Within sixty (60) days after any increase in the approved cost estimate, the Permittee must, in accordance with 6 NYCRR 373-2.8, either:

    a. Revise one or more of the Department approved financial assurance instrument(s) to increase the instrument(s) amount by at least the amount of the increase in the approved cost estimate and submit the revised instrument(s) for Department approval; or

    b. Submit an additional financial assurance instrument, or instruments from the allowable instrument types specified in 6 NYCRR 373-2.8 with an amount equal to at least the amount of the increase in the approved cost estimate and submit the additional instrument(s) for Department approval.

13. If the Permittee elects to replace any instrument with new financial assurance instrument(s) as specified by 6 NYCRR 373-2.8, the new instruments must be issued by an entity, or entities, that are legally and fiscally separate and distinct from the Permittee and any parent or subsidiary thereof. Also, if applicable, any replacement instruments pertaining to post-closure and corrective action must be worded in accordance with 6 NYCRR 373-2.8(j) except that the words "post-closure and corrective action" must be substituted for the words "post-closure" in any such replacement instrument.

P. COMMUNICATIONS

1. The Permittee must transmit all communications pursuant to this Permit to the Department via electronic delivery to the recipients specified in **Schedule 1 of Module I** of this Permit. All deliverables must be transmitted in a Department-approved format as specified in **Condition N** of this Module.

2. If requested by the Department in lieu of or in addition to an electronic deliverable, the Permittee must transmit the requested written communications pursuant to this Permit to the Department by United States Postal Service, by private courier service or by hand delivery to the following address:

   Chief, RCRA Permitting Section
   Division of Environmental Remediation
   New York State Department of Environmental Conservation
   625 Broadway, 12th Floor
   Albany, NY 12233-7017

3. The Permittee must submit additional copies of the specific deliverables identified in **Schedule 1 of Module I** to the addresses and agencies listed therein.

Q. PENALTIES

1. Permittee's Obligations

   a. The Permittee's failure to comply with any term of this Permit constitutes a violation of this Permit and the ECL. Nothing herein abridges the Permittee's right to contest any allegation that it has failed to comply with this Permit.

   b. Payment of any penalties must not in any way alter the Permittee's obligations under this Permit.

R. MISCELLANEOUS

1. The paragraph headings set forth in this Permit are included for convenience of reference only and must be disregarded in the construction and interpretation of any provisions of this Permit.

2. If there are multiple parties subject to this Permit, except where stated otherwise, the term "Permittee" must be read in the plural, the obligations of each such party under this Permit are joint and several, and the insolvency of or failure by any Permittee to implement any obligations under this Permit must not affect the obligations of the remaining Permittee(s) under this Permit.

3. If the Permittee is a partnership, the obligations of all general partners (including limited partners who act as general partners) under this Permit are joint and several and the insolvency or failure of any general partner to implement any obligations under this Permit must not affect the obligations of the remaining partner(s) under this Permit.

4. In any administrative or judicial action to enforce a condition of this Permit, the Permittee waives any objection to the admissibility as evidence of any data generated pursuant to this Permit.

5. Whenever materials or equipment are specified or described in this Permit using the name of a proprietary item or the name of a particular supplier, the naming of the item is intended to establish the type, function, quality, performance and design criteria required. In all cases, unless the name is followed by words indicating that "no 'or equal' or substitution is allowed" or similar language, materials or equipment of other suppliers may be accepted by the Department if sufficient information is submitted by the Permittee to allow the Department to determine that the material or equipment proposed is equivalent or equal to that named. Requests for review of "or equal" or substitute items of material and equipment will not be accepted by the Department from anyone other than the Permittee. If the Permittee wishes to furnish or use an "or equal" or substitute item of material or equipment, the Permittee must make written application to the Department for acceptance thereof, certifying that the proposed "or equal" or substitute will perform the same functions and achieve the same results called for by the general design, be similar and of equal substance and quality to that specified, and be suited to the same use as that specified.

6. The Permittee may submit a written request to the Department for a clarification on compliance with any condition in this Permit. Any such request must be submitted at least 30 days prior to the date on which the Permittee must comply with the condition identified in the clarification request. In response, the Department will provide the Permittee with a written clarification, detailing what constitutes compliance with the identified Permit condition. This clarification process shall in no way relieve the Permittee from the obligation to comply with all the terms and conditions of this Permit.

7. All data, information, and records concerning, created for or maintained by the Permittee for the operation, investigation or remediation of the facility and any contamination that has emanated from the facility, shall be preserved and made available to the Department upon request, except for attorney-client privilege or work product protection doctrine material(s). The Permittee shall use its best efforts to insure that all employees of the Permittee and all persons, including contractors and subcontractors who engage in activities under this Permit, are made reasonably available to, and cooperate with the Department if information, whether written or oral, is sought.

8. This Permit expressly replaces the Consent Decree Docket No. II-RCRA-90-3008(h) -0209. Any substantive requirements of the order are incorporated into this Permit and the Permit requirements are equivalent or more stringent than that order. Any on-going approved work plans that were approved pursuant to the Consent Decree are hereby incorporated into this Permit and are enforceable as part of this Permit. After the effective date of this Permit EPA will move to terminate the Consent Decree in Federal District Court.

SCHEDULE 1 of MODULE I

Facility-Specific Conditions

PART 373 PERMIT

SCHEDULE 1 OF MODULE I
FACILITY-SPECIFIC CONDITIONS

_ _

DEC Facility Name: **FMC Corporation**
DER Site ID No.: 932014
EPA RCRA ID No.: NYD002126845

Facility Address: 100 Niagara Street
Middleport, New York 14105
Niagara County

Hereinafter referred to as "Facility" or "Site"

_ _

A. PERMITTED ACTIVITIES

. 1. The following hazardous waste management units, activities and types and quantities of hazardous waste to be managed are authorized by this Permit:

Unit Type	No. of Areas/Units	Activity Type	Waste Type	Quantity
Eastern Surface Impoundment (ESI)	1	Inactive Status - Closure pending	Contaminated media from past operations/processes and remedial waste	2,000,000 gallons
Western Surface Impoundment (WSI)	1	ICM - Closure Pending	Contaminated media from past operations/processes and remedial waste	1,950,000 gallons

a. Eastern Surface Impoundment (SMWU #50) – The Eastern Surface Impoundment is on the eastern side of the FMC property. It was originally received process wastewater and stormwater. The Eastern process wastewater basin stopped receiving wastewater in 1977 and was filled in by grading in 1977-1978. It was later used for additional stormwater capacity prior to being used to temporarily store interim remedial measures and interim corrective measures wastes.

b. Western Surface Impoundment (SMWU #4) – It was constructed in 1976-1977. It is currently being used as an interim corrective measure to receive liquid waste with hazard constituents but does not currently receive hazardous waste. Monitoring is performed to ensure that wastes received are not hazardous and there is an action plan if hazardous wastes are confirmed, these requirements are contained in the WSI Operations Plan. Although it should not currently receive hazardous waste, the WSI is permitted because it hasn't been closed since previous hazardous waste activities. Storm water and other runoff from the northern half of the Facility and contaminated groundwater from the groundwater collection system is collected in the WSI or tanks and treated and discharged to Tributary One in accordance with the Facility's State Pollutant Discharge Elimination System (SPDES) permit.

B. CLOSED UNITS SUBJECT TO POST CLOSURE CARE

Unit Type	Approximate Area (sq. feet)
Central Surface Impoundment	88,000

C. PERMIT DOCUMENTS

The following Modules, Attachments and documents incorporated by reference are considered part of this Permit:

Modules

I General Conditions
Schedule 1 of Module I
II Corrective Action Requirements
III RESERVED
IV RESERVED
V Surface impoundments
VI RESERVED
VII RESERVED
VIII RESERVED
IX RESERVED
X RESERVED

Attachments:

A EPA Part A Application
B Engineering Drawings
C Closure Plan, Post-Closure and Financial Assurance
D Permit Modification Log

Documents Incorporated by Reference

1. FMC Corporation, Middleport, New York, Amended Application Hazardous Waste Management Facility Permit (6 NYCRR PART 373) USEPA ID # NYD002126845 NYSDEC Site # 932014 Amended May 18, 2015 and subsequent updates.

2. Attachments to FMC Corporation, Middleport, New York, Amended Application Hazardous Waste Management Facility Permit (6 NYCRR PART 373) USEPA ID #

NYD002126845 NYSDEC Site # 932014 Amended May 18, 2015 D002126845 NYSDEC Site # 932014 Amended May 18, 2015 and subsequent updates.

a. Attachment B - FMC Middleport RCRA Contingency Plan[1] May 13, 2016

b. Attachment C - Western Surface Impoundment (WSI) Operations Plan[1] DRAFT April 2016

c. Attachment D - North Site Cover Operations and Maintenance (O&M) Plan[1] DRAFT September 2016

d. Attachment E - Groundwater Extraction System Operation and Maintenance (O&M) Plan[1] DRAFT September 2016

e. Attachment F - Operation Maintenance and Monitoring (OM&M) Plan for North Rail Phase I Interim Corrective Measures[1] June 2011

f. Attachment G - Operation Maintenance and Monitoring (OM&M) Plan for North Rail Phase II Interim Corrective Measures[1] March 2012

g. Attachment H - North Commercial/Industrial Area Wooded Parcel Site Management plan (SMO)[1] June 2011

h. Attachment I - Culvert 105 Sediment Chamber Manhole Number 9 (MH-N9) at Margaret Droman Park Maintenance and Monitoring (M&M) Plan[1] June 2011

i. Attachment J - Health and Safety Plan (HASP) [1,2] DRAFT May 2015

j. Attachment M - Groundwater Monitoring Program (GMP) for Remedial Systems Effectiveness Monitoring[1,3] DRAFT May 2015

k. Attachment N - Quality Assurance Project Plan (QAPP) [1,3] DRAFT May 2015

l. Attachment P - Topographic Map[1] original 05.18.2015

m. Attachment R - Waste Analysis Plan[1,3] DRAFT February 2016

n. Attachment S - Security and Facility Inspection Plan[1] DRAFT February 2016

o. Attachment T - Personnel Training Program Plan[1] DRAFT February 2016

3. FMC Corporation, Middleport, New York, RCRA Facility Investigation (RFI) Report Volume I Background and Related Information Revised September 2009 FINAL

4. FMC Corporation, Middleport. New York, RCRA Facility Investigation (RFI) Report Volume II – Suspected Air Deposition Study Area 1 (South of the Erie Canal and West of

the Niagara/Orleans County Line) and Culvert 105 Study Area South of the Erie Canal September 2009 FINAL

5. FMC Corporation, Middleport. New York, RCRA Facility Investigation (RFI) Report Volume IV – Culvert 105 and Flood Zone September 2009 FINAL

6. FMC Corporation, Middleport. New York, RCRA Facility Investigation (RFI) Report Volume V – Tributary One and Flood Plain South of Pearson/Stone Roads June 2010 FINAL

7. FMC Corporation, Middleport. New York, Draft Corrective Measures Study (CMS) Report - Suspected Air Deposition and Culvert 105 Study Areas May 16, 2011

8. NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION FINAL STATEMENT OF BASIS FOR AIR DEPOSITION AREA #1 (OU2 AND OU4) AND CULVERT 105 (OU5) FMC CORPORATION MIDDLEPORT, NEW YORK USEPA ID NO.: NYD002126845 DER SITE NO. 932014 May 2013

9. FMC Corporation Middleport, New York, RCRA Facility Investigation Report (RFI) Volume X - Suspected Air Deposition Study Area 2 (North of the Erie Canal and East of the Niagara/Orleans County Line) October 2012 FINAL

10. FMC Corporation Middleport, New York, RCRA Facility Investigation (RFI) Report Volume III - Former Research and Development Property – Operable Unit 9 (OU-9) September 2013

11. FMC Corporation Middleport, New York, RCRA Facility Investigation (RFI) Volume IX.b – Eastern Parcel (Operable Unit 11) – October 2016

12. FMC Corporation Agricultural Chemical Division Middleport, New York, EPA ID #NYD002126845 – RCRA Facility Assessment, Preliminary Review Revised October 7, 1988

Footnotes

[1] *Each document referenced by this footnote includes the referenced document and any subsequent Department approved replacement.*

[2] *This is a generic HASP. A specific HASP will be developed using the generic plan as a starting point for each remedial project, closure or corrective action performed by FMC or their contractors.*

[3] *This document has been revised by the Department.*

D. COMPLIANCE SCHEDULE

The Permittee must complete the following compliance activities within the timeframes indicated on the following table:

Item No.	Title	Description[1,2]	Compliance Date
1.	Financial Assurance Requirements	Provide financial assurance as per 6 NYCRR 373-2.8 in the amount of $144,000,000[8, 9] for corrective action, closure and post closure care costs.	Within 90 days of the effective date of this Permit
2.	Western Surface Impoundment Operations Plan	Prepare an updated plan for submission to the Department for review and approval in accordance with the following schedule. The updated WSI operations plan must include: "as-built" WSI drawings for the WSI and all system components, cut/specification sheets for all system components, SCADA – logic, alarming, notifications, set points – interaction with site-wide system, and the revised analyte list:	
		1. Draft plan	Within 150 days of the effective date of this Permit
		2. Revised draft plan addressing Department comments	Within 60 days of receipt of Department comments on the draft plan.
		3. Final plan[7]	Within 30 days of receipt of Department comments on the revised draft plan.

Item No.	Title	Description[1,2]	Compliance Date
3.	Closure Plan and Post Closure Care Plan for the Western Surface Impoundment[3,4]	Prepare updated plans for submission to the Department for review and approval in accordance with the following schedule:	
		1. Draft plans	Within 300 days of the effective date of this Permit
		2. Revised draft plans addressing Department comments	Within 60 days of receipt of Department comments on the draft plan
		3. Final plans[7]	Within 30 days of receipt of Department comments on the revised draft plan
4.	Closure Plan and Post Closure Care Plan for the Eastern Surface Impoundment[3,4]	Prepare updated plans for submission to the Department for review and approval in accordance with the following schedule:	
		1. Draft plans	Within 300 days of the effective date of this Permit
		2. Revised draft plans addressing Department comments	Within 60 days of receipt of Department comments on the draft plan
		3. Final plans[7]	Within 30 days of receipt of Department comments on the revised draft plan
		4. Close ESI	Within 180 days of approval of the Final Closure Plan.
		5. Implement the post closure care plan.	Upon P.E. certification of closure.

Item No.	Title	Description[1,2]	Compliance Date
5.	Post Closure Plan for the Central Surface Impoundment[4]	Prepare an updated plan for submission to the Department for review and approval in accordance with the following schedule:	
		1. Draft plan	Within 90 days of the effective date of this Permit
		2. Revised draft plan addressing Department comments	Within 60 days of receipt of Department comments on the draft plan
		3. Final plan[7]	Within 30 days of receipt of Department comments on the revised draft plan

Item No.	Title	Description[1,2]	Compliance Date
6.	On-site facility/site ISMP	The ISMP shall include a soils management/excavation plan which outlines the procedures required to be implemented in the event a cover system is breached, penetrated or temporarily removed, and any underlying remaining contamination is disturbed. The ISMP will include the specific OM&M requirements for items numbers 2, 3, 4 and 5 in this Table and all previously approved OM&M plans under the 1991 AOC. Prepare a plan for submission to the Department for review and approval in accordance with the following schedule:	
		1. Draft ISMP	Within 300 days of the effective date of this Permit
		2. Revised draft ISMP addressing Department comments	Within 60 days of receipt of Department comments on the draft plan
		3. Final ISMP[7]	Within 30 days of receipt of Department comments on the revised draft plan

Item No.	Title	Description[1,2]	Compliance Date
7.	Off-site facility/site ISMP	Incorporate all existing off-site ISMPs at the time of permit issuance:	
		1. Draft ISMP	Within 300 days of the effective date of this Permit
		2. Revised draft ISMP addressing Department comments	Within 60 days of receipt of Department comments on the draft plan
		3. Final ISMP[7]	Within 30 days of receipt of Department comments on the revised draft plan
8.	Implementation of remedial action in OU2.[5, 6]	Submit a Department approved or accepted CMI Work Plan[7] which includes a general schedule for the entire remediation, including listing all properties that will be remediated each season and an accurate cost estimate for each year's work. The work plan will include property specific restoration plans for the properties to be remediated by FMC in the first construction season and include provisions for updating these property specific restoration plans in subsequent construction seasons. The Permittee is responsible for scheduling and timely submission of draft and revised deliverables which provide reasonable timeframes for DEC review and approval in order to meet the required due date, see Exhibit B.4 for review process.	Within 30 days of the effective date of this Permit

Item No.	Title	Description[1,2]	Compliance Date
9.	Implementation of remedial action in OU4.[5, 6]	Submit a Department approved of accepted CMI Work Plan[7] which includes a general schedule for the entire remediation, including listing each portion of the property that will be remediated each season and an accurate cost estimate for each year's work. The work plan will include restoration plans for the area to be remediated by FMC in the first construction season and include provisions for updating the property specific restoration plan in subsequent construction seasons. The Permittee is responsible for scheduling and timely submission of draft and revised deliverables which provide reasonable timeframes for DEC review and approval in order to meet the required due date, see Exhibit B.4 for review process.	Within 30 days of the effective date of this Permit

Item No.	Title	Description[1,2]	Compliance Date
10.	Implementation of remedial action in OU5.[5, 6]	Submit a Department approved or accepted CMI Work Plan[7] which includes a general schedule for the entire remediation, including listing all properties that will be remediated each season and an accurate cost estimate for each year's work. The work plan will include property specific restoration plans for the properties to be remediated by FMC in the first construction season and include provisions for updating these property specific restoration plans in subsequent construction seasons. The Permittee is responsible for scheduling and timely submission of draft and revised deliverables which provide reasonable timeframes for DEC review and approval in order to meet the required due date, see Exhibit B.4 for review process.	Within 30 days of the effective date of this Permit
11.	Determine and eliminate the sources of carbofuran entering the WSI	Submit an engineering study which identifies sources of carbonfuran which can enter the WSI. Submit an engineering work plan to eliminate the sources of carbonfuran entering the WSI. Implement the accepted engineering work plan.	Within 90 days of the effective date of the permit Within 90 days of DEC's acceptance of the engineering study Within 120 days of DEC's acceptance of the engineering work plan

Footnotes:

1. *All work plans prepared pursuant to this Compliance Schedule must be certified in accordance with 6 NYCRR 373-1.4(a)(5), and by a Professional Engineer, or by such other qualified environmental professional as the Department may find acceptable using the language provided in DER 10.*
2. *Plan shall fully address permitted/interim status operations*
3. *In accordance with 373-2.7 (c) (2), the content of the closure plans must identify steps necessary to perform partial and/or final closure of the facility at any point during its active life. The revised closure plans to be submitted by FMC must describe steps to be implemented to achieve closure, through acceptance of closure certification. The closure plans must provide sufficient detail (e.g., waste volumes, areas to be capped, labor, report preparation, security, etc.), along with associated cost estimate information, so that the Department may establish cost estimates for closure of the units. Once accepted by the Department, the cost estimates will serve as the basis for financial assurance.*
4. *The Post-Closure Plans must identify the activities to be performed and must do so based on the assumption that final closure will include removal of any solid wastes, backfilling and capping. The plans must have sufficient detail, along with cost estimate information, so that the Department may establish a cost estimate for post-closure care of the units to serve as a basis for financial assurance. Draft cost estimates must also be included for each unit subject to post-closure care.*
5. *All un-remediated OU2/4/5 properties must be completed within four years of issuance of the permit (for properties with owner approval to perform such remediation).*
6. *If there is an approved CMI for the properties to be completed in the construction season for the same year as the permit is issued, FMC will implement the approved remedial actions pursuant to the Department's CMI Work plan if the Department provides 60 days written notice; otherwise Department will complete the work for that construction season.*
7. *If necessary, the final document will be approved by the Department with conditions.*
8. *If the permit is issued prior to February 23, 2018, this financial assurance amount may be adjusted downward to reflect the remaining cost of the SB for OUs 2, 4, and 5 dated May 24, 2013. If on May 24, 2018, implementation of the remedy for OUs 2, 4 and 5 is not complete (excluding Site Management), FMC shall post financial assurance using one or more of the financial instruments in 6 NYCRR 373- 2.8, in the amount of the cost projection for the remainder of the remedy selected in this Final Statement of Basis by August 22, 2018. Financial assurance must be provided for all properties within these operable units that (i) have not been investigated or (ii) those determined to need remediation that have not been remediated or have not received a no–further-action letter by May 24, 2018.*
9. *The SB and the enforceability of the SB is the subject to an ongoing appeal by FMC and as such, the enforceability of the SB under the order, including the FA requirements, may be impacted by the appeal.*

E. SCHEDULE OF DELIVERABLES

The Permittee must complete the following deliverables within the time frames indicated on the following table:

Item #	Title	Description[1]	Deliverable Date
1.	Submit an Engineering Plan which will optimize onsite long-term ICMs.	Precipitation and storm water run-off should be prevented from coming into contact with site contamination. This includes, but is not limited to preventing precipitation from elevating the	

Item #	Title	Description[1]	Deliverable Date
		groundwater table and entering the swales, identifying and eliminating source of carbofuran to site surface water, and additional groundwater recovery and storage.	
		1. Draft Engineering Plan	Within 90 days of the effective date of this Permit
		2. Revised draft Engineering Plan addressing Department comments on the draft Engineering Plan.	Within 60 days of receipt of Department comments on the draft Engineering Plan
		3. Final Engineering Plan[3]	Within 30 days of receipt of Department comments on the revised draft Engineering Plan
2.	Submit an Engineering Plan to connect the dis-contiguous groundwater blast fractured bedrock trenches B, C, D and G on the North side of the facility.	The plan shall include removal and proper disposal of any contaminated media removed during installation of the trench.	
		1. Draft Engineering Plan	Within 150 days of the effective date of this Permit
		2. Revised draft Engineering Plan addressing Department comments on the draft Engineering Plan	Within 60 days of receipt of Department comments on the draft Engineering Plan
		3. Submit a final Engineering Plan[3]	Within 30 days of receipt of Department comments on the revised draft Engineering Plan.

Item #	Title	Description[1]	Deliverable Date
3.	OU1 RFI Work Plan[2]	Department approved or accepted RFI in accordance with the requirements in Part 373 The Permittee is responsible for scheduling and timely submission of draft and revised deliverables which provide reasonable timeframes for DEC review and approval in order to meet the required due date, see Exhibit B.1 for review process.	January 2, 2023 or within 180 days of the effective date of this Permit, whichever date comes first.
4.	OU3 CMS[2]	Upon acceptance of the CMS and issuance of a final SB the permittee shall submit a draft CMI in accordance with Exhibit B of this Module.	See deadline in Exhibit B
5.	OU6 CMS[2]	Submit a Department approved or accepted CMS in accordance with the approved work plan The Permittee is responsible for scheduling and timely submission of draft and revised deliverables which provide reasonable timeframes for DEC review and approval in order to meet the required due date, see Exhibit B.3 for review process.	November 1, 2017 or within 120 days of the effective date of this Permit, whichever date comes first.
6.	OU7 RFI[2]	Department approved or accepted RFI in accordance with the requirements in Part 373 The Permittee is responsible for scheduling and timely submission of draft and revised deliverables which provide reasonable timeframes for DEC review and	January 1, 2018 or within 120 days of the effective date of the permit, whichever date comes first

Item #	Title	Description[1]	Deliverable Date
		approval in order to meet the required due date, see Exhibit B.1 for review process.	
7.	OU8 RFI[2]	Department approved or accepted RFI in accordance with the requirements in Part 373 The Permittee is responsible for scheduling and timely submission of draft and revised deliverables which provide reasonable timeframes for DEC review and approval in order to meet the required due date, see Exhibit B.1 for review process.	January 1, 2018 or within 120 days of the Department's determination that submitted data is adequate for an RFI, whichever date comes first
8.	OU9 CMS[2]	Submit a Department approved or accepted CMS[3] after Department comments are received. The Permittee is responsible for scheduling and timely submission of draft and revised deliverables which provide reasonable timeframes for DEC review and approval in order to meet the required due date, see Exhibit B.3 for review process.	According to the timeframes in Exhibit B January 1, 2021 or within 180 days of the effective date of this Permit, whichever date comes first
9.	OU10 RFI[2]	Department approved or accepted RFI in accordance with the requirements in Part 373 The Permittee is responsible for scheduling and timely submission of draft and revised deliverables which provide reasonable timeframes for DEC review and approval in order to meet the	January 3, 2022 or within 180 days of the Department's determination that existing data from on-going monitoring is sufficient for purposes of investigation

Item #	Title	Description[1]	Deliverable Date
		required due date, see Exhibit B.1 for review process.	
10.	OU11 CMS[2]	Submit a Department approved or accepted CMS[3] in accordance with the requirements in Part 373. The Permittee is responsible for scheduling and timely submission of draft and revised deliverables which provide reasonable timeframes for DEC review and approval in order to meet the required due date, see Exhibit B.3 for review process.	Within 180 days of the effective date of this Permit
11.	Citizen Participation Plan (CPP)	Submit a CPP in accordance with the requirements in DER-23 Citizen Participation Handbook for Remedial Programs for Department approval.	Within 30 days of the effective date of this Permit

Footnotes:

1. *All work plans, engineering or other plans, studies, investigations and reports prepared pursuant to this Schedule of Deliverables must be certified in accordance with 6 NYCRR 373 1.4(a)(5), and by a Professional Engineer, or by such other qualified environmental professional as the Department may find acceptable using the language provided in DER 10.*

2. *This is the next step following issuance of the permit. All subsequent steps in the corrective action process will follow the conditions and timelines required in Exhibit B of Schedule 1 of Module I.*

3. *If necessary, the final document will be approved by the Department with conditions.*

F. ROUTINE REPORTING AND COMPLIANCE ACTIVITIES

The Permittee must submit the following routine reports to the Department by the indicated due date in accordance with the requirements of this Permit (Note: the list presented below does not include non-routine reporting to the Department:

Item	Report[1]	Frequency	Due Date	Requirement
1.	Quarterly Progress Report (Groundwater Monitoring report)	Quarterly	45 days after December 31, March 31, June 30 and September 30	Exhibit B Condition B.5.e.ii
2.	Annual Remedial Plan Activities Report which includes an updated listing of SWMUs, AOCs and RCRA Corrective Action Units.	Annually	March 1st	Exhibit B Condition B.5.e.iii
3.	Closure Cost, Post-Closure Cost, and Corrective Action Costs Estimates Adjusted For Inflation including Evidence that Financial Assurance Instruments have been Maintained and have not Lapsed[2]	Annually	April 1	Module I Condition O.3

Footnotes:

1. *The Permittee must certify all reports prepared pursuant to* ***Condition F*** *of this Schedule in accordance with 6 NYCRR 373 1.4(a)(5).*

2. *When certifying that financial assurance mechanisms have been maintained for closure, post-closure and corrective action and have not lapsed, the certification language required by 373-2.8(j) shall be modified as follows to include corrective action:*

    a. *For the Standby Trust Agreement, the certification shall state, "IN WITNESS WHEREOF the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in 6 NYCRR 373-2.8(j)(1), with the exception of including the words*

"and/or corrective action," as such regulations were constituted on the date first above written."

b. *For the Letter of Credit which accompanies the Standby trust Agreement, the certification shall state, "We certify that the wording of this letter of credit is identical to the wording specified in 6 NYCRR 373-2.8(j)(3), with the exception of including the words "and/or corrective action," as such regulations were constituted on the date shown immediately below."*

G. FACILITY-SPECIFIC REQUIREMENTS THAT SUPPLEMENT THE STANDARD MODULES

Exhibit A Supplement to Module I – General Provisions

- A General Conditions
- B Plans, Reports, Specifications, Implementation Schedules and Other Submittals
- C Public Participation

Exhibit B Supplement to Module II – Corrective Action

- A Applicability
- B Corrective Action Program
- C Groundwater Monitoring
- D Inaccessible SWMUs
- E Green Remediation

Exhibit C Supplement to Module V – Surface Impoundments

- A Authorized Surface Impoundments Waste Types
- B Special Conditions for Surface Impoundments

Exhibit D Closure/Post-Closure Care

- A Closure and Post-Closure Care
- B Special Conditions for Post-Closure Care for the CSI
- C Special Conditions for Post-Closure Care for the ESI and WSI

EXHIBIT A

SUPPLEMENT TO MODULE I – GENERAL PROVISIONS

EXHIBIT A
SUPPLEMENT TO
MODULE I - GENERAL PROVISIONS

The following conditions supplement those conditions contained within Module I of this Permit:

A. GENERAL CONDITIONS

1. The Permittee must make reasonable attempts to organize training events for local fire companies or departments, and to also arrange inspections of the Facility by these entities. During each inspection the Permittee shall solicit recommendations from the fire company or department concerning minimum suggested inventories for firefighting and safety equipment to be maintained at the facility. A report of each inspection, including any and all recommendations made by fire company or department inspectors and the Permittee's plans for addressing these recommendations, must be submitted to the Department by the Permittee within seven (7) days of each inspection.

2. The Permittee must provide a copy of the on-site contingency plan containing an inventory sheet listing the amount and location of all emergency equipment available on-site, to all employees involved in emergency response.

3. Upon notification by the Permittee of any partial closure of a unit or portion thereof, or of final closure of the Facility, the Department will determine at the time of said closures whether additional samples, sampling points, sampling techniques/methods and/or sample analysis (i.e., in addition to Closure Plan requirements in Attachment C of this Permit) will be necessary to verify the effectiveness of decontamination or removal of components, equipment, structures and contaminated soils.

    a. These determinations will be based upon the past history of operating practices and types of wastes handled at the unit/Facility and on the closure regulations and other requirements in effect at the time of closure of the unit/Facility. The operating record, the record of spills, the types of waste released, location of spills and the condition of any secondary containment systems will also provide data to be used in these determinations. Also, at the time of said closures, the Department will determine whether more restrictive and/or additional criteria (i.e., more restrictive than, or in addition to Closure Plan criteria in Attachment C of this Permit) will be necessary to verify the effectiveness of decontamination or removal of components, equipment, structures and contaminated soils, based on the Department's regulatory cleanup standards in effect at the time of said closures.

b. If the Department determines that additional sampling and analysis or more restrictive and/or additional criteria are necessary at the time of unit/Facility closure, the Department shall send the Permittee a notice of intent to modify this Permit in accordance with 6 NYCRR 621 to incorporate these requirements into the Permit. In the event the Department issues such a notice of intent, the Permittee will be restricted from issuing a certification of closure for the unit/facility in accordance with 6 NYCRR 373-2.7(f), until the associated 6 NYCRR 621 Permit modification process is completed and any associated closure requirement(s) that might result from this modification process are satisfied.

B. PLANS, REPORTS, SPECIFICATIONS, IMPLEMENTATION SCHEDULES AND OTHER SUBMITTALS

1. Submittals required by the Permit must be provided to the Department and other identified Agencies as indicated below, must be submitted to the addresses and titles (or designees) listed below. The list below identifies the Department/Agencies staff by title that must receive submissions and indicates the types of submissions each must receive. At any time during the life of this Permit, the Department may designate alternate titles to receive submissions (different than those indicated below), and direct the Permittee to make submissions to the alternate title. The list below also indicates whether the submission must be a paper or electronic copy. Where electronic copies are indicated, the submission must be in a form as required by **Condition N of Module I** of this Permit. Submissions of electronic copies may be made by e-mail or other methods acceptable to the Department.

a. One (1) electronic copy of all submittals to:

Regional Remediation Engineer
New York State Department of Environmental Conservation
Regional Remediation Engineer
New York State Department of Environmental Conservation
Region 9 Office
270 Michigan Ave.
Buffalo, NY 14203

Chief, RCRA Permitting Section
Remedial Bureau E Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-7017
c/o thomas.killeen@dec.ny.gov

and one (1) electronic copy, transmitted via e-mail, to:

Chief, Hazardous Waste Programs Branch
U.S. EPA Region II
c/o everett.adolph@epa.gov

Director, Remedial Bureau E
New York State Department of Environmental Conservation
c/o michael.cruden@dec.ny.gov

RCRA Project Manager
New York State Department of Environmental Conservation
c/o nathan.freeman@dec.ny.gov

b. One (1) paper and one (1) electronic copy of all financial assurance documents to:

RCRA C Financial Assurance Coordinator
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-7012

c. one (1) electronic copy of all waste reduction documents to:

Chief, Pollution Prevention Unit
Division of Material Management
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-7253
c/o john.vana@dec.ny.gov

d. One (1) hard copy of Applications to renew or modify this Permit to:

Chief Permit Administrator
Division of Environmental Permits
New York State Department of Environmental Conservation
Region 9 Office
270 Michigan Ave.
Buffalo, NY 14203
c/o david.denk@dec.ny.gov

e. Where additional Department staff are copied on the above submittals, the Permittee shall submit these copies electronically. In addition, the Permittee shall provide hard copies of any of the above submittal(s) when specifically requested by the Department.

C. PUBLIC PARTICIPATION (including 6NYCRR 373-1.10)

1. Information Repository (6NYCRR 373-1.10(c))

The Permittee shall establish and maintain an Information Repository at the Royalton Hartland Community Library, 9 S. Vernon St, Middleport, New York 14105, (716) 735-3281. The Permittee shall provide the Department with thirty (30) days' notice of any change to the location of the repository. The Permittee will continue to maintain the information repository for the life of the Permit or until otherwise notified by the Department.

The repository shall contain a copy of the final approved Part 373 Permit application, approved documents such as plans, reports, other relevant documents, the Part 373 Permit Fact Sheet, public notices pertaining to the Part 373 Permit, copies of correspondence including enclosures and attachments from the effective date of the Permit between the Department and the Permittee pertaining to the Permit or to compliance. Certain portions of the permit, and other information within the repository, may be redacted as necessary to protect national security or due to public sensitivity.

The Permittee shall provide a written notice of the availability of the information repository to all individuals on the facility mailing list within one month from the effective date of this Permit (except to those previously notified within 1 year prior to the effective date of the Permit) and to all individuals on the facility mailing list one year before the expiration date of this Permit.

2. Other public participation activities to consider to maintain good community relations:

a. Public Meetings

b. Citizens Advisory Group Meeting

EXHIBIT B

SUPPLEMENT TO MODULE II – CORRRECTIVE ACTION

EXHIBIT B
SUPPLEMENT TO
MODULE II - CORRECTIVE ACTION

The following conditions supplement those conditions contained within Module II of this Permit:

APPLICABILITY

A. The conditions of this Exhibit and Module II apply to:

1. the Solid Waste Management Units (SWMUs) and Areas of Concerns (AOCs) listed below; and

SWMU (1)	SWMU Group	Name	Description
1	A	Arsenic Acid Area	Spillage arsenic acid production tanks and drums.
2	B	Old Landfill Area	Burial of various pesticide wastes.
3	C	Former Wastewater Basin	Eastern carbofuran and dithiocarbamate waste water impoundment.
4	N	Western Surface Impoundment (WSI)	Lined stormwater impoundment, processes closed with respect to hazardous wastes by removal in 1988 and retrofitted as a non-hazardous stormwater basin.
5	D	Stormwater Retention Impoundment	Unlined arsenical surface water settling lagoon.
6	D	Stormwater Retention Impoundment	Unlined arsenical surface water settling lagoon.
7	E	Process Wastewater Basin	Unlined dithiocarbamate process waste water retention basin.
8	F	Dinitrocresol (Phenolic) Surface Impoundment	Unlined lagoon.

SWMU (1)	SWMU Group	Name	Description
9	G	Dithiocarbamate Wastewater Tank	Aboveground storage tank (AST).
10	G	Dithiocarbamate Wastewater Tank	AST
11	G	Dithiocarbamate Wastewater Tank (Indoor)	AST
12	G	Dithiocarbamate Wastewater Tank (Indoor)	AST
13	G	Dithiocarbamate Wastewater Tank (Indoor)	AST
14	B	Compressor Blowdown Sump	Concrete-lined indoor sump for oily water.
15	B	Flowable Wastewater Sump	Concrete-lined indoor sump for carbofuran wastewater.
16	G	Evaporator Sump	Concrete-lined sump closed and filled with concrete.
17	G	Dithocarbamate Tank Sump	Concrete-lined outdoor sump.
18	H	Kidwell Sump	Concrete-lined partially outdoor sump.
19	B	Contaminated Scrap Metal Waste Lugger	Scrap metal waste lugger located at end of access road, east of Building #23.
20	O	R&D Soil Lugger Area	Waste lugger located on a containment pad.
21	O	Filter Cake Luggers	Waste lugger located on a containment pad.
22	D	Metabolism Lab Generation Waste Area	Indoor waste drum storage.
23	I	Formulations Generation Waste Area	Outdoor waste drum generation area.

SWMU (1)	SWMU Group	Name	Description
24	I	Formulations Waste Storage Area	Outdoor waste drum storage area.
25	I	Product Formulations Waste Area	Indoor drum storage area.
26	O	Formulations Waste Storage Area	Indoor drum storage area.
27	J	Research Solvent Storage Area	Outdoor drum storage area.
28	O	Specialty Products Storage Area	Indoor drum storage area.
29	G	Dithiocarbamate Waste Area	Indoor drum storage area.
30	K	Laboratory Solvent Waste Area	Indoor drum storage/generation area.
31	A	Storage Area	Outdoor drum storage area.
32	O	Carbofuran Storage Area	Indoor drum storage area.
33	B	Empty Drum Storage Area	Indoor empty drum storage area.
34	B	Carbofuran Storage Area	Indoor container storage area.
35	L	Sulfur Shed Storage Area	Indoor drum storage area.
36	O	Spent Oil Waste Area	Indoor drum storage area.
37	J	R&D Waste Area	Indoor drum storage area.
38	O	Carbofuran Trash Area	Indoor trash and empty container storage area.
39	G	Dithiocarbamate Trash Area	Indoor trash and empty container storage area.
40	O	Warehouse Storage	Indoor container storage area.
41	L	North Tandex Dust House	Aboveground dust house/collector.
42	L	South Tandex Dust House	Aboveground dust house/collector.

SWMU [(1)]	SWMU Group	Name	Description
43	I	R&D Waste Area (East) Dust House	Aboveground dust house/collector.
44	I	R&D Waste Area (West) Dust House	Aboveground dust house/collector.
45	I	Fairfield Dust House	Aboveground dust house/collector.
46	H	Kidwell (East) Dust House	Aboveground dust house/collector.
47	H	Kidwell (West) Dust House	Aboveground dust house/collector.
48	G	West Miscellaneous Dust House	Aboveground dust house/collector.
49	N	Central Surface Impoundment (CSI)	Unlined stormwater impoundment closed in 1988 by removal of sediments, capping.
50	N	Eastern Surface Impoundment (ESI)	Unlined stormwater impoundment removed from service and isolated in 1988, with closure deferred pending completion of RFI/CMS. After 1988, the area has been used for the placement of non-hazardous waste (primarily soil) - see SWMU #54.
AOCn #1[(2)]	M	Carbon Disulfide Storage Tank Area	AST
52	E	Xylene Storage Area	ASTs
53	C	Contaminated Soil Storage Area	Temporary lined storage unit for soils excavated from the off-site Northern Ditches.
54		ESI Soil Deposition Area or ESI Fill Area	Placement of non-hazardous soils and debris generated from several off-site remediation projects 1996-2011.

Notes:
(1) Solid Waste Management Units (SWMU) as identified in the NYSDEC's 1988 RCRA Facility Assessment (RFA) and in FMC's revised version, titled "RCRA Facility Assessment, Preliminary Review," (May 1, 1989); the 1989 Modified RFA Report has not been approved or accepted by the NYSDEC.
(2) Formerly designated as SWMU #51; designated as Area of Concern (AOCn) #1 as requested by the NYSDEC in 1998.

2. the RCRA Corrective Action Units listed below; and,

RCRA Corrective Action Unit	*Description*	*Status*[(1)]
OU1	FMC Facility excluding Eastern Parcel	
OU2	Air Deposition Area 1	Final Statement of Basis dated May 2013. Remedy partially completed
OU3	Air Deposition Area 2	Draft CMS dated September 2015 submitted to the DEC/EPA. DEC accepts the CMS for the purposes of developing a remedy.
OU4	Royalton-Hartland School Property (air deposition area 1)	Final Statement of Basis dated May 2013, Remedy partially completed
OU5	Culvert 105 and Flood Zones (including Wooded Parcel)	Final Statement of Basis dated May 2013
OU6	Tributary One & Flood Zones - South of Pearson Road	RFI dated December 9, 2009 complete (not public noticed). CMS due to submittal on November 1, 2017
OU7	Tributary One & Flood Zones - North of Pearson Road	Data submission to DEC/EPA required. Agencies must determine if data adequate for RFI.
OU8	Jeddo & Johnson Creeks & Flood Zones	Data submission to DEC/EPA required. Agencies must determine if data adequate for RFI.
OU9	Southwest Commercial Property (R&D) Not currently owned my FMC	RFI completed public noticed March 2014. Draft CMS work plan is under review.

RCRA Corrective Action Unit	*Description*	*Status*[(1)]
OU10	FMC facility groundwater and associated off-site groundwater contamination	Groundwater is monitored, collected, and treated as per Western Surface Impoundment Operations Plan, North Site Cover Operation and Maintenance Plan, Groundwater Extraction System Operation and Maintenance Plan, and Groundwater Monitoring Plan
OU11	FMC Facility Eastern Parcel	Draft RFI dated October, 2016 submitted to Agencies.

Notes:
(1) The status provided is the status at the time of permit issuance. The status will be revised annually on the anniversary of permit issuance by the facility requesting a permit modification to update the status. This can be submitted with the annual status report.

3. any additional SWMUs or AOCs discovered during the course of groundwater monitoring, field investigations, environmental audits or other means including, but not necessarily limited to, those identified pursuant to **Condition C of Module II**.

   The SWMUs which are known to exist at the facility and which may have released hazardous waste or hazardous constituents to the environment are listed in Vol I., Section IX of the Permit Application incorporated by reference into this Permit by **Condition B of Schedule 1 of Module I**. Interim Corrective Measures which are necessary to address groundwater contamination associated with those SWMUs have been implemented. The Corrective Measures which are necessary to address the soil contamination associated with those SWMUs have either been implemented or deferred until the soils are accessible. Many SWMU Areas or portions of SWMU Areas are either inaccessible or not practical to excavate. These soils are required to be properly assessed and managed appropriately as they become accessible in the future.

   The Permittee has a program in place for the assessment of newly identified SWMUs and AOCs that is included in Vol. I, Section IX of the Permit Application incorporated by reference into this Permit by **Condition B of Schedule 1 of Module I**. This program is an approved plan for the notification, assessment, sampling, analysis and reporting of newly identified SWMUs and AOCs that meet the requirements of **Module II Conditions C(1) through C(5)** of this permit.

   For the Areas of Concern identified in paragraph 1 above, the Permittee is required to characterize and if necessary remediate conditions. Therefore, the Permittee is required to prepare an RFI Work Plan in accordance with **Condition D of Module II**. The Department may, at its discretion, also require the Permittee to prepare an Interim Corrective Measures (ICM) Work Plan.

B. CORRECTIVE ACTION PROGRAM

1. RCRA Facility Investigation (RFI) Requirements for known SWMU's, SWMU groups and OUs.

a. As required by the USEPA 3008(h) order, FMC has undertaken RFI investigations at Solid Waste Management Units (SWMU) and Operable Units (OU) at the Middleport facility. As detailed in Exhibit B, Condition A.1.b, investigation of the SWMU's are at different stages. These stages have included:

i. Submittal, review, comment, modification and approval of a RFI work plan;

ii. Field investigation;

iii. Investigatory report submittal, regulatory agency review and comment; and,

iv. Additional investigation.

b. Upon receipt of the individual SWMU or OU Final RFI report, the Department will review and transmit comments as appropriate.

2. RCRA Facility Investigation (RFI) Requirements for Newly Identified SWMU's

The permittee shall follow the procedures for investigation of newly identified SWMUs as stated in **Condition C of Module II**.

3. Corrective Measures Study (CMS)

a. Upon approval or acceptance of an Operable Unit RFI Report, if the Department requires a CMS work plan, then the CMS work plan shall be submitted within 60 days, otherwise a CMS shall be submitted, within one hundred eighty (180) days.

b. If a CMS Work Plan is required, upon approval of the CMS work plan, a CMS shall be submitted within one hundred eighty (180) days.

The CMS shall include the following general requirements:

i. Evaluation of the corrective measures alternative or alternatives from a technical, environmental and human health, cost and institutional standpoint;

ii. Delineation of the preferred corrective measure or measures;

iii. Justification and recommendation of the corrective measure or measures preferred for implementation;

iv. Proposed implementation schedule(s) of the preferred corrective measure or measures outlining the major steps of a Corrective Measure Implementation (CMI) program.

c. If required by the Department, the Permittee shall, within ninety (90) days develop a SWMU specific (or group specific) draft CMS. This SWMU specific (or group specific) draft CMS shall include the following general requirements:

i. Evaluation of the corrective measures alternative or alternatives from a technical, environmental and human health, cost and institutional standpoint;

ii. Delineation of the preferred corrective measure or measures;

iii. Justification and recommendation of the corrective measure or measures preferred for implementation;

iv. Proposed implementation schedule(s) of the preferred corrective measure or measures outlining the major steps of a Corrective Measure Implementation (CMI) program.

d. Upon receipt of the draft CMS by the Department, it will be reviewed and comments transmitted as appropriate. The schedule for submission in Module I Condition A.7 will be followed. The following requirements will be met upon acceptance of the draft CMS by the Department:

i. The Permittee will, as appropriate, submit within thirty (30) days, a revised draft CMS;

ii. A public informational meeting will be held to present the final draft CMS.

iii. Thereafter, the Department and the Permittee will proceed in accordance with Module II, Condition D.5.

4. Corrective Measures Implementation (CMI)

a. Within 120 days of Department approval of a CMS, the Permittee shall submit to the Department a draft Corrective Measure Implementation (CMI) program as appropriate. The CMI program shall include, at a minimum, the following:

i. A CMI program plan which includes a program management plan and development of and/or participation in a community relations plan as required pursuant to applicable regulations;

ii. Corrective measure design, including plans and specifications, operation and maintenance plans, cost estimates (including a draft assurance of financial responsibility as required by 6NYCRR §373-2.6(l) and 373-2.8), project schedule, construction quality assurance objectives, health and safety plan, and design phases;

iii. Certification requirements including QA/QC requirements, inspection activities, and required documentation;

iv. Reporting procedures including progress and final certification reports.

b. Once the draft CMI program is received by the Department, it will be reviewed and commented upon. Subsequent activities will proceed in accordance with Condition B.4 of this Exhibit and the following schedule:

i. Meeting between the Permittee, the Agency and the Department to discuss draft CMI program comments within thirty (30) days of the Permittee's receipt of draft CMI program comments.

ii. Submission of revised CMI program to the Department within ninety (90) days of the above described meeting. This submission shall include documentation of assurances of the Permittee's financial responsibility, as described in condition B.7 of this Exhibit, for completing the corrective action measures specified in such revised CMI program.

c. Following submission of the final CMI program, the Department will develop a draft permit modification for public notice. The final permit modification will require the Permittee to implement all corrective measures specified in the draft permitted CMI program, as modified during the permit process. The final permit modification will also require the Permittee to apply for, in accordance with a schedule to be approved by the Department, and use best efforts, to obtain any additional permits or authorization required for the treatment, storage, discharge or disposal of wastes to be generated by the CMI activities. Nothing contained herein shall be deemed to preclude the Permittee from raising, during such CMI permit modification process, any issues it may have concerning such treatment, storage, discharge or disposal or any other issues related to the proposed permit modification.

d. If corrective action measures specified in the revised CMI program described in subparagraph (b) are significantly changed as a result of the permit modification process. The Permittee shall submit appropriate amendments to the assurances of financial responsibility, described in Condition B.7 of this Exhibit, within sixty (60) days following the effective date of the modification.

5. Interim Corrective Measures (ICM)

a. If at any time it is determined by the Department that a release or, based on site-specific circumstances, a threatened release of hazardous waste, including hazardous constituents, from a SWMU, or a combination of SWMUs, poses a threat to human health or the environment, or that such condition jeopardizes the Permittee's ability to comply with any governmental permit, a draft interim corrective measures study shall be submitted to the Department for approval within one hundred twenty (120) calendar days of notice of such a determination. This study shall consider, among other relevant factors, the character,

the extent, direction, the rate of release, the proximity to population, the exposure pathways, the effects of delayed action, and the evaluations of appropriate interim corrective measures. Upon approval of the study by the Department, the Permittee shall implement the required interim corrective measures as specified by the Department.

b. The Department has determined that Interim Corrective Measures are needed to address the groundwater contamination referred above as OU10.

   The Department has determined that the most effective and timely way to achieve the necessary corrective measures is to continue the implementation of the previously approved interim remedial program.

   The Department recognizes that over time, changes in the operation and monitoring of the Interim Corrective Measures program may be appropriate. Such changes will require written authorization from the Department, and will be treated as minor permit modifications unless otherwise specified by the Department.

c. Additional ICM's have been conducted by the Permittee and require continued maintenance include OM&M for the North Railroad Property Phase 1 and Phase 2, North Commercial/Industrial Wooded Parcel and Culvert 105 Sediment Chamber MH-N9 at Margaret Droman Park. Department approved plans for each of the aforementioned ICM areas are attached to this permit.

d. The use of the WSI is authorized as an Interim Corrective Measure (ICM) for the control, containment and collection for treatment of contaminated runoff. Continued use of the WSI for this purpose is contingent upon the following conditions:

   i. The WSI shall be operated in accordance with the "Western Surface Impoundment Operations Plan" document incorporated by reference 2b and any additional conditions specified here.

   ii. The current underdrain system shall continue to be pumped in order to maintain an inward groundwater flow at the WSI.

   iii. The influent stream to the WSI shall be monitored for the purpose of evaluating corrective measures.

   iv. The WSI shall be monitored for both surface water and sediment, and the inflow to the WSI shall be monitored in accordance with the WSI Monitoring Work Plan, found in Section 5.0 of the WSI Operations Plan.

   v. The following analytes will be tested for as part of the WSI Inflow and Surface Water Monitoring in lieu of those listed in Section 5.3 and 5.4 of the WSI Operations Plan:

'a.'	Arsenic (TCLP)	D004
'b.'	Barium (TCLP)	D005
'c.'	Cadmium (TCLP)	D006

'd.'	Chromium (TCLP)	D007
'e.'	Lead (TCLP)	D008
'f.'	Mercury (TCLP)	D009
'g.'	Selenium (TCLP)	D010
'h.'	Silver (TCLP)	D011
'i.'	2,4-D (TCLP)	D016
'j.'	2,4,5-TP (Silvex) (TCLP)	D017
'k.'	Carbofuran CAS 1563-66-2	P127

vi. The following analytes will be tested for as part of the WSI sediment sampling in lieu of those listed in Section 5.5 of the WSI Operations Plan:

'a.'	Arsenic (TCLP)	D004
'b.'	Barium (TCLP)	D005
'c.'	Cadmium (TCLP)	D006
'd.'	Chromium (TCLP)	D007
'e.'	Lead (TCLP)	D008
'f.'	Mercury (TCLP)	D009
'g.'	Selenium (TCLP)	D010
'h.'	Silver (TCLP)	D011
'i.'	Endrin (TCLP)	D012
'j.'	Lindane (TCLP)	D013
'k.'	Methoxychlor (TCLP)	D014
'l.'	Toxaphene (TCLP)	D015
'm.'	2,4-D (TCLP)	D016
'n.'	2,4,5-TP (Silvex) (TCLP)	D017
'o.'	Heptachlor (TCLP)	D031
'p.'	Benzene (TCLP)	D018
'q.'	Chlorobenzene (TCLP)	D021
'r.'	Chloroform (TCLP)	D022
's.'	1,4-Dichlorobenzene (TCLP)	D027
't.'	1,2-Dichloroethane (TCLP)	D028
'u.'	1,1-Dichloroethylene (TCLP)	D029
'v.'	Methyl ethyl ketone (TCLP)	D035
'w.'	Tetrachloroethylene (TCLP)	D039
'x.'	Trichloroethylene (TCLP)	D040
'y.'	Methylene chloride (Total)	U080
'z.'	Carbofuran	P127

vii. If, at any time during its operation as an ICM, the WSI is found by Permittee, EPA, or NYSDEC to contain hazardous wastes, as defined by RCRA or the regulations promulgated pursuant to 6 NYCRR Part 371, the WSI Contingency Plan, found in section 6.0 of the WSI Operations Plan, shall be implemented within seven (7) days. Failure by Respondent to implement the approved contingency plan within seven (7) days shall constitute a violation of this Permit.

viii. Any validated data that indicate the WSI may contain hazardous waste will be reported to DEC within three days of FMC's receipt of this data.

ix. Within 10 days of any required implementation by the Permittee of the Contingency Plan found in Section 6.0 of the WSI Operations Plan, the Permittee shall submit to the Department a notification that the Permittee has commenced the implementation of the contingency plan as required in 7) above.

x. A summary of actions taken upon implementation of the contingency plan shall be presented in the quarterly report required by Condition B.5.e.ii of this Exhibit.

e. Reporting requirements for Interim Corrective Measures

i. System Down Time - The remedial system shall be operated on a continuous basis. If any part of the system is inoperable (down) for a period of more than 3 days consecutively or 5 days in a 30 day period, FMC shall notify the Department within 15 days. The notification will include a plan for restoring system operation.

ii. Quarterly Reports – FMC shall submit quarterly progress reports to the Department. These reports shall include, but not be limited to, all information collected pursuant to the approved Groundwater Monitoring Program, attachment M to this Permit. The quarterly reports will be due to the Department within forty-five (45) days following the end of a quarter. For the purposes of this Permit, quarterly reporting periods are defined as follows:

October 1 to December 31 - First (1st) Quarter

January 1 to March 31 - Second (2nd) Quarter

April 1 to June 30 - Third (3rd) Quarter

July 1 to September 30 - Fourth (4th) Quarter

Unless otherwise agreed to by the Department Project Coordinator (PC), the quarterly reports must include, at a minimum, the following information:

'a.' A summary of all activities performed pursuant to this Permit during the previous quarter.
'b.' A summary of all analytical results that have become available during the previous quarter.
'c.' Supporting QA/QC documentation, in accordance with the approved "Quality Assurance Project Plan", for quarterly analytical results.
'd.' All information recorded in the well record during the previous quarter.

'e.' Quarterly groundwater elevation data, expressed in both tabulated form and as potentiometric surface contour maps. These maps must include a delineation of the zone of capture, and indicate flow rate and direction

'f.' An evaluation of contaminant migration. This must include maps for all significant contaminants (to be specified in the approved work plan(s) formulated pursuant to this Permit and its Attachments) showing concentrations for each of the program monitoring wells.

'g.' Well maintenance activities planned or performed.

'h.' A summary of plans for installation of additional wells. Existing approved work plans may be referenced.

'i.' Pumping well rates and volumes, if applicable.

'j.' Contaminant recovery levels, if applicable.

'k.' Treatment efficiency data, if applicable.

'l.' A description and discussion of any problems encountered during the previous quarter and the course(s) of action taken to overcome these problems.

'm.' A summary of the activities planned for the following quarter.

'n.' A summary of actions taken upon implementation of the contingency plan

Data shall be provided as hard copy and in an acceptable digital format for input into the Department's computers.

iii. Annual Reporting - Annually the Permittee shall submit a summary report of all sampling results obtained during the preceding year.

The Annual Report shall be due by March 1 of each year and shall contain a summary of all data and evaluations as required for quarterly reports.

In addition, the following information shall be contained in the Annual Report:

'a.' The Permittee shall determine the groundwater flow rate and direction. [6 NYCRR 373-2.6(i)(5)].

'b.' Proposal for any changes to the Groundwater Monitoring Plan.

iv. Five year Review Requirements - Because the selected corrective actions may result in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, and will take longer than five years to achieve remedial action goals and clean-up levels, a review will be required within ninety (90) days of permit issuance and every five years afterwards to ensure the remedy selected is, or will be protective of human health and the environment.

f. Modification of the Interim Corrective Action System - If, after review of the performance monitoring data, the Department determines that the design or Operation of the Remedial

System is not sufficient to achieve the remedial criteria, the Department may require FMC to modify the design or operation of the system so as to achieve the remedial criteria.

If the Department determines that a remedial technology other than groundwater recovery is needed to achieve the remedial criteria, the Department will initiate Permit Modification pursuant to 6 NYCRR part 621.

FMC may implement, without prior Department approval, adjustments to the groundwater recovery system that will facilitate or improve groundwater control and cleanup. Modification of the groundwater treatment system may only be made after receipt of written approval by the Department.

6. Institutional Measures

In order to minimize the impacts of the soil and groundwater contamination on the surrounding community FMC must:

a. Restrict public access to the facility.

b. Formal notification on the deed to the facility property, or on some other instrument which is normally examined during title search, that will in perpetuity notify any potential purchaser of the property that:

i. the land has been used to manage hazardous waste;

ii. its use is restricted under 6NYCRR Part 373-2.7, as if it were a "hazardous waste disposal facility."

c. Maintain the infiltration control measures previously installed.

7. Financial Assurance

Within ninety days of the effective date of this Permit, FMC shall submit the necessary documentation to demonstrate financial responsibility for completing the corrective measures and the post-closure care during the post-closure care period. The estimate and the mechanism used to demonstrate financial responsibility must conform to the requirements set forth in 6NYCRR Part 373-2.8, see Compliance Schedule item 1 found in Section D of Schedule 1 of Module I.

C. GROUNDWATER MONITORING

The groundwater monitoring program has been developed to monitor and evaluate the performance of the ICMs for remediation by monitoring for changes in the chemistry and hydraulics beneath and downgradient of the facility.

1. Description of Wells

Groundwater quality monitoring wells are grouped according to purpose as follows:

a. On-site Extraction wells and WSI Sump: A-542RX, A-756X, A-757X, A-758X, A-759X, A-760X, BC-752X, C-EX1, C-EX2, D-EX1, D-EX2, G-EX1, G-EX2, G-EX3 and WSI Sump
b. On-Site Deep Bedrock Sentry Wells: C533, C637, C1001, C1094, and DE1003

c. Boundary wells:

Northern boundary wells: 21, 830, 831, 832, 833, 834, 1028, A16, A857, A858A, A1014, AB7, B11, B13, B856, B859, C8A, C10A, C12A, C14A, C1022, C1035, and C1036

Eastern boundary wells: 15, 528, 835, 836, A650A, A1037, C860, C863

Southern (upgradient) boundary well: C86

d. Off-Site Sentry Wells:

Northern sentry wells: 1120, 1032, 1038, A1030, A1033, A1122, AB521, BC522A, C1034, C1031, C1124, SDGI-OB1, SDGI-B1, SDGI-D1, SDGI-B3, SDGI-D3, SDGI-A5 and SDGI-C5

Eastern sentry wells: A864, A866, B867, and C865

Western sentry wells: 1015, B1016, C1017

e. Off Site VOC Monitoring wells: 21(1), 833(1), 834(1), 1223, 1032(2), 1038(2), 1221, 1225, 1227, A16(1), A857(1), A858A(1), A1033(2), A1220, A1222, A1224, A1226, and AB521(2)

2. Sampling Frequency

Well Group	Sampling Frequency	Analytical Lists
On-site extraction wells and WSI sumps	Semiannual	Four Indicator
	Every 2 years	GIPL
On-site deep bedrock sentry wells	Annual	Four Indicators
	Every 2 years	GIPL
Boundary wells	Annual	Four Indicators
	Every 2 years	GIPL
Off-site sentry wells	Annual	Four Indicators
	Every 2 years	GIPL

Well Group	Sampling Frequency	Analytical Lists
Off-site VOC monitoring wells	Annual	Off-Site VOC Monitoring List

3. Parameters

The well groups listed in Condition C.1 shall be sampled for:

Four Indicator Chemicals:
Methylene Chloride Arsenic Ethylene Thiourea (ETU) Ammonia
Off-Site VOC Monitoring List:
Trichloroethene 1,1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene Chloroethane Vinyl Chloride

Groundwater Indicator Parameter List (GIPL)
Volatile Organic Compounds
1,2-Dichloroethene (total or individual cis and trans isomers)
Acetone
Benzene
Chlorobenzene
Chloroform
Ethylbenzene
Methylene Chloride
Toluene
Trichloroethene
Xylene (total or individual o, m & p isomers)
Total Dithiocarbamates
Chlorinated Pesticides
4,4'-DDT
BHC-alpha
BHC-beta
BHC-delta
BHC-gamma (Lindane)
Chlorinated Herbicides
2,4 Dichlorophenoxyacetic Acid (2,4-D)
Methyl Carbamates
Carbaryl
Carbofuran
Chloropropham
Propoxur
7-Hydroxybenzofuran
Karbutilate
Metals
Arsenic
Cadmium
Lead
Mercury
Selenium
Zinc
Miscellaneous Compounds
Ammonia Ethylene Thiourea

4. Additional Monitoring

   a. Hydraulic Barrier Monitoring - The hydraulic barrier monitoring will be performed quarterly in overburden, shallow bedrock and Deep Bedrock Unit 1 monitoring wells that are proximate to the extraction systems. Quarterly hydraulic head measurements will be obtained from the wells listed in Attachment M, Table 3-1.

   b. Network-wide Hydraulic Head Monitoring - Hydraulic head measurements will be collected annually in the monitoring well network overburden, shallow bedrock and Deep Bedrock Units 1-3 wells shown in Attachment M, Figure 3-1 and listed in Attachment M, Table 3-1. These wells include those in the quarterly hydraulic barrier monitoring and other wells that are part of the groundwater quality sampling program.

5. Well Maintenance

The groundwater monitoring system will be maintained to ensure that all monitoring points yield representative samples of high integrity. Within 30 days of the effective date of this Permit, and during each sampling event, all wells in the Monitoring Network shall be inspected for integrity in accordance with a Groundwater Monitoring System Inspection Plan. Should a well be found to be damaged beyond usability, blocked or broken, or fail to recharge properly, it shall be repaired or abandoned and replaced if necessary. Should any cracking or frost heaving of grout be observed, repairs will be made and the top of the inner well casing resurveyed, to ensure accurate definition of groundwater elevations. All repairs or replacements shall be completed prior to the next scheduled sampling events.

6. Collection of Groundwater Samples by NYSDEC

At the request of the Department, the Permittee shall allow the Department and/or its authorized representatives to collect samples or splits of any samples collected by the Permittee pursuant to the requirements of this Permit. Similarly, at the request of the Permittee, the Department will allow the Permittee or the Permittee's authorized representatives to take splits or duplicates of any samples collected by the Department. The Permittee shall provide for adequate disposal of purge water whenever samples are collected by the Department.

7. Well Construction

All groundwater monitoring wells installed after the effective date of this Permit, and pursuant to the requirements of this Permit, shall be constructed in accordance with the most recent Department requirements and guidelines. Work plans which include proposed well installations shall include a description of installation procedures, and materials to be used.

8. Well Rehabilitation

Within ninety (90) days of the effective date of this permit and every three (3) years the Permittee shall inspect the detection monitoring network to determine its integrity. The inspection shall be certified by a professional engineer or qualified geologist. The inspection shall include the following:

a. A survey of all groundwater wells and piezometers in the monitoring network (performed by a New York State licensed surveyor) to the top of well casing elevation and to provide an updated site plan. The survey must be accurate to within 0.01 feet of elevation and the site plan must be presented on a scale of 1 inch equals 200 feet.

b. An establishment of the ability of all wells and piezometers in the monitoring network to yield meaningful groundwater elevations when measured with an instrument accurate to within 0.01 feet. The ability of the wells to yield such information shall be based upon a comparison of the sounding of a well to its historical depth. Wells shall be considered obstructed if 10% or more of the well screen is covered or otherwise inaccessible. At a minimum, these wells will be redeveloped to remove sediments from the bottom of the well.

c. An establishment of the ability of all groundwater wells to yield representative samples for determining the concentration of hazardous waste constituents that may be present in the groundwater. Physical examination of the well shall include removal and inspection of any dedicated sampling device to assure that the device is functioning as designed.

d. If the first triennial inspection of the monitoring system indicates the need for more (or less) frequent inspections, the frequency of required inspections may, with Department approval, be changed.

9. Additions to the Sampling Program

If hazardous waste constituents are consistently present in the detection monitoring wells below the statistical "trigger" levels, the Department may require the Permittee to perform additional sampling and install additional wells to determine whether the constituents originate from the Regulated Unit.

10. Sampling and Analysis

All Sampling and Analysis shall be performed in accordance with the approved FMC SAP. Any modification of the approved SAP must be approved by the Department prior to its implementation.

D. INACCESSIBLE SWMUS

On the basis of the RCRA Facility Assessment and subsequent documentation, the Department has determined that there is a potential for release of hazardous waste and/or constituents from the following inaccessible SWMU(s) and/or AOC(s) identified in Module Condition A.3.:

None identified

For the above area(s), the Permittee shall submit to the Department for approval a schedule for the preparation of a RCRA Facility Assessment-Sampling Visit ("RFA-SV") Work Plan, no later than one-hundred and eighty (180) calendar days prior to the date when the SWMU(s) is anticipated to become accessible for such an investigation. Accessibility to the SWMU(s) shall be considered achievable when the impediment to the SV (e.g. buildings, structures, utilities) is demolished, abandoned, or is altered in a manner that would allow access to the SWMU(s). All such work shall proceed in accordance with the approved schedule. The RCRA Facility Assessment-Sampling Visit Work Plan shall include an Implementation Schedule. If, however, the Department determines that the submitted schedule for the preparation of the RFA-SV and Implementation Schedule are not acceptable, the Permittee shall be required to make modifications consistent with specific deficiencies to be identified in a notice, within a time period to be determined by the Department. The Department shall have final approval of the RCRA Facility Assessment-Sampling Visit Work Plan preparation schedule and the Implementation Schedule.

The Permittee shall develop the RFA-SV Work Plan in accordance with Module II of this Permit), and the most recent version of the RCRA Quality Assurance Project Plan Guidance.

Following submission of the RFA-SV Work Plan set forth in this Condition, subsequent activities for the Plan shall proceed in accordance with A.7 of Module I.

E. GREEN REMEDIATION

1. The Permittee must make best efforts to implement green remediation practices in the performance of the requirements of the Work, including but not limited to performance of a RCRA Facility Investigation, Corrective Measures Study, Interim Corrective Measure, Corrective Measures Implementation and Post-Closure/Effectiveness Evaluations to maximize to the extent practicable, sustainability, reduce energy and water usage, promote carbon neutrality, promote materials reuse and recycling, and protect and preserve land resources.

2. The Permittee must make best efforts to utilize concepts and techniques presented in the New York State Department of Environmental Conservation - DEC Program Policy DER-31/Green Remediation, most recent edition.

EXHIBIT C

SUPPLEMENT TO MODULE III - EASTERN AND WESTERN SURFACE IMPOUNDMENTS

EXHIBIT C
SUPPLEMENT TO
MODULE V - EASTERN AND WESTERN SURFACE IMPOUNDMENTS

The following conditions supplement those conditions contained within **Module V** of this Permit:

A. AUTHORIZED AREAS

1. The Permittee has the following Surface Impoundments at the Facility which have not been closed.

Area
Eastern Surface Impoundment (ESI)
Western Surface Impoundment (WSI)

a. The Eastern Surface Impoundment is an inactive surface impoundment with a 6 inch temporary soil cover. FMC shall close this unit as per **Schedule 1 of Module I Compliance Schedule Item 3**.

b. The Western Surface Impoundment has been repurposed as a lined collection pond for contaminated surface water run-off from the North site cover prior to treatment at the on-site waste water treatment plant as an ICM.

B. SPECIAL CONDITIONS FOR SURFACE IMPOUNDMENTS (SPECIFIC)

1. The special conditions presented below are applicable to the Eastern Surface Impoundment.

a. Inspection:

i. Regular inspections of the ESI Fill Area Cover will be performed in conjunction with maintenance activities so that the cover system and surface water and groundwater collection and conveyance system function as intended.

ii. During the inspection of the surface cover of the ESI area will be inspected for the presence of any areas of significant erosion of the soil cover, the presence of ponded water, and the growth of woody vegetation.

b. Soil cover maintenance:

i. The ESI Area will be mowed on a regular basis between May and October. Mowing is required to remove any woody vegetation that could affect the integrity of the cover system and to facilitate the identification of eroded areas and ponded water.

ii. Woody vegetation will not be allowed to grow in the cover area. Any woody vegetation (greater than 2-inch-diameter) will be removed from all of the soil cover areas.

iii. Eroded areas including any animal burrows or holes will be repaired within seven days of being identified, unless delayed by weather/ground conditions. Maintenance or repairs will not be performed if frozen soil, snow cover, or muddy conditions exist such that the surface of the Eastern Surface Impoundment could be damaged as a result of gaining access to implement the repair/maintenance activity. If larger scale repairs (such as for recurring holes) is required, FMC will temporarily repair the holes, if practicable, and initiate engineering, planning, and/or procurement of additional materials within seven days of identifying the hole(s).

Additionally, after a burrow is repaired, the location will be inspected again within seven days to confirm that additional burrows have not been made.

c. Soil excavation:

i. Excavation of the ESI Fill Area will not be permitted without Department approval of the excavation and cover repair plan.

2. The special conditions presented below are applicable the Western Surface Impoundment.

a. The WSI shall be operated in accordance with the "Western Surface Impoundment Operations Plan" document incorporated by reference 2b.

b. Any validated data that indicate the WSI may contain hazardous waste will be reported to DEC within three days of FMC's receipt of this data.

EXHIBIT D

CLOSURE/POST CLOSURE CARE

EXHIBIT D

CLOSURE/POST-CLOSURE CARE

A. CLOSURE AND POST-CLOSURE CARE

1. The Permittee must perform closure and post-closure care for each regulated unit authorized by this Permit and post-closure care for each closed regulated unit in accordance with the requirements of 6 NYCRR 373-2.7, this Permit, the Department-approved Closure Plan and Post-Closure Plan provided as Attachment C of this Permit and the Groundwater Corrective Measures Program and Operations and Maintenance Manual incorporated by reference into this Permit by **Condition B of Schedule 1 of Module I**.

2. The Permittee must conduct long-term post-closure care and corrective action for each closed regulated unit authorized by this Permit in perpetuity unless otherwise approved by the Department.

3. The Permittee must determine the costs associated with long-term post-closure care and corrective action in accordance with the following:

   a. The total amount of the cost estimate for the entire post-closure care and corrective action period shall be calculated using the total annual cost estimate for post-closure and corrective action according to the following procedure:

      i. The total amount of the Facility's annual post-closure and corrective action cost estimate, in current dollars, must be multiplied by a 30-year post-closure care and corrective action period to derive the total 30-year post-closure cost estimate in accordance with 6 NYCRR 373-2.8(e)(1)(ii).

      ii. Using the total amount of the Facility's annual post-closure and corrective action cost estimate, calculate the present value of the cost over the entire post-closure care and corrective action period by dividing the total annual amount by the most recent Department-approved discount rate.

      iii. The total amount of the cost estimate for the entire post-closure care and corrective action period shall always be the greater of the two amounts calculated according to **Conditions A.3.a.i and A.3.a.ii** of this Exhibit.

   4. The calculation required by **Condition A.3.a** of this Exhibit must be repeated anytime there is an increase in the Facility's annual post-closure or corrective action cost estimate, with the results submitted to the Department. If this calculation

results in an increase in the previously approved Department cost estimate, the Permittee must establish additional financial assurance to cover the amount of the increase in the cost estimate in accordance with **Condition O of Module I.**

B. SPECIAL CONDITIONS FOR POST-CLOSURE CARE CENTRAL SURFACE IMPOUNDMENT (GENERAL):

1. The Central Surface Impoundment was closed as a landfill. The post closure plan in **Attachment C** must be followed.

C. SPECIAL CONDITIONS FOR POST-CLOSURE CARE ESI and WSI (GENERAL)

1. Upon closure follow the approved post closure plan in place at the time of closure.

MODULE II

Corrective Action Requirements

PART 373 PERMIT

MODULE II - CORRECTIVE ACTION REQUIREMENTS

A. APPLICABILITY

1. Statute and Regulations: Article 27, Title 9, Section 27-0913, and 6 NYCRR 373-2.6(l) requires corrective action, including corrective action beyond the Facility boundary where necessary to protect human health and the environment, for all releases of hazardous wastes, including hazardous constituents, from any solid waste management unit (SWMU) regardless of the time at which waste was placed in such unit. Pursuant to 6 NYCRR 373-1.6(c)(2), the Department may impose Permit conditions as the Department determines necessary to protect human health and the environment (such as areas of concern (AOCs) as defined in **Module I** of this Permit).

2. Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs): The Permittee must initiate and complete the corrective action processes for all SWMUs and AOCs at the Facility. The conditions of this Module apply to:

   a. All known SWMUs, AOCs and RCRA Corrective Action Units as identified in **Schedule 1 of Module I** that have not completed the corrective action process; and

   b. Any newly-identified SWMUs and AOCs identified during the course of groundwater monitoring, field investigations, environmental audits or other means including, but not necessarily limited to, those identified pursuant to **Condition C** of this Module.

B. STANDARD CONDITIONS FOR CORRECTIVE ACTION

1. The Permittee must perform any and all corrective action specified by **Condition A.2** of this Module and Vol. I, Section IX of the Permit Application incorporated by reference into this Permit by **Condition B of Schedule 1 of Module I**.

2. The Permittee must follow the requirements for Groundwater Protection as incorporated by reference into this Permit, including any groundwater sampling and analysis plan which may be required therein.

3. The Permittee and its consultants/contractors performing corrective action activities must demonstrate completion of appropriate training in accordance with the Department-approved Personnel Training Program provided as Vol. I, Section VII of the Permit Application incorporated by reference into this Permit by **Condition B of Schedule 1 of Module I** and follow all applicable health and safety plans.

4. Compliance with Governmental Requirements: During investigative activities, interim corrective measures and final corrective measures (including, but not limited to, equipment decommissioning, excavation and unit demolition) required by this Module, the Permittee must ensure that the transportation, treatment, storage, discharge, and disposal of all contaminated materials generated as a result of such activities (including, but not limited to, soil, sediments, liquids, tanks, pipes, pumps, rubble, debris and structural materials) are performed in an environmentally sound manner pursuant to all applicable federal, State and local requirements, and in a way that is protective of human health and the environment. Nothing in this Module shall be construed to require the Permittee to proceed in a manner which is in violation of any such requirements.

5. Notifications:

   a. Groundwater Contamination: If at any time the Permittee discovers that hazardous constituents in groundwater released from the Facility have migrated beyond the Facility boundary in concentrations that exceed an action level, the Permittee must, within fifteen (15) calendar days of discovery, provide written notice to the Department.

   b. Air Contamination: If at any time the Permittee discovers that hazardous constituents in air have been released from a SWMU or AOC at the Facility, and have or are migrating to areas beyond the Facility boundary in concentrations that exceed action levels in the Department's DAR-1 ("Guidelines for the Control of Toxic Ambient Air Contaminants"), and that residences or other places at which continuous, long-term human exposure to such constituents might occur are located within such areas, the Permittee must immediately initiate all appropriate actions necessary to mitigate the release to concentrations below the action levels or cease operation immediately. In addition, the Permittee must:

      i. Provide written notification to the Department within fifteen (15) calendar days of such discovery; and

      ii. Immediately initiate any actions that might be necessary to provide notice to all individuals who have been, may have been or may become exposed to the released constituents.

   c. Residual Contamination: If hazardous wastes or hazardous constituents are located within or have been released from SWMUs or AOCs and will remain in or on the land, including groundwater, after the term of this Permit has expired, the Permittee must record, in accordance with State law, a notation in the deed to the Facility property or in some other instrument acceptable to the Department which is normally examined during title search that will, in perpetuity, notify any potential purchaser of the property, of the types, concentrations and locations of such hazardous wastes or hazardous constituents.

d. Newly Discovered SWMUs and AOCs: The Permittee must notify the Department, in writing, of any additional SWMUs and AOCs discovered during the course of groundwater monitoring, field investigations, environmental audits or other means within fifteen (15) days of discovery. Thereafter, the Permittee must proceed with the assessment, investigation, evaluation and remediation of the SWMU and/or AOC as set forth in **Condition C** of this Module.

e. Newly Discovered Releases: The Permittee must notify the Department, in writing, of any release(s) of hazardous wastes, including hazardous constituents, discovered during the course of groundwater monitoring, field investigations, environmental audits, or other activities no later than fifteen (15) calendar days of discovery. Such newly-discovered release(s) may be from newly-identified unit(s)/area(s), from unit(s)/area(s) for which, based on the findings of the RCRA Facility Assessment (RFA), the Department had previously determined that no further investigation was necessary, or from unit(s)/area(s) investigated as part of a RCRA Facility Investigation (RFI). Based on the information provided in the notification, the Department shall determine the need for further investigation of the release(s). If the Department determines that such investigations are needed, the Department shall, by written notification, require the Permittee to prepare an RFI Work Plan in accordance with **Condition D** of this Module. The Department may, at its discretion, also require the Permittee to prepare an Interim Corrective Measures (ICM) Work Plan.

6. Determination of No Further Action

a. Based on the results of a RFA or a RFI for a particular SWMU or AOC, or combination of SWMUs and/or AOCs, and any other relevant information, the Permittee may submit an application to the Department for a permit modification under 6 NYCRR 373-1.7(b) and 621 to terminate the subsequent corrective action requirements of this Module and **Schedule 1 of Module I** for the subject SWMU(s) or AOC(s). The permit modification application must contain information demonstrating that no release(s) of hazardous wastes, including hazardous constituents, have occurred from the subject SWMU(s) and/or AOC(s), or that such releases do not and will not pose a threat to human health or the environment. The permit modification application must also include the information required in 6 NYCRR 373-1, 373-2 and 621.4(n).

b. If, based upon review of the Permittee's request for a permit modification, the results of the RFI, and other information, including comments received during the forty-five (45) calendar day public comment period required for major permit modifications, the Department determines that the release(s) or the suspected release(s) investigated are either non-existent or do not pose a threat to human health or the environment, the Department may grant the requested modification.

c. A determination of no further action shall not preclude the Department from modifying this Permit in accordance with 6 NYCRR 621.13 in order to implement the following actions:

i. Require the Permittee to perform such investigations as necessary to comply with the requirements of this Module and **Schedule 1 of Module I** if new information or subsequent analysis indicates that there are, or are likely to be, releases from SWMUs/AOCs that may pose a threat to human health or the environment; and/or,

ii. Require continual or periodic monitoring of air, soil, groundwater, surface water, sediment or subsurface gas, if necessary, to protect human health and the environment, when site-specific circumstances indicate the release(s) of hazardous waste(s), including hazardous constituents, are likely to occur from any SWMU(s) and/or AOC(s).

C. SCHEDULE FOR ASSESSMENT OF NEWLY IDENTIFIED SWMUs AND AOCs

1. Notification of Assessment: The Permittee must notify the Department, in writing, of any additional SWMU(s) and/or AOC(s) not listed in **Schedule 1 of Module I**, which are identified during the course of groundwater monitoring, field investigations, environmental audits, or other means within fifteen (15) calendar days of discovery.

2. SWMU/AOC Assessment Report: Within thirty (30) calendar days of notifying the Department, the Permittee must submit a SWMU/AOC Assessment Report. This report must provide, at a minimum, the following information for each newly identified SWMU/AOC:

   a. Type of unit/area;

   b. Location of each unit/area on a topographic map of appropriate scale;

   c. Dimensions, capacities, and structural descriptions of the unit/area (supply available engineering drawings);

   d. Function of unit/area;

   e. Dates that the unit/area was operated;

   f. Description of the wastes that were placed or spilled at the unit/area;

   g. Description of any known releases from the unit/area (to include groundwater data, soil analyses, air monitoring data, and/or surface water/sediment data);

   h. The results of any sampling and analysis required for the purpose of determining whether releases of hazardous wastes, including hazardous constituents, have occurred, are occurring, or are likely to occur from the unit/area; and

   i. Whether this unit/area, individually or in combination with other units/areas described in **Schedule 1 of Module I**, is a significant source of contaminant release.

3. SWMU/AOC Sampling and Analysis Plan: If prior to or after submission of the SWMU/AOC Assessment Report required in **Condition C.2** of this Module the Department determines and notifies the Permittee that sampling and analysis is required, the Permittee must, within thirty (30) calendar days of such notification, submit to the Department for approval a plan prepared in accordance with **Condition D** of this Module, for sampling and analysis of specific environmental media including, but not limited to, groundwater, land surface and subsurface strata, surface water/sediment or air, as necessary to determine whether a release of hazardous waste, including hazardous constituents, from such unit(s) and/or area(s) has occurred, is likely to have occurred, or is likely to occur. The SWMU/AOC Sampling and Analysis Plan must demonstrate that the sampling and analysis program, if applicable, is capable of yielding representative samples and must include parameters sufficient to identify migration of hazardous waste, including hazardous constituents, from the newly-discovered SWMU(s) and/or AOC(s) to the environment.

4. Subsequent Assessment Actions: Following submission of the SWMU/AOC Assessment Sampling and Analysis Plan set forth in **Condition C.3** of this Module, the Department may either approve the Plan as submitted or issue comments on the Plan. If approved, the Permittee must implement sampling in accordance with the Plan within thirty (30) calendar days of receipt of the Department's approval. If the Department issues comments on the Plan, subsequent activities for the Plan must proceed in accordance with **Condition A.7 of Module I** of this Permit.

5. SWMU/AOC Sampling and Analysis Report: Within thirty (30) calendar days of receipt by the Permittee of validated analytical data generated under the approved SWMU/AOC Sampling and Analysis Plan, the Permittee must follow reporting requirements in the approved Plan and submit a SWMU/AOC Sampling and Analysis Report to the Department. The Report must describe all results obtained from the implementation of the approved Plan.

6. Assessment Conclusions: Based on the results of the SWMU/AOC Sampling and Analysis Report, the Department shall determine the need for further investigations at the specific unit(s) covered in the SWMU/AOC Assessment Report. If the Department determines that such investigations are needed, the Department shall, by written notification, require the Permittee to prepare and submit for approval a RFI Work Plan. In addition, the Department may, at its discretion, require the Permittee to submit an Interim Corrective Measures (ICM) Work Plan if an ICM is deemed necessary by the Department to safeguard human health and the environment. Any additional activities required by the Department must be undertaken in accordance with **Condition D** of this Module.

D. DEVELOPMENT AND IMPLEMENTATION OF CORRECTIVE ACTION PROGRAM

1. For the purposes of this Permit, the technical and administrative requirements of "DER-10 – Technical Guidance for Site Investigation and Remediation" are applicable where corrective action has been determined by the Department to be necessary. Since DER-10 uses State Superfund nomenclature, the following table provides a cross-

reference between Resource Conservation and Recovery Act (RCRA) and State Superfund nomenclature when using "DER-10 – Technical Guidance for Site Investigation and Remediation":

RCRA Program Element	***Equivalent Superfund Program Element***
RCRA Facility Assessment (RFA) (including Preliminary Review [PR], Visual Site Inspection [VSI] and Sampling Visit [SV])	Site Characterization (SC)
RCRA Facility Investigation (RFI)	Remedial Investigation (RI)
Corrective Measures Study (CMS)	Feasibility Study (FS)
Interim Corrective Measure (ICM)	Interim Remedial Measure (IRM)
Statement of Basis (SB)	Record of Decision (ROD)
Corrective Measures Implementation (CMI) (design)	Remedial Design (RD)
CMI (construction)	Remedial Action (RA)
Post-Closure / Effectiveness Evaluations	Site Management (SM)

2. Accordingly, when the Department, as part of this Permit, requires the Permittee to prepare any component (e.g., work plan, report, study, design, remedy, etc.) of a specific RCRA Program element identified in the above table, the Permittee must utilize DER-10 - Technical Guidance for Site Investigation and Remediation for the preparation of the appropriate analog RCRA Program component. The required component shall be captioned with the appropriate RCRA program element title. This is the required approach unless specific alternative direction is otherwise provided by the Department in writing.

3. Work Plan Development

   a. The Permittee must submit a corrective action work plan to the Department within thirty (30) days of notification by the Department that such work plan is necessary.

   b. All corrective action activities at the Facility must be conducted pursuant to one or more Department-approved work plans. The work plan(s) prepared pursuant to this Permit must address both on-site and off-site contamination consistent with the provisions of Department guidance, entitled "DER-10 - Technical Guidance for Site Investigation and Remediation."

   c. All work plans must be developed consistent with Department guidance entitled "DER-10 - Technical Guidance for Site Investigation and Remediation." Work plans prepared to address corrective action at active units or units under post-

closure care must also incorporate the applicable requirements of 6 NYCRR 373-2.6 and 373-2.7.

d. All Department-approved work plans will be incorporated into this Permit when specifically noted in such approvals, pursuant to 6 NYCRR 621 and become enforceable under this Permit.

e. The Department may, at its discretion, direct the Permittee to prepare "supplemental" work plans, studies and/or designs as it determines necessary to ensure protection of human health and the environment.

f. The Permittee may opt to propose one or more supplemental work plans (including one or more ICM Work Plans) at any time, which the Department shall review for appropriateness and technical sufficiency.

g. Any proposed work plan must be submitted for the Department's review and approval/acceptance, and must include, at a minimum, a chronological description of the anticipated activities, a schedule for performance of those activities, and sufficient detail to allow the Department to evaluate that work plan. The requirements for submittal review are specified in **Condition D.6.** of this Module.

h. All work plans prepared pursuant to this Module must be certified in accordance with 6 NYCRR 373-1.4(a)(5), and by a Professional Engineer, or by such other qualified environmental professional as the Department may find acceptable using the language provided in DER-10.

4. Work Plan Implementation

a. Upon approval of a work plan by the Department, the Permittee must implement such work plan in accordance with the schedule contained therein.

b. The Department must be notified at least 7 days in advance of, and be allowed to attend, any field activities to be conducted under a Department-approved work plan, as well as any pre-bid meetings, job progress meetings, substantial completion meeting and inspection, and final inspection and meeting.

c. During all field activities conducted under a Department-approved work plan, the Permittee must have, on-site, a representative who is qualified to supervise the activities undertaken. Such representative may be an employee or a consultant retained to perform such supervision.

d. The Permittee must follow the notification requirements of **Condition B.5** of this Module during work plan implementation.

e. All corrective action activities must be conducted in accordance with **Condition B.4** of this Module.

f. In accordance with the schedule contained in a Department-approved work plan, the Permittee must submit a final report (e.g., RFI report, etc.) that meets the requirements set forth in "DER-10 - Technical Guidance for Site Investigation and Remediation," summarizes all data generated during implementation of the work plan, and includes a complete description of all assessments and evaluations required by the work plan.

g. Any final report or final engineering report that includes construction activities must include "as built" drawings showing any changes made to the remedial design or the IRM.

h. All final reports and final engineering reports must be submitted for the Department's review and approval. The requirements for submittal review are specified in **Condition D.6.** of this Module.

i. All final reports and final engineering reports must be certified in accordance with 6 NYCRR 373-1.4(a)(5), and by a Professional Engineer, or other qualified environmental professional as the Department may find acceptable using the language provided in DER-10.

5. Remedy Selection

a. The Department shall select the final corrective measure(s) in accordance with DER-10 based on information the Permittee submits in the RFI Report, the Corrective Measures Study (CMS) or Feasibility Study (FS), and/or other documents or reports. The proposed remedy shall be set forth in a draft Statement of Basis (SB) prepared by the Department for the Facility

b. The Department will process a major permit modification to incorporate the final SB into the Permit in accordance with 6 NYCRR Part 373 permit modification Regulations identified in Module I of this Permit.

c. Once the SB has been incorporated into this Permit, the Permittee must submit a Corrective Measures Implementation (CMI) Work Plan or Remedial Design/Remedial Action (RD/RA) Work Plan that provides for the development and implementation of final plans and specifications for implementing the remedial alternative set forth in this Permit (i.e., in the SB). This work plan must, unless otherwise provided in writing by the Department, be submitted within one hundred twenty (120) days of the effective date of the Permit modification. The Permittee must commence implementation of the CMI Work Plan or RD/RA Work Plan within thirty (30) days of the Department's approval of such work plan.

d. The Permittee must submit a Site Management Plan (SMP) or an update to an existing SMP, as necessary, in accordance with the schedule set forth in the approved CMI Work Plan or RD/RA Work Plan or in accordance with a request from the Department. The Permittee must commence implementation of the Site Management Plan within thirty (30) days of the Department's approval of such plan.

e. The Permittee must submit an initial periodic review report (PRR) in accordance with the schedule in the SMP and thereafter annually, unless the Department approves an alternate frequency in writing. The periodic review report must include the information specified in DER-10 and other applicable NYSDEC guidance, and must also include, but not be limited to, documentation of the performance of any required groundwater compliance inspections, operation and maintenance inspections, groundwater comprehensive monitoring evaluations, and any required corrective measures effectiveness evaluations related to the remedy(ies) in place at the Facility, as well as a description and results summary for any investigation or corrective action activity that occurred at the Facility during the period. The PRR must be certified in accordance with 6 NYCRR 373-1.4(a)(5), and by a Professional Engineer or other qualified environmental professional as the Department may find acceptable using the language provided in DER-10.

f. As part of the periodic review report submission, the Permittee must provide an annual certification (or some other time frame approved in writing by the Department) of institutional and engineering controls until such time that the Department notifies the Permittee in writing that this certification is no longer needed. Therefore, the PRR must: (a) contain certification that the institutional controls and engineering controls put in place are still in place and are either unchanged from the previous certification or are compliant with Department-approved modifications; (b) allow the Department access to the site; and, (c) state that nothing has occurred that would impair the ability of the control to protect public health or the environment, or constitute a violation or failure to comply with the SMP unless otherwise approved by the Department. The Permittee must submit a written certification in accordance with 6 NYCRR 373-1.4(a)(5) and DER-10 - Technical Guidance for Site Investigation and Remediation.

g. The Permittee must continue operation of the selected remedy until such time that the remedial objectives have been achieved and/or the Department determines that continued operation is technically impracticable or not feasible.

6. Review of Submittals: The Department shall review and respond in writing to each corrective action submittal (e.g., plans, studies, reports, schedules, written submittals, etc.) the Permittee makes pursuant to this Permit Module and Exhibit B of Schedule 1 of Module I, in accordance with **Condition A.7 of Module I** of this Permit.

E. OTHER REQUIREMENTS

1. Reserved

2. Environmental Easement

a. If a Statement of Basis (SB), or other approved work plan, for the Facility relies upon one or more institutional and/or engineering controls, the Permittee (or the owner of the Facility) must submit to the Department for approval an environmental

easement and/or restrictive covenant to run with the land in favor of the State which must be:

i. created and recorded pursuant to ECL Article 71, Title 36;

ii. in a form and manner as prescribed by the Department;

iii. in compliance with General Obligations Law (GOL) 5-703(1) and ECL 71-3605(2); and,

iv. recordable pursuant to Real Property Law (RPL) 291.

b. Upon acceptance of the environmental easement and/or restrictive covenant by the State, the Permittee must comply with the requirements of **Condition E.2** of this Module.

c. Agents, employees or other representatives of the State may enter and inspect the property burdened by an environmental easement with reasonable prior notice to the property owner, to assure compliance with the restrictions identified by the environmental easement.

d. If the SB provides for no action other than implementation of one or more institutional controls, the Permittee must cause an environmental easement to be recorded under the provisions of **Condition E.2.a** of this Module.

e. If the Permittee does not cause such environmental easement to be recorded in accordance with **Condition E.2.a** of this Module, the Department may file an Environmental Notice on the Facility.

3. Progress Reports

a. The Permittee must submit a written progress report of its actions under this Module to the parties identified in **Schedule 1 of Module I** by the 10th day of each month commencing with the month subsequent to the approval of the first work plan and ending with the completion of a work item requiring reporting as specified in this Permit or a Department-approved work plan.

4. Dispute Resolution

a. The Permittee may submit a written Notice of Dispute to the Department related to the Department's action on any of the Permittee's corrective action submittals required by or related to this Permit Module and Exhibit B of Schedule 1 of Module I. Any such notices must be made within the time periods specified under **Condition A.7. of Module I of this Permit and must be directed to** the designated individual as defined in Condition E.4.a.iii. Such a notice must contain specific information describing the Permittee's position and including any relevant supporting documentation. The designated individual shall render a written decision and furnish a copy thereof to the Permittee, which shall be the final

Department determination, unless the Permittee files a written appeal of that decision with the designated appeal individual within 20 days of receipt of that decision.

i. Upon receipt of the written appeal pursuant to **Condition E.4.a** of this Module, the designated appeal individual, will review the record and decision. The designated appeal individual will take one of the following actions, with written notice to the Permittee:

'a.' remand the matter to the program staff for further negotiation or information if it is determined that the matter is not ripe for review;

'b.' determine that there is no need for further action, and that the determination of the designated individual is confirmed; or,

'c.' make a determination on the record as it exists.

ii. The decision of the designated appeal individual shall be the final Department decision and represent the Department's determination to proceed in accordance with **Condition E.4.b** of this Module.

iii. The designated individual to:

'a.' hear disputes is a bureau director in the Department's Division of Environmental Remediation; and,

'b.' to review dispute decisions is the assistant director of the Department's Division of Environmental Remediation.

b. In the event that the Department issues a final decision in accordance with **Condition E.4.a.ii. above**, the Department shall, pursuant to 6 NYCRR 621.13, send to the Permittee a notice of intent to modify this Permit with regard to the Department's final decision in order to safeguard human health and the environment.

c. Upon receipt of a notice of intent from the Department, the Permittee must act in accordance with 6 NYCRR 621.13(d) or the Department's action will become effective on the date specified in the notice of intent. In the event that the Permittee acts in accordance with 6 NYCRR 621.13(d) within the specified timeframe, the procedure for permit modification will continue in accordance with 6 NYCRR 621.13.

F. MISCELLANEOUS

1. Required Authorizations

a. The Permittee must use best efforts to obtain all Facility access, permits, easements, approvals, institutional controls, and/or authorizations necessary to perform the

Permittee's obligations under this Permit, including all Department-approved work plans and the schedules contained therein. If, despite the Permittee's best efforts, any access, permits, easements, approvals, institutional controls, or authorizations cannot be obtained, the Permittee must promptly notify the Department and include a summary of the steps taken. The Department may, as it deems appropriate and within its authority, assist the Permittee in obtaining same.

b. If an interest in property is needed to implement an institutional control required by a work plan and such interest cannot be obtained, the Department may require the Permittee to modify the work plan to reflect changes necessitated by the Permittee's inability to obtain such interest. Within 15 days of receipt of such notice, the Permittee must elect in writing to either: a) modify the work plan as requested by the Department within 45 days, or, b) invoke dispute resolution in accordance with **Condition E.4** of this Module.

MODULE V

Requirements for Surface Impoundments

A. AUTHORIZED STORAGE, WASTE TYPES AND STORAGE VOLUME

1. The Permittee is authorized to use the surface impoundments for the storage of hazardous wastes subject to the terms of this Permit as described in Schedule 1 of Module I. Schedule 1 of Module I provides information regarding the location, capacity and type of waste stored for each permitted surface impoundment.

2. In the event that the Facility has multiple surface impoundments, the following provisions apply individually to each surface impoundment.

B. DESIGN AND OPERATING REQUIREMENTS [6 NYCRR 373-2.11(b)]

1. The Permittee must design and operate each surface impoundment authorized by this Permit in accordance with the requirements of 6 NYCRR 373-2.11(b) and this Permit including Schedule 1 of Module I, except as may be authorized by Schedule 1 of Module I.

C. DOUBLE-LINED SURFACE IMPOUNDMENTS NOT EXEMPT FROM 6 NYCRR 373-2.6 [6 NYCRR 373-2.11(c)]

1. Double-lined or single-lined surface impoundments authorized by this Permit are not exempt from the 6 NYCRR 373-2.6 groundwater protection requirements in accordance with 6 NYCRR 373-2.11(c) and this Permit including Schedule 1 of Module I.

D. MONITORING AND INSPECTION [6 NYCRR 373-2.11(d)]

1. The Permittee must perform monitoring and inspection of each surface impoundment authorized by this Permit in accordance with the requirements of 6 NYCRR 373-2.11(d) and this Permit, including Schedule 1 of Module I and the Department-

approved Security and Facility Inspection Plan incorporated by reference into this Permit.

2. For each occurrence where evidence of any of the items listed in 6 NYCRR 373-2.11(d)(2) are identified in any surface impoundment, the Permittee must record the occurrence in the inspection log and maintain the log as part of the operating record required by 6 NYCRR 373-2.5(c). The Permittee must indicate in the facility's operating record the date the defect was identified, the date repairs were completed and a brief description of said repairs.

3. If overflows are discovered associated with any surface impoundment (including ancillary equipment), the Permittee must immediately report the situation as specified in Condition C.2 of Module I (i.e., Oral Reports) and implement the Department-approved Integrated Contingency Plan incorporated by reference into this Permit as necessary.

4. For any identified overflow or condition creating the potential for an overflow from a surface impoundment, the Permittee must take immediate action to stop or prevent any overflow and clean up any overflow material in accordance with the procedures contained in the Department-approved Integrated Contingency Plan incorporated by reference into this Permit.

5. The Permittee must take action in response to any of the aforementioned deficiencies in accordance with 6 NYCRR 373-2.2(g)(3), Condition E.7 of this Module and, if applicable, Conditions E and K of this Module.

6. If the dike of a surface impoundment is found to be breached or in such a deteriorated condition that it is obviously incapable of containing liquid, or if the liquid level in any surface impoundment suddenly drops due to reasons other than changes in flow into or out of the impoundment, the Permittee must: a) notify the Department and take immediate action to stop or prevent any release from the impoundment; b) take steps in accordance with the Department-approved Integrated Contingency Plan incorporated by reference into this Permit to clean up any overflow material; c) immediately cease operation of the impoundment and relocate any material stored within the impoundment until the defect is repaired to the satisfaction of the Department; and, d) implement the requirements of Condition E of this Module.

7. For any identified deterioration or malfunction of equipment or structures associated with a hazardous waste management unit which do not result in a release or create the potential for a release of hazardous waste from the unit's primary containment (i.e., defects other than those described in Condition D.6 of this Module) or for situations where the waste has been removed from the impoundment in accordance with Condition D.6 of this Module, except for specific defects where other Permit conditions or the regulations require repairs within other specified time periods, the Permittee must either:

a. Schedule and complete repairs to the defect within thirty (30) days from the date the defect was first identified;

b. Submit a proposed schedule for Department approval within seven (7) days from the date the defect was first identified, if it is anticipated that it will take longer than 30 days to complete repairs. The proposed schedule must include the date for completing the repairs which must be within six (6) months from the date when the defect was identified; or

c. The Permittee may request, and the Department may approve, extensions to the schedule provided the Permittee has adequately demonstrated that the extension is needed due to unforeseen circumstances or circumstances beyond the Permittee's control and that the delay will not lead to an environmental or human health hazard.

E. EMERGENCY REPAIRS AND CONTINGENCY PLANS [6 NYCRR 373-2.11(e)]

1. The Permittee must immediately implement response actions and perform emergency repairs on each surface impoundment authorized by this Permit in accordance with the requirements of 6 NYCRR 373-2.11(e) and this Permit, including Schedule 1 of Module I and the Department-approved Integrated Contingency Plan incorporated by reference into this Permit. The Department-approved Integrated Contingency Plan, prepared in accordance with 6 NYCRR 373-2.4, includes procedures for compliance with the requirements of 6 NYCRR 373-2.11(e).

F. CLOSURE AND POST-CLOSURE CARE [6 NYCRR 373-2.11(f)]

1. The Permittee must perform closure for each surface impoundment authorized by this Permit in accordance with the requirements of 6 NYCRR 373-2.11(f), 6 NYCRR 373-2.7 and this Permit, including Schedule 1 of Module I and the Department-approved Closure Plan and/or Post-Closure Plan provided as Attachment C of this Permit. For surface impoundments closed in accordance with 6 NYCRR 373-2.11(f)(2), the Permittee must meet the closure and post-closure requirements of 6 NYCRR 373-2.14(g), 6 NYCRR 373-2.7(g) and this Permit. If, at closure, some waste residues or contaminated materials are left in place, the Permittee must comply with all post-closure requirements of 6 NYCRR 373-2.11(f)(2) and submit, for Department approval, a post-closure plan, a post-closure cost estimate and financial assurance in at least the amount of the post-closure cost estimate for the subject surface impoundment(s).

G. SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTE [6 NYCRR 373-2.11(g)]

1. The Permittee must follow the special requirements for ignitable or reactive wastes for each surface impoundment authorized by this Permit in accordance with the requirements of 6 NYCRR 373-2.11(g) and this Permit including Schedule 1 of Module I.

H. SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTES [6 NYCRR 373-2.11(h)]

1. The Permittee must follow the special requirements for incompatible wastes for each surface impoundment authorized by this Permit in accordance with the requirements of 6 NYCRR 373-2.11(h) and this Permit including Schedule 1 of Module I.

I. SPECIAL REQUIREMENTS FOR HAZARDOUS WASTES F020, F021, F022, F023, F026 AND F027 [6 NYCRR 373-2.11(i)]

1. The Permittee must follow the special requirements for hazardous wastes F020, F021, F022, F023, F026 and F027 for each surface impoundment authorized by this Permit in accordance with the requirements of 6 NYCRR 373-2.11(i) and this Permit including Schedule 1 of Module I.

J. ACTION LEAKAGE RATE [6 NYCRR 373-2.11(j)]

1. For any double-lined surface impoundment, the Permittee must comply with the action leakage rate for each surface impoundment with leak detection authorized by this Permit in accordance with the requirements of 6 NYCRR 373-2.11(j) and this Permit including Schedule 1 of Module I.

K. RESPONSE ACTIONS [6 NYCRR 373-2.11(k)]

1. For any double-lined surface impoundment, the Permittee must perform the response actions for each surface impoundment with leak detection authorized by this Permit in accordance with the requirements of 6 NYCRR 373-2.11(k) and this Permit, including Schedule 1 of Module I and the Department-approved Response Action Plan incorporated by reference into this Permit.

L. AIR EMISSION STANDARDS [6 NYCRR 373-2.11(l)]

1. The Permittee must comply with the air emission standards for each surface impoundment authorized by this Permit in accordance with the requirements of 6 NYCRR 373-2.11(l) and this Permit including Schedule 1 of Module I.

M. OTHER REQUIREMENTS

1. The Permittee must operate each surface impoundment authorized by this Permit to prevent overtopping in accordance with 6 NYCRR 373-2.11(b)(7) and maintain a minimum of two (2) feet of freeboard at all times, unless specified otherwise in Schedule 1 of Module I.

2. The Permittee must inspect each surface impoundment daily, or as otherwise specified in Schedule 1 of Module I, to determine whether each surface impoundment has a minimum of two (2) feet of freeboard as required by Condition M.1 of this Module.

3. Prior to discharging the contents of any surface impoundment to an off-site surface water body, the Permittee must submit and receive Department approval of a discharge

pre-qualification report containing analytical data and other information which indicates conformance with the limitations stipulated in the Facility's State Pollutant Discharge Elimination Systems (SPDES) Permit. The Permittee must not discharge from any surface impoundment to an off-site surface water body without prior written approval from the Department. All such discharges must be conducted in accordance with the Facility's SPDES Permit.

4. The Permittee must obtain and submit to the Department a certification from an independent Professional Engineer, licensed to practice in New York, which stipulates that the surface impoundment's dike (i.e., berm), including that portion which provides freeboard, has adequate structural integrity in accordance with 6 NYCRR 373-2.11(d)(3). For surface impoundments constructed with a double liner and operable leak detection, this certification must be obtained and submitted to the Department every five (5) years unless otherwise specified in Schedule 1 of Module I; for all other surface impoundments, this certification must be obtained and submitted to the Department every two (2) years unless otherwise specified in Schedule 1 of Module I.

5. Precautions in Flammable & Oxidizer Waste Storage Areas: Machinery and equipment must not be permitted in flammable and oxidizer waste storage areas or any process area where a flammable atmosphere may exist unless it has been fitted with appropriate safeguard devices approved by Underwriters Laboratories (UL) to render the machinery/equipment intrinsically safe. Only non-sparking tools shall be used in these storage areas.

ATTACHMENT A

EPA Part A application

OMB# 2050-0024; Expires 01/31/2017

SEND COMPLETED FORM TO: The Appropriate State or Regional Office.

United States Environmental Protection Agency
RCRA SUBTITLE C SITE IDENTIFICATION FORM

1. Reason for Submittal

MARK ALL BOX(ES) THAT APPLY

Reason for Submittal:

- ☐ To provide an Initial Notification (first time submitting site identification information / to obtain an EPA ID number for this location)
- ☒ To provide a Subsequent Notification (to update site identification information for this location)
- ☐ As a component of a First RCRA Hazardous Waste Part A Permit Application
- ☒ As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment # 1)
- ☐ As a component of the Hazardous Waste Report (If marked, see sub-bullet below)
  - ☐ Site was a TSD facility and/or generator of >1,000 kg of hazardous waste, >1 kg of acute hazardous waste, or >100 kg of acute hazardous waste spill cleanup in one or more months of the report year (or State equivalent LQG regulations)

2. Site EPA ID Number

EPA ID Number N Y D 0 0 2 1 2 6 8 4 5

3. Site Name

Name: FMC Corporation

4. Site Location Information

Street Address: 100 Niagara Street

City, Town, or Village: Middleport | **County:** Niagara

State: New York | **Country:** U.S.A. | **Zip Code:** 14105

5. Site Land Type

☑ Private ☐ County ☐ District ☐ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other

6. NAICS Code(s) for the Site (at least 5-digit codes)

A. 3 2 5 3 2 0 | C.

B. | D.

7. Site Mailing Address

Street or P.O. Box: 100 Niagara Street

City, Town, or Village: Middleport

State: New York | **Country:** U.S.A. | **Zip Code:** 14105

8. Site Contact Person

First Name: Gregory | **MI:** B. | **Last:** Sullivan

Title: Plant Manager

Street or P.O. Box: 100 Niagara Street

City, Town or Village: Middleport

State: New York | **Country:** U.S.A. | **Zip Code:** 14105

Email: gregory.sullivan@fmc.com

Phone: (315) 735-6325 | **Ext.:** | **Fax:** (716) 735-3767

9. Legal Owner and Operator of the Site

A. Name of Site's Legal Owner: FMC Corporation | **Date Became Owner:** 1/1/1946

Owner Type: ☑ Private ☐ County ☐ District ☐ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other

Street or P.O. Box: 1735 Market Street

City, Town, or Village: Philadelphia | **Phone:** 215.299.6000

State: Pennsylvania | **Country:** U.S.A. | **Zip Code:** 19103

B. Name of Site's Operator: FMC Corporation | **Date Became Operator:** 1/1/1946

Operator Type: ☑ Private ☐ County ☐ District ☐ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other

10. Type of Regulated Waste Activity (at your site)
Mark "Yes" or "No" for all current activities (as of the date submitting the form); complete any additional boxes as instructed.

A. Hazardous Waste Activities; Complete all parts 1-10.

Y ☑ N ☐ **1. Generator of Hazardous Waste**
If "Yes," mark only one of the following – a, b, or c.

- ☑ a. LQG: Generates, in any calendar month, 1,000 kg/mo (2,200 lbs/mo.) or more of hazardous waste; **or** Generates, in any calendar month, or accumulates at any time, more than 1 kg/mo (2.2 lbs/mo) of acute hazardous waste; **or** Generates, in any calendar month, **or** accumulates at any time, more than 100 kg/mo (220 lbs/mo) of acute hazardous spill cleanup material.
- ☐ b. SQG: 100 to 1,000 kg/mo (220 – 2,200 lbs/mo) of non-acute hazardous waste.
- ☐ c. CESQG: Less than 100 kg/mo (220 lbs/mo) of non-acute hazardous waste.

If "Yes" above, indicate other generator activities in 2-10.

Y ☐ N ☑ **2. Short-Term Generator** (generate from a short-term or one-time event and not from on-going processes). If "Yes," provide an explanation in the Comments section.

Y ☐ N ☑ **3. United States Importer of Hazardous Waste**

Y ☐ N ☑ **4. Mixed Waste (hazardous and radioactive) Generator**

Y ☐ N ☑ **5. Transporter of Hazardous Waste**
If "Yes," mark all that apply.

- ☐ a. Transporter
- ☐ b. Transfer Facility (at your site)

Y ☐ N ☑ **6. Treater, Storer, or Disposer of Hazardous Waste** Note: A hazardous waste Part B permit is required for these activities.

Y ☐ N ☑ **7. Recycler of Hazardous Waste**

Y ☐ N ☑ **8. Exempt Boiler and/or Industrial Furnace**
If "Yes," mark all that apply.

- ☐ a. Small Quantity On-site Burner Exemption
- ☐ b. Smelting, Melting, and Refining Furnace Exemption

Y ☐ N ☑ **9. Underground Injection Control**

Y ☐ N ☑ **10. Receives Hazardous Waste from Off-site**

B. Universal Waste Activities; Complete all parts 1-2.

Y ☐ N ☑ **1. Large Quantity Handler of Universal Waste (you accumulate 5,000 kg or more) [refer to your State regulations to determine what is regulated]. Indicate types of universal waste managed at your site. If "Yes," mark all that apply.**

- a. Batteries ☐
- b. Pesticides ☐
- c. Mercury containing equipment ☐
- d. Lamps ☐
- e. Other (specify) _____ ☐
- f. Other (specify) _____ ☐
- g. Other (specify) _____ ☐

Y ☐ N ☑ **2. Destination Facility for Universal Waste**
Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities; Complete all parts 1-4.

Y ☐ N ☑ **1. Used Oil Transporter**
If "Yes," mark all that apply.

- ☐ a. Transporter
- ☐ b. Transfer Facility (at your site)

Y ☐ N ☑ **2. Used Oil Processor and/or Re-refiner**
If "Yes," mark all that apply.

- ☐ a. Processor
- ☐ b. Re-refiner

Y ☐ N ☑ **3. Off-Specification Used Oil Burner**

Y ☐ N ☑ **4. Used Oil Fuel Marketer**
If "Yes," mark all that apply.

- ☐ a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner
- ☐ b. Marketer Who First Claims the Used Oil Meets the Specifications

D. Eligible Academic Entities with Laboratories—Notification for opting into or withdrawing from managing laboratory hazardous wastes pursuant to 40 CFR Part 262 Subpart K

❖ You can ONLY Opt into Subpart K if:

- you are at least one of the following: a college or university; a teaching hospital that is owned by or has a formal affiliation agreement with a college or university; or a non-profit research institute that is owned by or has a formal affiliation agreement with a college or university; AND
- you have checked with your State to determine if 40 CFR Part 262 Subpart K is effective in your state

Y☐ N☑ 1. Opting into or currently operating under 40 CFR Part 262 Subpart K for the management of hazardous wastes in laboratories **See the item-by-item instructions for definitions of types of eligible academic entities. Mark all that apply:**

☐ **a. College or University**

☐ **b. Teaching Hospital that is owned by or has a formal written affiliation agreement with a college or university**

☐ **c. Non-profit Institute that is owned by or has a formal written affiliation agreement with a college or university**

Y☐ N☑ 2. Withdrawing from 40 CFR Part 262 Subpart K for the management of hazardous wastes in laboratories

11. Description of Hazardous Waste

A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.

D001	D002	D004	D008	D009	D022	D028
D035	F002	F003	F005	F039	P127	P189
U080						

B. Waste Codes for State-Regulated (i.e., non-Federal) Hazardous Wastes. Please list the waste codes of the State-Regulated hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed.

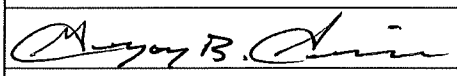
12. Notification of Hazardous Secondary Material (HSM) Activity

Y ☐ N ☑ Are you notifying under 40 CFR 260.42 that you will begin managing, are managing, or will stop managing hazardous secondary material under 40 CFR 261.2(a)(2)(ii), 40 CFR 261.4(a)(23), (24), or (25)?

If "Yes," you must fill out the Addendum to the Site Identification Form: Notification for Managing Hazardous Secondary Material.

13. Comments

14. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations. For the RCRA Hazardous Waste Part A Permit Application, all owner(s) and operator(s) must sign (see 40 CFR 270.10(b) and 270.11).

Signature of legal owner, operator, or an authorized representative	Name and Official Title (type or print)	Date Signed (mm/dd/yyyy)
	Gregory B. Sullivan	01/29/2016
	Middleport Plant Manager	
	FMC Corp. - Agricultural Solutions	

EPA ID Number | N | Y | D | 0 | 0 | 2 | 1 | 2 | 6 | 8 | 4 | 5 |

OMB#: 2050-0024; Expires 01/31/2017

United States Environmental Protection Agency

HAZARDOUS WASTE PERMIT INFORMATION FORM

1. Facility Permit Contact	**First Name:** Gregory	**MI:** B.	**Last Name:** Sullivan	
	Contact Title: Plant Manager			
	Phone: (315) 735-6325	**Ext.:**	**Email:** gregory.sullivan@fmc.com	
2. Facility Permit Contact Mailing Address	**Street or P.O. Box:** 100 Niagara Street			
	City, Town, or Village: Middleport			
	State: New York			
	Country: U.S.A.	**Zip Code:** 14105		
3. Operator Mailing Address and Telephone Number	**Street or P.O. Box:** 100 Niagara Street			
	City, Town, or Village: Middleport			
	State: New York	**Phone:** (716) 735-6325		
	Country: U.S.A.	**Zip Code:** 14105		
4. Facility Existence Date	**Facility Existence Date (mm/dd/yyyy):** 01/01/1946			

5. Other Environmental Permits

A. Facility Type *(Enter code)*	B. Permit Number	C. Description
N	NY0000035	NYSDEC SPDES Permit
P	9293600017	NYSDEC State Air Facility Permit
E	CBS#9-0000-00954	NYSDEC Chemical Bulk Storage Registration Certificate
E	PBS#9-2221-00194	NYSDEC Petroleum Bulk Storage Registration Certificate
E		Village of Middleport Sanitary Sewer Use Permit

6. Nature of Business: The FMC Agricultural Products Group facility located in Middleport, NY mixes, blends, and packages pesticides (insecticides, fungicides, and herbicides) as liquids or powders for agricultural use.

7. Process Codes and Design Capacities – Enter information in the Section on Form Page 3

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04 and X99), describe the process (including its design capacity) in the space provided in Item 8.

B. PROCESS DESIGN CAPACITY – For each code entered in Item 7.A; enter the capacity of the process.

1. **AMOUNT – Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process.**
2. **UNIT OF MEASURE – For each amount entered in Item 7.B(1), enter the code in Item 7.B(2) from the list of unit of measure codes below that describes the unit of measure used. Select only from the units of measure in this list.**

C. PROCESS TOTAL NUMBER OF UNITS – Enter the total number of units for each corresponding process code.

Process Code	Process	Appropriate Unit of Measure for Process Design Capacity
Disposal		
D79	Underground Injection Well Disposal	Gallons; Liters; Gallons Per Day; or Liters Per Day
D80	Landfill	Acre-feet; Hectares-meter; Acres; Cubic Meters; Hectares; Cubic Yards
D81	Land Treatment	Acres or Hectares
D82	Ocean Disposal	Gallons Per Day or Liters Per Day
D83	Surface Impoundment Disposal	Gallons; Liters; Cubic Meters; or Cubic Yards
D99	Other Disposal	Any Unit of Measure Listed Below
Storage		
S01	Container	Gallons; Liters; Cubic Meters; or Cubic Yards
S02	Tank Storage	Gallons; Liters; Cubic Meters; or Cubic Yards
S03	Waste Pile	Cubic Yards or Cubic Meters
S04	Surface Impoundment	Gallons; Liters; Cubic Meters; or Cubic Yards
S05	Drip Pad	Gallons; Liters; Cubic Meters; Hectares; or Cubic Yards
S06	Containment Building Storage	Cubic Yards or Cubic Meters
S99	Other Storage	Any Unit of Measure Listed Below
Treatment		
T01	Tank Treatment	Gallons Per Day; Liters Per Day
T02	Surface Impoundment	Gallons Per Day; Liters Per Day
T03	Incinerator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; BTUs Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Gallons Per Day; Metric Tons Per Hour; or Million BTU Per Hour
T04	Other Treatment	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Short Tons Per Day; BTUs Per Hour; Gallons Per Day; Liters Per Hour; or Million BTU Per Hour
T80	Boiler	Gallons; Liters; Gallons Per Hour; Liters Per Hour; BTUs Per Hour; or Million BTU Per Hour

Process Code	Process	Appropriate Unit of Measure for Process Design Capacity (for T81 – T94)
Treatment (Continued)		
T81	Cement Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; BTU Per Hour; Liters Per Hour; Kilograms Per Hour; or Million BTU Per Hour
T82	Lime Kiln	
T83	Aggregate Kiln	
T84	Phosphate Kiln	
T85	Coke Oven	
T86	Blast Furnace	
T87	Smelting, Melting, or Refining Furnace	
T88	Titanium Dioxide Chloride Oxidation Reactor	
T89	Methane Reforming Furnace	
T90	Pulping Liquor Recovery Furnace	
T91	Combustion Device Used in the Recovery of Sulfur Values from Spent Sulfuric Acid	
T92	Halogen Acid Furnaces	
T93	Other Industrial Furnaces Listed in 40 CFR 260.10	
T94	Containment Building Treatment	Cubic Yards; Cubic Meters; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; BTU Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million BTU Per Hour
Miscellaneous (Subpart X)		
X01	Open Burning/Open Detonation	Any Unit of Measure Listed Below
X02	Mechanical Processing	Short Tons Per Hour; Metric Tons Per Hour; Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; Kilograms Per Hour; Gallons Per Hour; Liters Per Hour; or Gallons Per Day
X03	Thermal Unit	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; BTU Per Hour; or Million BTU Per Hour
X04	Geologic Repository	Cubic Yards; Cubic Meters; Acre-feet; Hectare-meter; Gallons; or Liters
X99	Other Subpart X	Any Unit of Measure Listed Below

Unit of Measure	Unit of Measure Code
Gallons	G
Gallons Per Hour	E
Gallons Per Day	U
Liters	L
Liters Per Hour	H
Liters Per Day	V
Short Tons Per Hour	D
Short Tons Per Day	N
Metric Tons Per Hour	W
Metric Tons Per Day	S
Pounds Per Hour	J
Kilograms Per Hour	X
Million BTU Per Hour	X
Cubic Yards	Y
Cubic Meters	C
Acres	B
Acre-feet	A
Hectares	Q
Hectare-meter	F
BTU Per Hour	I

7. Process Codes and Design Capacities (Continued)

EXAMPLE FOR COMPLETING Item 7 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	B. PROCESS DESIGN CAPACITY (2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	1	S	0	2	533.788	G	001	
	1	S	0	4	5,200,000	G	003	
	2				(see Item 13 - Comments)			
	3							
	4							
	5							
	6							
	7							
	8							
	9							
1	0							
1	1							
1	2							
1	3							

Note: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the line sequentially, taking into account any lines that will be used for "other" process (i.e., D99, S99, T04, and X99) in Item 8.

8. Other Processes (Follow instructions from Item 7 for D99, S99, T04, and X99 process codes)

Line Number (Enter #s in sequence with Item 7)		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	(2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	2	T	0	4	100.00	U	001	
					Not Applicable			

9. Description of Hazardous Wastes - Enter Information in the Sections on Form Page 5

A. EPA HAZARDOUS WASTE NUMBER – Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR Part 261, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY – For each listed waste entered in Item 9.A, estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in Item 9.A, estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE – For each quantity entered in Item 9.B, enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure, taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in Item 9.A, select the code(s) from the list of process codes contained in Items 7.A and 8.A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all listed hazardous wastes.

For non-listed waste: For each characteristic or toxic contaminant entered in Item 9.A, select the code(s) from the list of process codes contained in Items 7.A and 8.A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

1. **Enter the first two as described above.**
2. **Enter "000" in the extreme right box of Item 9.D(1).**
3. **Use additional sheet, enter line number from previous sheet, and enter additional code(s) in Item 9.E.**

2. PROCESS DESCRIPTION: If code is not listed for a process that will be used, describe the process in Item 9.D(2) or in Item 9.E(2).

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER – Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. **Select one of the EPA Hazardous Waste Numbers and enter it in Item 9.A. On the same line complete Items 9.B, 9.C, and 9.D by estimating the total annual quantity of the waste and describing all the processes to be used to store, treat, and/or dispose of the waste.**
2. **In Item 9.A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In Item 9.D.2 on that line enter "included with above" and make no other entries on that line.**
3. **Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.**

EXAMPLE FOR COMPLETING Item 9 (shown in line numbers X-1, X-2, X-3, and X-4 below) – A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operations. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
								(1) PROCESS CODES (Enter Code)									(2) PROCESS DESCRIPTION (If code is not entered in 9.D(1))
X	1	K	0	5	4	900	P	T	0	3	D	8	0				
X	2	D	0	0	2	400	P	T	0	3	D	8	0				
X	3	D	0	0	1	100	P	T	0	3	D	8	0				
X	4	D	0	0	2												Included With Above

9. Description of Hazardous Wastes *(Continued. Use additional sheet(s) as necessary; number pages as 5a, etc.)*

Line Number		A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
					(1) PROCESS CODES (Enter Code)	(2) PROCESS DESCRIPTION (If code is not entered in 9.D(1))
	1		zero			see Item 13 - Comments
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
1	0					
1	1					
1	2					
1	3					
1	4					
1	5					
1	6					
1	7					
1	8					
1	9					
2	0					
2	1					
2	2					
2	3					
2	4					
2	5					
2	6					
2	7					
2	8					
2	9					
3	0					
3	1					
3	2					
3	3					
3	4					
3	5					
3	6					

10. Map

Attach to this application a topographical map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all spring, rivers, and other surface water bodies in this map area. See instructions for precise requirements.

11. Facility Drawing

All existing facilities must include a scale drawing of the facility (see instructions for more detail).

12. Photographs

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment, and disposal areas; and sites of future storage, treatment, or disposal areas (see instructions for more detail).

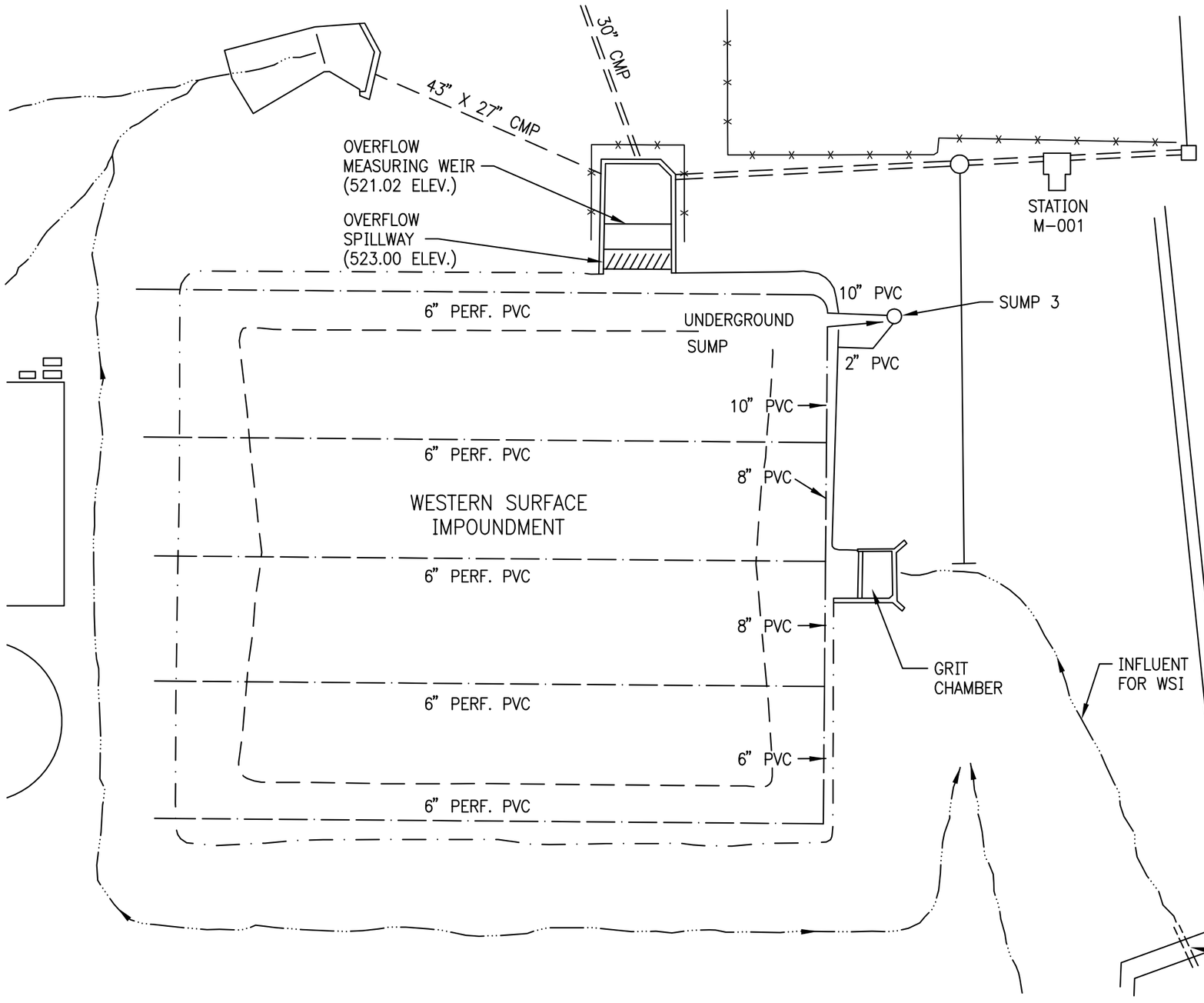
13. Comments

For Items 7 and 9:
1. Hazardous waste is not currently treated, stored or disposed at the facility in units subject to 6 NYCRR Part 373 permitting requirements. All hazardous wastes generated at the facility are exempt from Part 373 permitting requirements because the wastes are either disposed off-site within 90 days of generation or are treated in the facility's water treatment units that are exempt from permitting pursuant to Part 373-1.1(d)(1)(xii).
2. This application is submitted, at the request of NYSDEC letter dated March 18, 2015, to amend FMC's 1986 application, which included the following regulated hazardous waste units: five container storage areas and three surface impoundments.
3. The five former regulated hazardous waste container storage areas were certified clean closed in 1997, with NYSDEC approval by letter dated August 24, 2001, and post-closure care not needed.
4. One former regulated hazardous waste surface impoundment (Central Surface Impoundment; CSI) was certified closed in 1989, with NYSDEC approval by letter dated March 22, 1990. Hazardous waste soil and sediment within the limits of the CSI were removed prior to installation of the cover. The CSI closure is subject to post-closure care.
5. Two former regulated hazardous waste surface impoundments (Western and Eastern Surface Impoundments; WSI and ESI) ceased receiving or managing hazardous waste in 1988. The WSI was partially closed in 1989 by removing the existing liner and associated sediments/ballast. A new liner was installed and the WSI since has been used to manage non-hazardous surface water runoff from the facility, operating as part of an interim corrective measure (ICM). The ESI no longer serves as an impoundment. In 1988, the ESI was isolated so that it ceased to receive any hazardous waste and was drained. With the NYSDEC's approval, the footprint of the former ESI has been used for the placement of non-hazardous remedial soil generated from off-site interim corrective actions between 1996 and 2011. The WSI and ESI and RCRA corrective action activities are subject to an Administrative Order on Consent (AOC: Docket No. II RCRA-90-3008(h)-0209) entered into between FMC, NYSDEC, and the USEPA in July 1991. The 1991 AOC specifies that final closure of the WSI and ESI is subject to the results of the RCRA Facility Investigation and Corrective Measures Study (RFI/CMS) process for the facility.
6. The location of the facility is identified on Figure A-1. The locations of the property line, facility buildings and key features, and of the three impoundments are identified on Figure A-2. Solid waste management units (SWMUs) are identified on Figure A-3 and Table A-1.

Attachments:
Figure A-1 Location Map (USGS topographic map)
Figure A-2 Facility Features (annotated aerial photograph)
Figure A-3 Solid Waste Management Unit (SWMU) Locations
Table A-1 Identification of Former SWMUs

ATTACHMENT B

Engineering Drawings



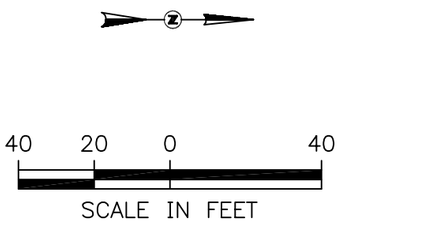


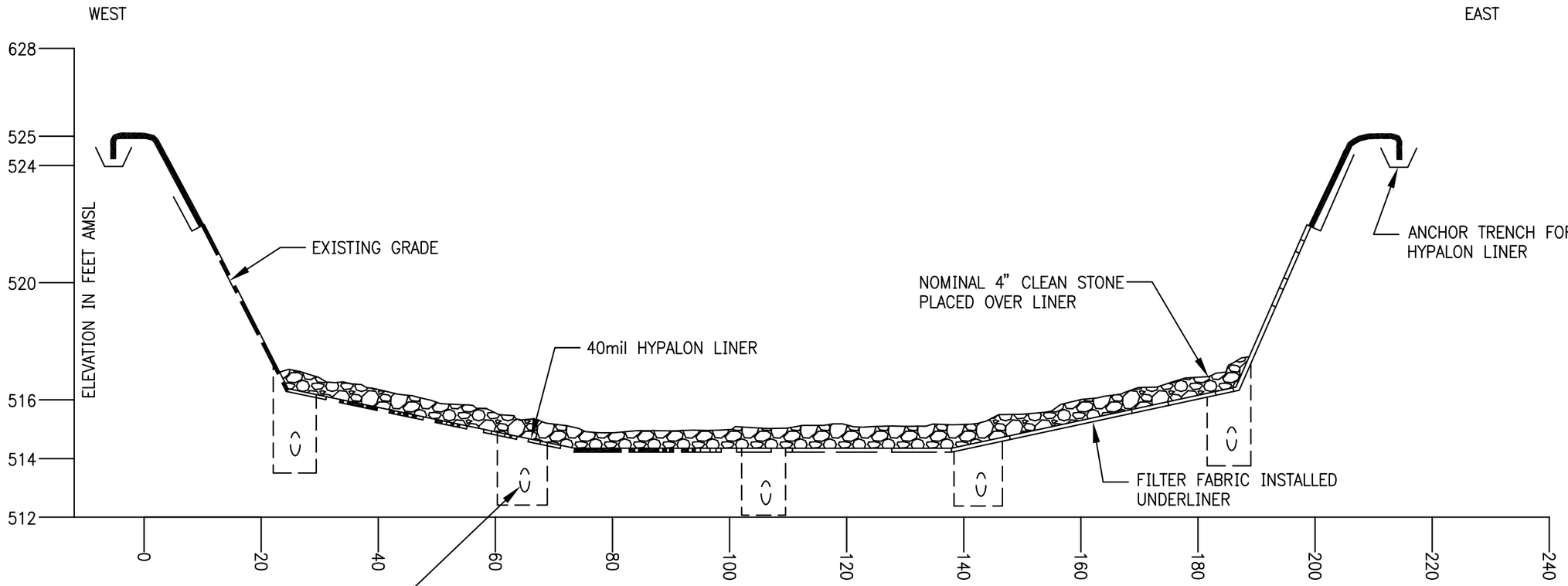
FIGURE 3

FMC CORPORATION–MIDDLEPORT, NEW YORK
WESTERN SURFACE IMPOUNDMENT

PLAN VIEW – WSI

PARSONS
40 LA RIVIERE DRIVE, SUITE 350, BUFFALO. NEW YORK 14202 PHONE: 716-541-0730

P:\FMC-Middleport and Dublin Road\Middleport Plant Site\RECRA PERMIT APPLICATION FILES\FIG_3 -WSI- PLAN_VIEW_WSI_041015.dwg



TYPICAL WEST–EAST CROSS SECTION
WESTERN SURFACE IMPOUNDMENT

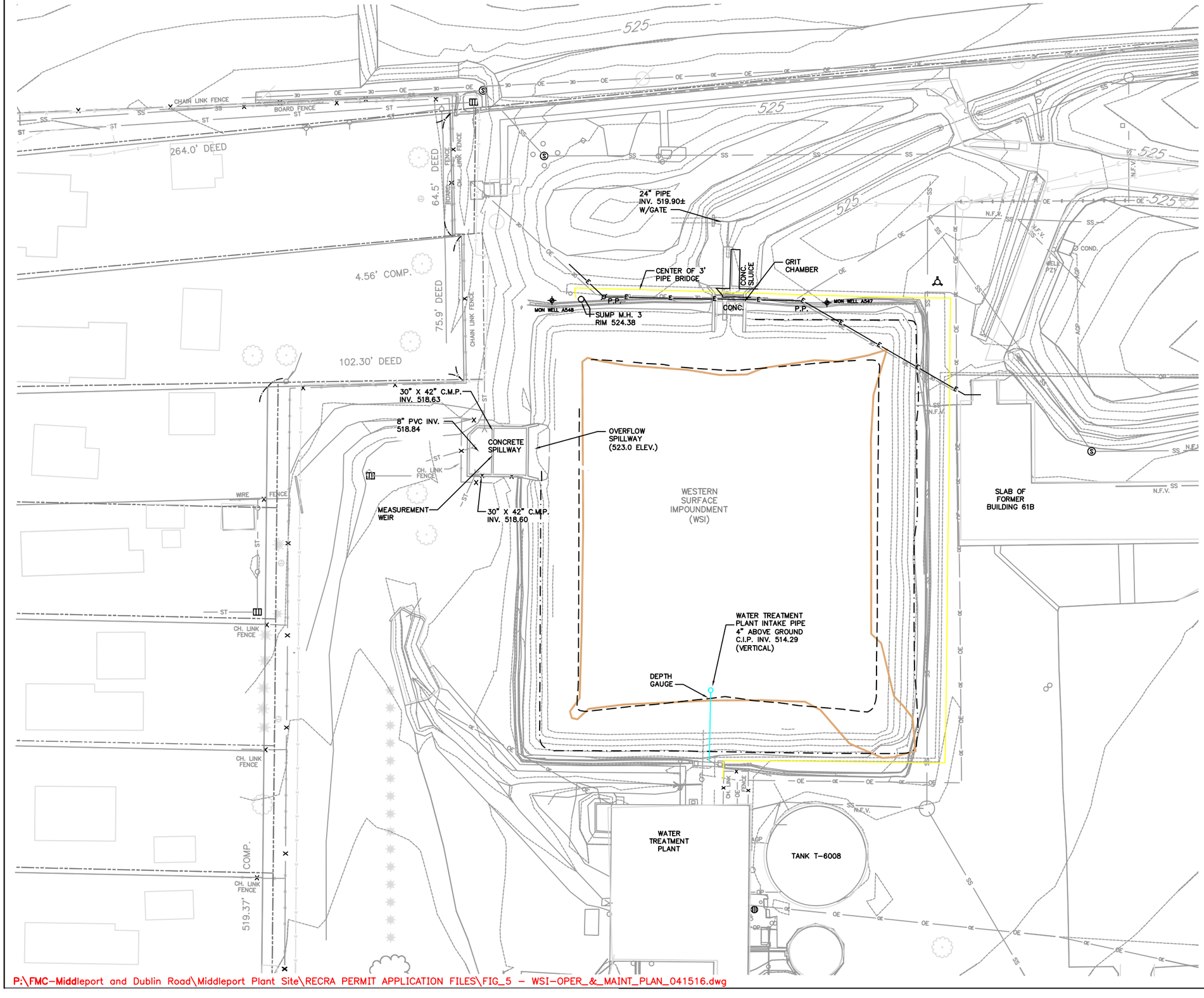
FIGURE 4

FMC CORPORATION–MIDDLEPORT, NEW YORK
WESTERN SURFACE IMPOUNDMENT

TYPICAL CROSS SECTION
WSI

PARSONS
40 LA RIVIERE DRIVE, SUITE 350, BUFFALO. NEW YORK 14202 PHONE: 716-541-0730

P:\FMC-Middleport and Dublin Road\Middleport Plant Site\RECRA PERMIT APPLICATION FILES\FIG_4 - WSI-CROSS-SECTION_041516.dwg



50 25 0 50

SCALE IN FEET

LEGEND:

- APPROXIMATE OFFSITE PROPERTY LINE
- APPROXIMATE FMC PROPERTY LINE
- APPROXIMATE LOCATION OF FENCE
- 519 EXISTING 1' CONTOUR ELEVATION
- 520 EXISTING 5' CONTOUR ELEVATION
- OVERHEAD ELECTRIC
- ST STORM SEWER PIPING
- EDGE OF BALLAST STONE

NOTES:

MAPING BASED ON MAY 11, 2015
"TOPOGRAPHIC MAP OF FMC LANDS"
McINTOSH AND McINTOSH, P.C.

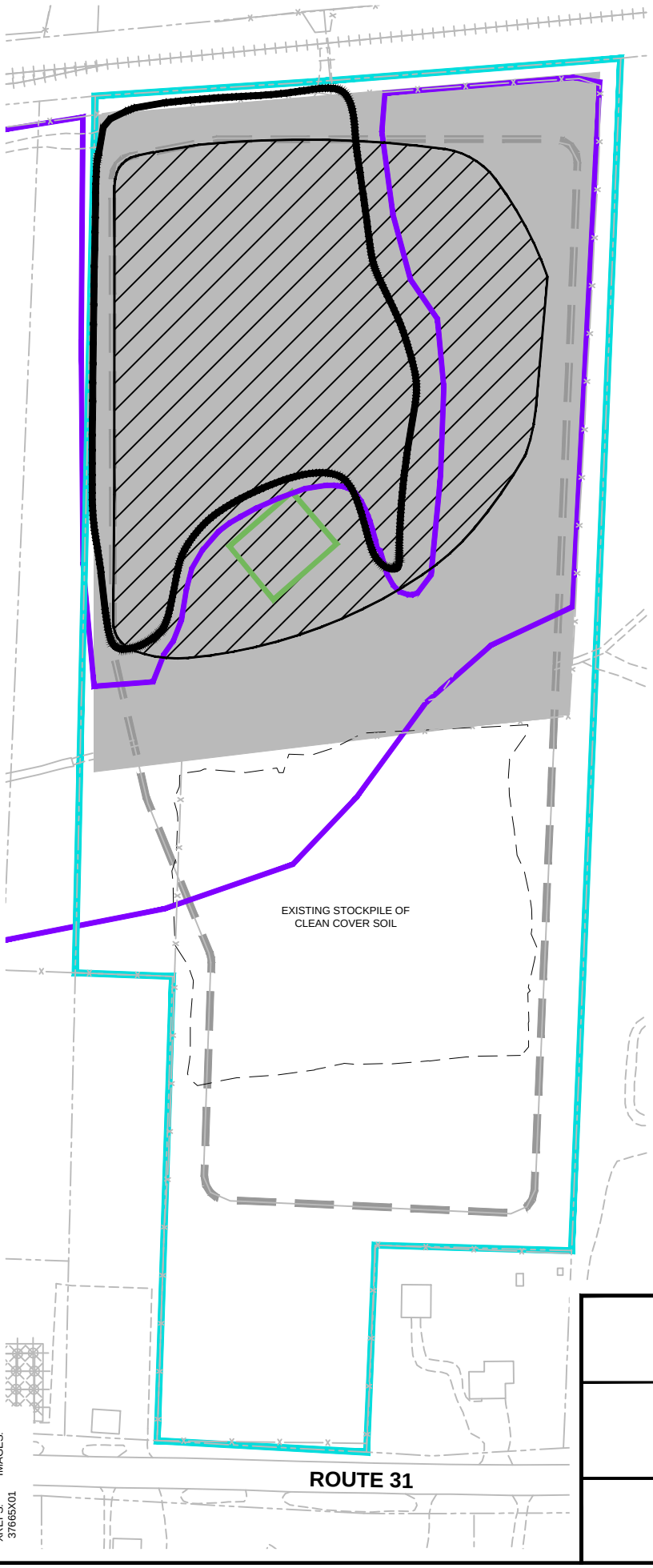
P:\FMC-Middleport and Dublin Road\Middleport Plant Site\RECRA PERMIT APPLICATION FILES\FIG_5 - WSI-OPER_&_MAINT_PLAN_041516.dwg

FIGURE 5

FMC CORPORATION-MIDDLEPORT, NEW YORK
WESTERN SURFACE IMPOUNDMENT

DETAIL-
WESTERN SURFACE IMPOUNDMENT
OPERATION AND MAINTENANCE PLAN

PARSONS
40 LA RIVIERE DRIVE, SUITE 350, BUFFALO, NEW YORK 14202 PHONE: 716-541-0730



LEGEND:

EXISTING FEATURES:

- EASTERN PARCEL
- APPROXIMATE LIMITS OF NORTH SITE COVER (INSTALLED 1987–1988)
- EXISTING ESI FILL AREA, (FILL EVENTS 1996, 1999, 2003, 2005, 2007, 2008, AND 2011)(SWMU #54)
- 1987–1988 NORTHERN DITCHES IRM SOIL CONTAINMENT CELL (SWMU #53)
- STOCKPILE OF CLEAN COVER SOIL (INSTALLED 1987–1988)

HISTORICAL FEATURES:

- FORMER EASTERN PROCESS WASTEWATER RETENTION BASIN, 1964–1977 (SWMU #3)
- EASTERN SURFACE IMPOUNDMENT, 1978–1988 (SWMU #50)

PROPOSED FEATURES:

- PROPOSED CORRECTIVE ACTION MANAGEMENT UNIT (CAMU)

NOTES:

1. SWMU GROUP C COMPRISES SWMUs #3, #53, AND #54.
2. BASEMAP INFORMATION BASED ON APRIL 15, 2002 AERIAL SURVEY PROVIDED BY ABRAMS AERIAL SURVEY CORPORATION AND INFORMATION COMPILED FROM FIELD SURVEYS PERFORMED BY MCINTOSH AND MCINTOSH, P.C. ON SEPTEMBER 18, 1999; MARCH 28, 20001; APRIL 29, 2004; AUGUST 13, 2004; APRIL 7, 2005; SEPTEMBER 9, 2005; OCTOBER 12, 2005; JUNE 16, 2007; MAY 10, 2007; DECEMBER 13, 2007; OCTOBER 6, 2008; AND OCTOBER 8, 2008. THE HORIZONTAL DATUM IS NORTH AMERICAN DATUM 1983 (NAD83).

0 200' 400'

GRAPHIC SCALE

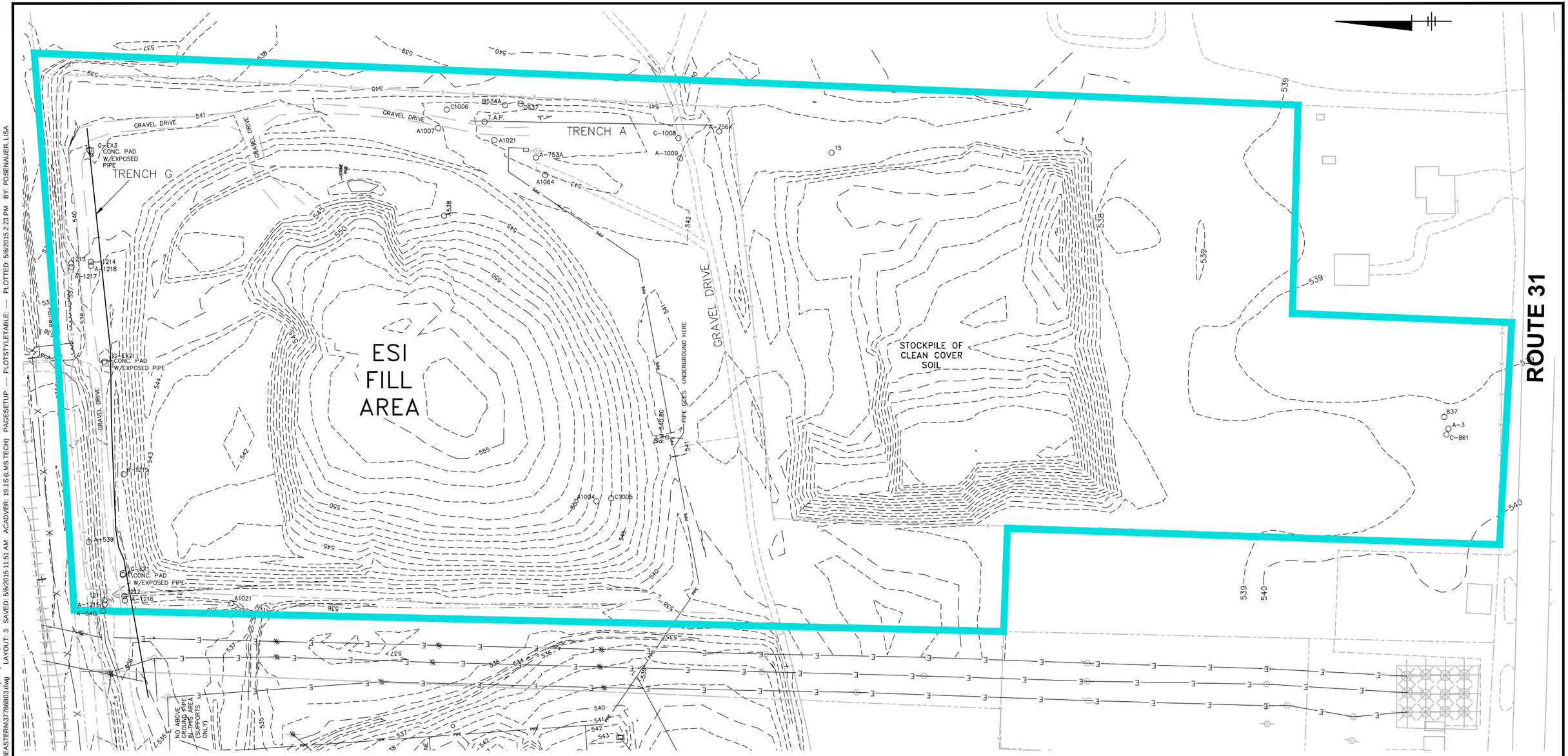
FMC CORPORATION
MIDDLEPORT, NEW YORK
CLOSURE REPORT -
EASTERN SURFACE IMPOUNDMENT

SITE FEATURES

ARCADIS

FIGURE
2

CITY: SYRACUSE, NY DIV/GROUP: IMDV/CAD DB/LD: L.POSENAUER PM: D.WRIGHT LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACTIB\003778612015\000011\DWG\CLOSURE_PLAN\EASTERN\37786B02.dwg LAYOUT: 2 SAVED: 5/6/2015 11:15 AM ACADVER: 19.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 5/6/2015 2:24 PM BY: POSENAUER, LISA
XREFS: IMAGES:
37665X01



LEGEND:

- EASTERN PARCEL
- 542 CURRENT TOPOGRAPHIC CONTOUR (SEE NOTE 1)
- RAILROAD TRACKS
- E OVERHEAD ELECTRICAL LINES
- MONITORING WELL
- PIPE ABOVEGROUND PIPING
- BLAST–FRACTURED BEDROCK GROUNDWATER RECOVERY TRENCH

0 120' 240'

GRAPHIC SCALE

NOTE:

1. SURVEY INFORMATION SHOWN ON THIS DRAWING WAS COMPILED FROM: SEPTEMBER 18, 1999, MARCH 28, 2001, APRIL 29, 2004, AUGUST 13, 2004, APRIL 7, 2005, SEPTEMBER 9, 2005, JULY 31, 2007, JANUARY 3, 2008, OCTOBER 6, 2008, AND OCTOBER 10, 2011 FIELD SURVEYS PERFORMED BY McINTOSH AND McINTOSH, P.C.

FMC CORPORATION
MIDDLEPORT, NEW YORK
CLOSURE PLAN -
EASTERN SURFACE IMPOUNDMENT

SITE PLAN

ARCADIS

FIGURE
3

CITY: SYRACUSE, NY DIV/GROUP: IMDV/CAD DB/LD: L.POSENAUER PM: D.WRIGHT LYR:(OPT)ON=*OFF=*REF*
G:\ENV\CAD\SYRACUSE\ACTIVITIES\00377860\20150000\01DWG\CLOSURE_PLAN\EASTERN\37786B03.dwg LAYOUT: 3 SAVED: 5/6/2015 11:51 AM ACADVER: 19.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: --- PLOTTED: 5/6/2015 2:23 PM BY: POSENAUER, LISA
XREFS: IMAGES:
37786X00
37665X01
37786X72

ATTACHMENT C

Closure, Post-Closure and Financial Assurance

CLOSURE PLAN – WESTERN SURFACE IMPOUNDMENT

ARCADIS Design & Consultancy for natural and built assets

FMC

FMC Corporation

Middleport, New York

EPA ID No. NYD002126845

CLOSURE PLAN – WESTERN SURFACE IMPOUNDMENT

DRAFT – April 2016

CLOSURE PLAN – WESTERN SURFACE IMPOUNDMENT

Prepared for:

FMC Corporation

Middleport, New York

Prepared by:

Arcadis of New York, Inc.

6723 Towpath Road

P O Box 66

Syracuse

New York 13214-0066

Tel 315 446 9120

Fax 315 449 0017

Our Ref.:

B0037786.1373

Date:

April 2016

CONTENTS

FIGURES

APPENDICES

ACRONYMS AND ABBREVIATIONS

Agencies	NYSDEC and USEPA
AOC	Administrative Order on Consent
CMS	Corrective Measures Study
CRA	Conestoga-Rovers & Associates
Facility	Agricultural Solutions facility located in Middleport, New York
FMC	FMC Corporation
ICM	Interim Corrective Measure
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
SPDES	State Pollutant Discharge Elimination System
USEPA	United States Environmental Protection Agency
WSI	Western Surface Impoundment
WTP	Water Treatment Plant

1 INTRODUCTION

1.1 Overview

This is the Closure Plan for the Western Surface Impoundment (WSI Closure Plan) located at FMC Corporation's (FMC's) Agricultural Solutions facility in the Village of Middleport and Town of Royalton, New York ("Facility" or "Site") (Figure 1). By letter dated March 18, 2015, the New York State Department of Environmental Conservation (NYSDEC) requested that FMC amend its 1986 hazardous waste management facility permit application (under Title 6 of the New York Codes, Rules and Regulations [NYCRR], Part 373) for the Facility. This WSI Closure Plan is a required component of, and is included with, FMC's amended permit application.

This closure plan identifies the elements necessary to close the WSI in accordance with Section 373-2.7 and the Administrative Order on Consent (AOC) entered into by FMC, NYSDEC, and the United States Environmental Protection Agency (USEPA) (NYSDEC and USEPA referred to herein jointly as "the Agencies") in July 1991 (Docket No. II RCRA-90-3008(h)-0209). This plan also includes a cost estimate for final WSI closure, in accordance with Section 373-2.8(c).

1.2 WSI Background

The WSI was constructed in 1977 as a storage and equalization basin for FMC's on-site Water Treatment Plant (WTP). The impoundment was excavated below grade into the bedrock and lined with a Hypalon® liner. An underdrain system was installed beneath the liner to minimize the potential for hydrostatic uplift of the liner. The underdrain system was built on and extends approximately three feet into the bedrock underlying the impoundment. In 1985, the NYSDEC notified FMC that the WSI was considered a RCRA-regulated hazardous waste storage/treatment unit under federal and State regulations. In 1986, FMC submitted a hazardous waste management facility permit application pursuant to applicable regulations. The WSI managed stormwater as a hazardous waste under the interim status requirements until implementation of the first phase of closure in 1988.

In March 1988, FMC submitted the *Plan of Closure: Surface Impoundments, FMC Corporation, Middleport, New York, Plant Site* (Conestoga-Rovers & Associates [CRA], 1988) which identified the elements necessary to close the three surface impoundments existing at the Facility at that time, including the WSI. By letters dated May 27, 1988 and July 14, 1988, NYSDEC conditionally approved the 1988 closure plan, with comments subsequently addressed in the August 1988 version of the plan. After considerable communication between FMC and the Agencies, NYSDEC approved FMC's request to effect closure of the WSI in two phases. The first phase was to remove and dispose of soil, sediment, and the existing liner in the WSI and install a new liner in the impoundment for use of the WSI as a non-hazardous stormwater collection basin. Phase 1 was completed in 1988 and documented in the *Final Construction Report, Interim Closure, Western Surface Impoundment* (CRA, 1989). The second phase of closure activities was deferred.

After the first phase of closure, a new liner system was installed in the WSI so that it could be used to receive non-hazardous surface water runoff from the northern portion of the Facility, including the North

Site Cover (installed 1987-1988). The runoff collected in the WSI was sampled and analyzed to confirm that it no longer exhibited hazardous waste characteristics for arsenic, which in turn would demonstrate that pre-closure activities in other areas of the Facility were proving effective in reducing arsenic concentrations in surface water runoff.

In March 1990, FMC requested a closure plan modification that deferred the final phase of closure (backfill and cover installation) in order to allow continued use of the WSI as a non-hazardous surface water impoundment. The proposed modifications were presented in the *Modifications to Plan of Closure, Western Surface Impoundment, FMC Corporation, Middleport, New York* (CRA, 1990). This WSI closure modification was incorporated into the AOC (Section VI, Paragraph 6.j) as part of ICM provisions. As specified in the AOC, use of the WSI as a non-hazardous surface water impoundment is contingent upon continued operation of the WSI underdrain system, implementation of a formal WSI monitoring program, and implementation of a contingency plan in the event that the WSI is found to contain hazardous wastes.

FMC's *Western Surface Impoundment (WSI) Operations Plan* (WSI Operations Plan) contains the WSI Monitoring Work Plan and the WSI Contingency Plan as required by AOC Section VI, Paragraphs 6.j(2) and 6.j(3), respectively. The WSI Operations Plan includes a description of the program proposed to monitor inflow into and the contents of the WSI, associated protocols, and a proposed schedule for implementing the program. The WSI Operations Plan also includes the AOC-specified Contingency Plan. The WSI Operations Plan is a required component of FMC's amended permit application (Attachment C), and the 2016 draft version of the WSI Operations Plan is an update from the *Western Surface Impoundment (WSI) Operations Plan, Revision No. 1* (CRA, 1994) to incorporate the following:

- a 1993 revision to the WSI surface water sampling and analyses program;
- a 1995 revision to the WSI sediment sampling and analyses protocol;
- revisions to the WSI operations, maintenance and monitoring functions as recommended in the *North Site Cover Evaluation Final Report* (ARCADIS, 2012);
- the design and construction of a WSI berm extension (2013-2015); and
- proposed changes to the WSI monitoring program described therein.

Section VI, Paragraph 4.b of the AOC also specified that the WSI would continue to be operated as an ICM pending the results of the RCRA Facility Investigation (RFI) for the Facility and, if one is undertaken, the Corrective Measures Study (CMS) required under the AOC. The AOC further specified that FMC may submit a closure plan modification for the WSI based on the results of those studies.

By letter dated July 2, 2009, the NYSDEC requested that FMC: a) evaluate the overflow potential of the WSI; b) identify and evaluate steps to reduce the frequency of overflows and to mitigate impacts on the receiving water; and c) recommend corrective actions. Accordingly, FMC completed the work as described in the *Western Surface Impoundment Hydrologic Evaluation Report* (ARCADIS, 2010) and *North Site Cover Evaluation Final Report* (ARCADIS, 2012). FMC began implementation of the actions recommended in the North Site Cover Evaluation Final Report during the second half of 2012. One of these actions included the extension of the WSI berm to increase the WSI storage capacity, which was completed in 2015. The progress of these actions is summarized in FMC's quarterly progress reports submitted pursuant to the terms and conditions of the AOC.

1.3 Regulatory Framework

The AOC authorizes the use of the WSI as an ICM for the control, containment, and collection for treatment of contaminated and/or potentially contaminated runoff. Continued use of the WSI as a non-hazardous surface water impoundment assures that Facility runoff meets FMC's State Pollutant Discharge Elimination System- (SPDES-) permitted discharge criteria and enables control and containment of a potential release at the Facility.

The WSI and its underdrain and sump collection system are also part of groundwater ICMs being implemented at the Facility pursuant to the terms and conditions of the AOC. These groundwater ICMs consist of the following:

- Groundwater extraction system and bedrock groundwater migration control trenches;
- WSI and underdrain system;
- Overburden groundwater collection underdrains and sumps; and
- North Site Cover.

Water collected by these ICMs is treated at the Facility's WTP prior to discharge under the terms and conditions of the Facility's SPDES permit. The data from this program are summarized in FMC's quarterly progress reports submitted pursuant to the terms and conditions of the AOC.

1.4 Plan Organization

In addition to this introduction, the following sections are provided:

- Section 2 – Facility and WSI Description
- Section 3 – WSI Closure Performance Standards
- Section 4 – WSI Closure Activities
- Section 5 – WSI Closure Cost Estimate & Financial Assurance
- Section 6 – WSI Post-Closure Care and Facility Contact Information
- Section 7 – References

2 FACILITY AND WSI DESCRIPTION

2.1 Overview

FMC owns and operates a pesticide formulation facility on approximately 102 acres of land located in the southeast corner of the Village of Middleport and in the Town of Royalton, Niagara County, New York ("Facility") (Figure 1). The entire perimeter of the Facility is fenced with two monitored, gated entrances. The "northern half" of the Facility comprises approximately 63 acres where pesticide manufacturing occurred and formulation is occurring now. This area currently contains several large buildings used for formulation and warehousing.

The majority of the northern portion of the Facility is covered with a clay/asphalt cap and buildings. Stormwater runoff from this portion of the Facility is directed primarily to asphalt-lined or grass-covered swales that drain to the WSI. Water collected in the WSI is pumped to and treated at the Facility's WTP and then discharged, through the Facility's SPDES monitoring station, to a downstream outfall at Tributary One in accordance with the SPDES permit. The approximate limits of the WSI watershed and the locations of the WSI, the WTP, and the SPDES monitoring station are shown on Figure 2.

2.2 WSI Description

The original WSI was a lined surface water impoundment with an available storage capacity of approximately 1.4 million gallons[1]. The existing WSI watershed (Figure 2) is comprised of the northern portion of the Facility, the portion of the North Railroad Property Phase 1 ICM Area south of the mainline railroad tracks, and approximately 5% of the Phase 2 ICM Area that drains to the WSI (ARCADIS, 2012). Stormwater runoff from the WSI watershed area flows through a series of drainage swales and culverts to the WSI.

When the WSI exceeds its storage capacity, surface water overflows from the WSI into a concrete structure on the west side of the WSI. This structure drains to a culvert pipe that leads to the Facility's SPDES monitoring station and then to Outfall 001 at Tributary One of Jeddo Creek. Modifications to the WSI concrete overflow structure were completed in 2012 and extension of the WSI berm was completed in 2015, as recommended in the *North Site Cover Evaluation Final Report* (ARCADIS, 2012). After completing the WSI berm extension project, the storage capacity of the WSI increased to approximately 2 million gallons (an increase of 550,000 gallons, which is approximately 40% greater than the previous capacity of approximately 1.4 million gallons).

[1] As presented in the WSI Operations Plan, the total volume of the WSI from the liner to the overflow elevation is approximately 1.5 million gallons, including the required ballast stone and accumulated sediment. The 1.4-million-gallon storage capacity was calculated as the available storage capacity between the elevation of the intake pipe invert used to pump water from the WSI to the WTP and the WSI overflow weir, based on a topographic survey of the WSI liner dimensions and the ballast stone/accumulated sediment surface completed by McIntosh & McIntosh in November 2009.

The WSI was excavated into the underlying shallow bedrock 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. Details of the WSI construction are shown on Figure 3.

In addition to causing groundwater flow into the underdrain in the vicinity of the impoundment, the underdrain piping could also capture and remove any potential releases through the liner of the WSI. The WSI and its underdrain and sump collection system are also part of groundwater ICMs being implemented at the Facility pursuant to the terms and conditions of the AOC. Water collected by these ICMs is treated at the Facility's WTP prior to discharge under the terms and conditions of the Facility's SPDES permit. The data from this program are summarized in FMC's quarterly progress reports submitted pursuant to the terms and conditions of the AOC.

The WSI is lined with a geosynthetic (Hypalon®) liner, which is covered with ballast stone in the base and secured at the top either in earth-covered anchor trenches or with batten connections (metal strips) used to attach the liner to concrete structures (WSI inlet and overflow weir). The WSI liner was last replaced in 1988 (after completion of the first phase of closure) with a new, 40-millimeter-thick Hypalon® liner to allow the WSI to be used as a non-hazardous stormwater retention basin (CRA, 1989). A 4-inch layer of new ballast stone was installed to prevent liner flotation. A plan view and typical section through the impoundment are depicted on Figures 4 and 5, respectively. As part of the WSI berm extension project, the liner was extended with a 40-millimeter-thick polyurea liner over the new berm extension.

Since approval of the WSI Operations Plan (CRA, 1994) in 1993, the WSI has been routinely inspected and any noted repairs have been made. A detailed visual inspection was conducted in June 2011 to assess the condition and integrity of the liner. The liner was inspected for penetrations, flotation, mounds or depressions, improperly anchored sections, condition of the batten connections, integrity of previous repairs, material degradation, and tears/cracks. The inspection was performed on those portions of the liner not covered by ballast stone and accumulated sediment/surface water. A leak test of the entire liner was subsequently conducted. In June 2012, minor repairs were made to the liner. A description of the testing which took place, identification of the repairs, and description of the extent of the repairs made to the liner is included in the *North Site Cover Evaluation Final Report* (ARCADIS, 2012). Similar liner leak test and repair activities were also conducted in 2015, and will be repeated every three years.

The periodic WSI surface water and sediment data obtained since completion of the Phase I WSI closure activities have consistently demonstrated that the surface water runoff managed by the WSI is non-hazardous. Data obtained during operation/monitoring of the WSI are reported in the quarterly progress reports submitted to the NYSDEC pursuant to the AOC.

2.3 WSI Operations

In accordance with Section VI, Paragraph 6.j of the AOC, the continued use of the WSI is conditionally authorized as an ICM for the control, containment, and collection for treatment of contaminated and/or potentially contaminated runoff. Specifically, the continued use of the WSI is contingent upon the following:

- FMC shall continue to operate the WSI underdrain system to maintain groundwater flow in the vicinity of the WSI toward the WSI.

- FMC shall develop and implement a WSI Monitoring Work Plan to monitor the inflow into and contents of the WSI.
- FMC shall develop a contingency plan to be implemented in the event monitoring performed pursuant to the WSI Monitoring Work Plan indicates the WSI contains hazardous waste.
- FMC shall implement the approved contingency plan if at any time the WSI is found to contain hazardous waste.

The WSI Operations Plan provides details on meeting these requirements.

3 WSI CLOSURE PERFORMANCE STANDARDS

The WSI closure activities will be completed consistent with the closure performance standards specified in Sections 373.2-7(b) and 373-2.11(f)(1), as follows:

1. Minimize the need for further maintenance.
2. Control, minimize or eliminate, to the extent necessary to protect human health and the environment, post-closure escape of hazardous wastes, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere.
3. Remove or decontaminate all waste residues, contaminated system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste.
4. Eliminate free liquids by removing liquid wastes or solidifying the remaining wastes and waste residues.
5. Comply with all applicable post-closure requirements if some waste residues or contaminated materials are left in-place at final closure

The Phase I WSI closure activities and continued use of the WSI, as an ICM for control, containment and collection for treatment of contaminated and/or potentially contaminated surface water runoff, complies with these closure performance standards. Potential post-closure migration of hazardous waste constituents from the WSI, if any, has been substantially minimized by the Phase I closure activities completed in 1988 and continued operation of the WSI underdrain. The Phase I closure activities included removal and on-site treatment of standing water remaining in the WSI at the time, followed by removal and off-site disposal of soil, sediment, and the liner in the WSI (CRA, 1989). A total of 609 tons of material was disposed offsite at Chemical Waste Management's Model City, New York landfill. The material was classified as non-hazardous (based on EP toxicity of arsenic) but, for precautionary reasons, was managed by FMC as if it was a hazardous waste and placed in a secure landfill cell. After the first phase of closure, a new liner system was installed in the WSI so that it could be used to receive surface water runoff from the northern portion of the Facility.

The AOC (Section VI, Paragraph 4.b) recognizes that final closure steps may be determined based on the results of the RFI for the Facility and, if one is undertaken, the CMS required under the AOC. In addition to the above closure performance standards, if a CMS is to be conducted at the Facility, the following Corrective Action Objectives (CAOs) will be applicable to final closure of the WSI:

1. To protect human health and the environment with respect to contaminants associated with the Facility consistent with applicable or relevant and appropriate legal authority, using site-specific data and information, supported by multiple lines of evidence, including site-specific risk assessment, and based on the current and reasonably anticipated future industrial land use of the Eastern Parcel, such that:
    - The post-closure lifetime excess cancer risks fall within the range of 10^{-4} to 10^{-6};
    - The post-closure non-cancer risks do not exceed a Hazard Index of 1; and

- The “point of departure”, or starting point, for corrective action risk-management decisions for the Facility is to prevent direct contact with contaminated soil, sediment, surface water or groundwater.

2. To use institutional controls, engineering controls, remedial technologies and/or a combination of them consistent with the current and reasonably anticipated future industrial land use of the Facility to the extent it is feasible and cost-effective to do so.
3. To prevent, reduce or manage the off-site migration of contaminated soil, sediment, surface water and groundwater associated with the Facility.
4. To prevent, reduce or manage unacceptable ecological impacts associated with contaminated soil, sediment, surface water or groundwater associated with the Facility, while balancing the adverse ecological impacts that may result from the closure activities themselves.
5. To use best management practices reflecting USEPA's Green Remediation concepts to reduce the demands placed on the environment ("footprint"), to the extent practicable and cost-effective. Such concepts may include clean diesel technology, waste minimization, resource conservation, reduction of greenhouse gas and other air emissions (e.g., by using alternative energy sources, fuel-efficient technology, or minimizing truck trips), ecological and soil preservation, leveraging infrastructure needs, sharing data, minimizing demolition and earth-moving activities, reusing structures and demolition material, and combining other activities that support timely and cost-effective cleanup and reuse.

4 WSI CLOSURE ACTIVITIES

Since completion of the Phase I WSI closure activities in 1988, the WSI has been operated as a non-hazardous stormwater retention basin, and demonstrated to not contain hazardous waste. The remaining closure activities for the WSI will be completed in a manner that is consistent with the closure performance standards identified above. The AOC (Section VI, Paragraph 4.b) recognizes that final closure steps may be determined based on the results of the RFI for the Facility and, if one is undertaken, the CMS required under the AOC. The AOC further specified that FMC may submit a closure plan modification for the WSI based on the results of those studies and that the WSI would continue to be operated as an ICM pending the results.

Pending the results of the Facility RFI/CMS and, if warranted, subsequent modification of the WSI closure plan, FMC has identified the following two options for final closure of the WSI:

- Option 1 – Continue current operation of the WSI as a non-hazardous stormwater retention basin and groundwater ICM/remedial system
- Option 2 – Complete final closure by removal of the WSI sediment/stone and liner, backfilling, and covering the area. The WSI underdrain will remain as part of the post-closure groundwater remedial systems at the Facility.

Option 1 may be modified based on the final corrective measure identified for the Facility under the terms and conditions of the AOC. The steps for Option 2 are identified in the subsections below.

4.1 Notification of Closure and Time Allowed for Closure

Currently, there are no plans to complete closure of the WSI in the near future. However, when the decision to close the WSI is made, the following actions will be taken:

- FMC will notify the NYSDEC at least 60 days prior to the date of initiating closure activities.
- FMC will submit final design drawings and specifications for closure of the WSI. The design drawings will consist of the following:

  i) Final grading plan, including final design contours, drainage systems and closure limits;

  ii) Cross-sections through and typical details for the closure cover; and

  iii) Existing conditions including existing contours, surface features, and monitoring and extraction wells.

Additionally, specifications will be prepared and will include material and installation requirements, health and safety requirements, and testing requirements and frequencies for quality assurance/quality control.

Closure activities will be completed within 180 days following NYSDEC approval of the final design drawings and specifications for closure of the WSI. At the time of closure, applicable procedures will be followed if an extension is necessary.

4.2 WSI Media Removal and Disposal

Standing water from the WSI will be removed and treated at the Facility's WTP prior to discharge under the terms and conditions of the Facility SPDES permit. Once the WSI surface water level is sufficiently low to permit sampling of the sediments, if necessary, FMC will collect sediment samples from the WSI for waste characterization purposes, as described in the WSI Operations Plan. Additional analytical testing required by the receiving facility to complete the waste profile for disposal will also be performed.

Following removal of the standing water, ballast stone and sediment will be removed, dewatered and/or stabilized if necessary prior to off-site transport and disposal at a permitted facility. The WSI liner will be removed and disposed off-site at a permitted facility.

The prepared subgrade and underdrain system beneath the WSI liner will be left in place following removal of the liner and will be inspected and repaired if needed. Irregularities in the subgrade (if any) will be investigated. Dust control, stormwater management, and erosion and sediment control measures will be established/implemented as necessary during WSI closure construction activities.

4.3 Backfilling and Final Cover Installation

Filter fabric will be placed on the WSI subgrade prior to placement of backfill in approximate 12-inch lifts, compacted and graded to provide positive drainage (e.g., drain to west or north to the existing bypasses that connect to culverts and the Facility outfall). A final cover will be placed over the backfilled WSI to an elevation of at least the current overflow elevation. Consistent with the CSI cover, the final WSI cover will consist of 12 inches of clay and a 6-inch vegetated topsoil layer.

Soil from FMC's on-site stockpile of clean cover soil will be used (as appropriate) to meet design contours and grading requirements to be specified in the final design drawings and specifications for WSI closure. Any imported fill or soil (including clay and topsoil) will be subject to the applicable requirements set forth in Section 5.4 of NYSDEC's Division of Environmental Remediation (DER) *Technical Guidance for Site Investigation and Remediation* (DER-10) (NYSDEC, May 2010).

Erosion control measures, such as the installation of erosion control matting, will be implemented where required if excessive soil loss occurs prior to or subsequent to development of the vegetative cover.

4.4 Equipment Decontamination

Following completion of the final closure activities, equipment involved in the closure, which may have come in contact with potentially contaminated material, will be decontaminated on site in the equipment decontamination area. Equipment which may include loaders, backhoes, bulldozers, dump trucks, pumps and additional miscellaneous items, will be decontaminated by washing with a high pressure water wash

or steam cleaner. All decontaminated equipment will be inspected to ensure all visible sediment has been removed from exposed surfaces.

Decontamination wash water will be collected and treated at the Facility's WTP prior to discharge under the Facility SPDES permit and collected sediment will be disposed off-site.

4.5 Security

The entire perimeter of the Facility is fenced with two monitored, gated entrances. The Facility fence and security procedures will minimize the potential for trespassers at the Facility and closed WSI. Site security and access control activities, including maintenance of the existing Facility perimeter fence, gates, and signage are detailed in the *Security and Facility Inspection Plan* (Attachment S of FMC's amended permit application).

4.6 Required Notices for Closure

Within 60 days of completing final closure for the WSI, FMC will submit to the Niagara County clerk and to the Commissioner a survey plat indicating the location and dimensions of the closed WSI with respect to permanently surveyed benchmarks. This plat will be prepared and certified by a professional land surveyor registered in New York. The plat filed with the County clerk will contain a prominently displayed note stating FMC's obligation to restrict disturbance of the closed WSI.

In addition, FMC will submit to the Niagara county clerk and the NYSDEC Commissioner a record of the type, location, and quantity of hazardous wastes disposed within the surface impoundment.

FMC will record, on the deed to the facility property or on some other instrument which is normally examined during title search, in accordance with State law, a notation that will in perpetuity notify any potential purchaser of the property that:

(1) The land has been used to manage hazardous wastes;

(2) Its use is restricted under Section 373-2.7(g)(3); and

(3) The survey plat and record of the type, location, and quantity of hazardous wastes disposed of within each area of the Facility have been filed with the Niagara County clerk and the Commissioner.

4.7 Certification of Closure

Within 60 days of completing final closure for the WSI, FMC and an independent Professional Engineer registered in New York will submit, to the NYSDEC Commissioner, certification that the facility has been closed in accordance with the specifications in the approved closure plan. The certification will be signed by FMC and the Professional Engineer. Final closure certification will also be requested from NYSDEC at that time.

5 WSI CLOSURE COST ESTIMATE AND FINANCIAL ASSURANCE

The closure cost estimate for the WSI is provided in Appendix A and was developed in accordance with Section 373-2.8(c) for the WSI final closure steps identified herein. The WSI closure cost estimate is also kept on file at the Facility, as required by Section 373-2.8(c)(4).

FMC will comply with financial assurance requirements specified in Section 373-2.8(d).

6 WSI POST-CLOSURE CARE AND FACILITY CONTACT INFORMATION

Post-closure activities (e.g., maintenance and monitoring activities) are identified in the *Post-Closure Plan - Surface Impoundments* (Attachment Q of FMC's amended permit application). Post-closure care will be performed as part of a Site-wide Site Management Plan that will be prepared by FMC as a required component of the amended permit application (Attachment U). Contact information for the person/office to contact about the WSI or Facility is provided in Appendix B.

7 REFERENCES

ARADIS. 2010. Western Surface Impoundment Hydrologic Evaluation Report, FMC Corporation, Middleport, New York. December 2010.

ARCADIS. 2012. North Site Cover Evaluation Final Report. ARCADIS of New York Inc. June 6, 2012.

Conestoga-Rovers & Associates. 1988. Plan of Closure: Surface Impoundments, FMC Corporation, Middleport, New York, Plant Site. August 1988.

Conestoga-Rovers & Associates. 1989. Final Construction Report, Interim Closure, Western Surface Impoundment, FMC Middleport Plant Site, Middleport, New York, March 1989.

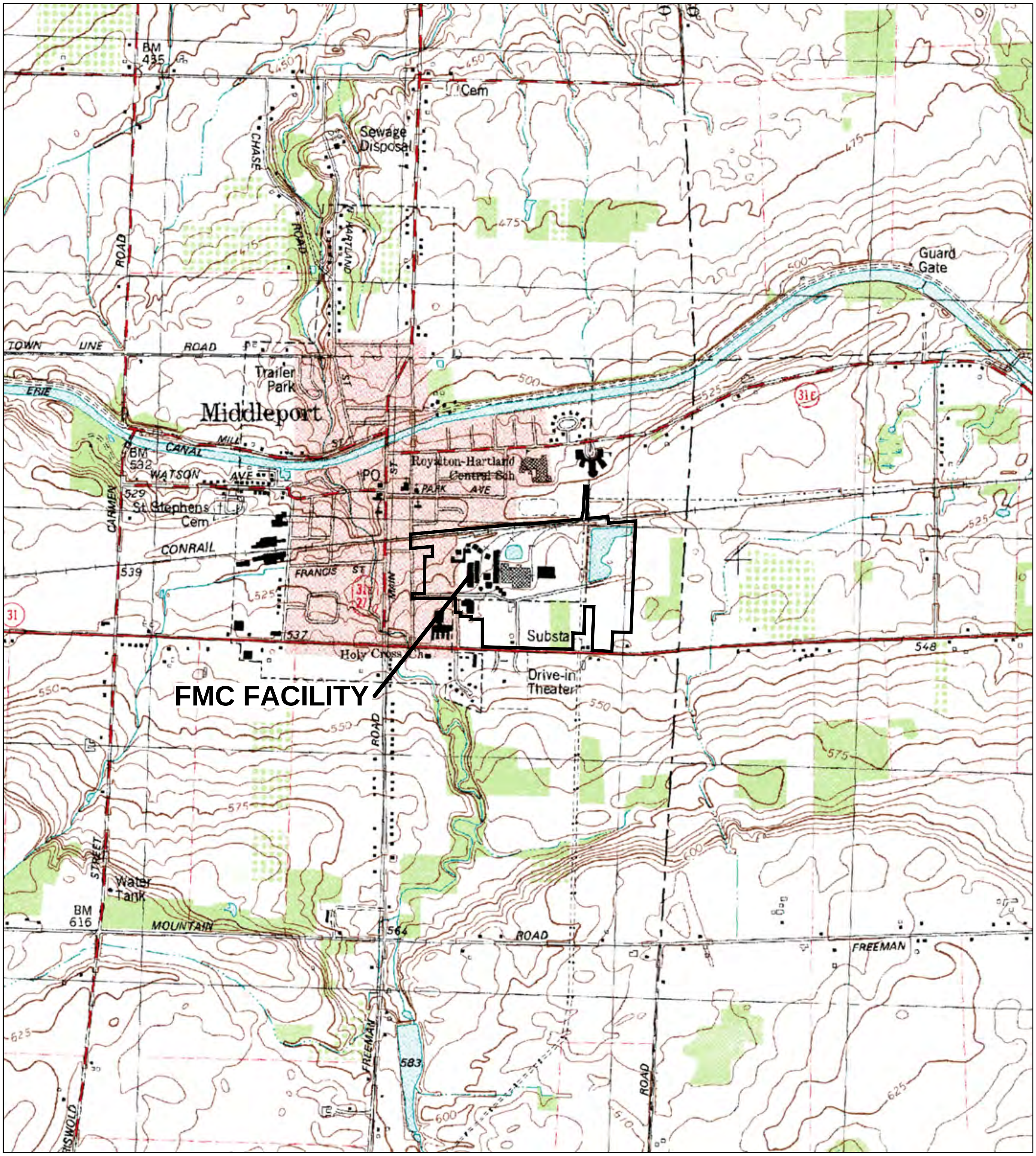
Conestoga-Rovers & Associates. 1990. Modifications to Plan of Closure, Western Surface Impoundment, FMC Corporation, Middleport, New York. March 1990.

Conestoga-Rovers & Associates. 1994. Western Surface Impoundment (WSI) Operations Plan Revision #1. January 1994.

Parsons. 2015. Western Surface Impoundment (WSI) Operations Plan, FMC Middleport Site, EPA ID No. NYD002126845. Draft 2016.

USEPA, et al.1991. Administrative Order on Consent [Docket No. II RCRA-90-3008(h)-0209] entered into by FMC, NYSDEC and USEPA, effective July 2, 1991.

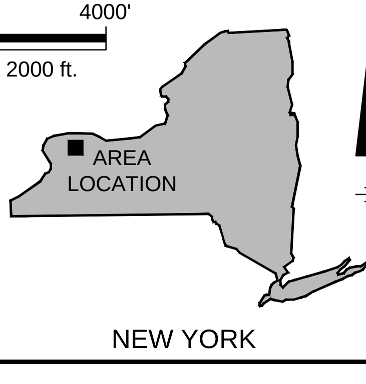
FIGURES



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., MEDINA, NY, 1980.

0 2000' 4000'

Approximate Scale: 1 in. = 2000 ft.



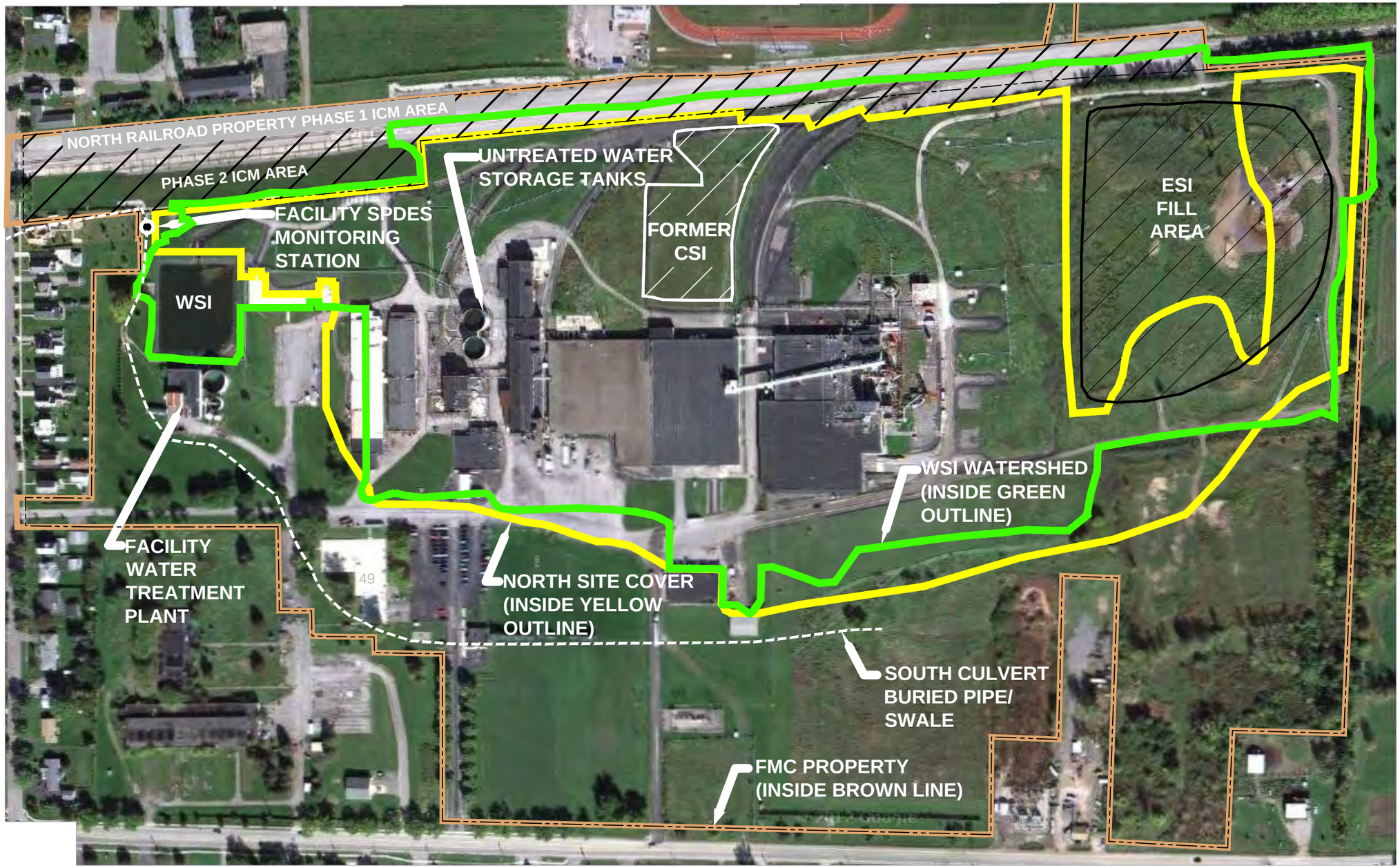
FMC CORPORATION
MIDDLEPORT, NEW YORK

CLOSURE PLAN - WESTERN SURFACE IMPOUNDMENT

SITE LOCATION MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE **1**



NOTES:

1. THIS FIGURE WAS PREPARED FROM A DRAWING BY PARSONS, ENTITLED "SITE PLAN", FIGURE 2, DATED APRIL 20, 2015, AT A SCALE OF 1" = 240'.
2. WATERSHED LIMITS UPDATED IN 2010 AS PART OF THE WSI HYDROLOGIC EVALUATION.
3. PHOTOGRAPH DATED SEPTEMBER 2011 (GOOGLE).

0 240' 480'
GRAPHIC SCALE

FMC CORPORATION
MIDDLEPORT, NEW YORK
CLOSURE PLAN -
WESTERN SURFACE IMPOUNDMENT

SITE PLAN

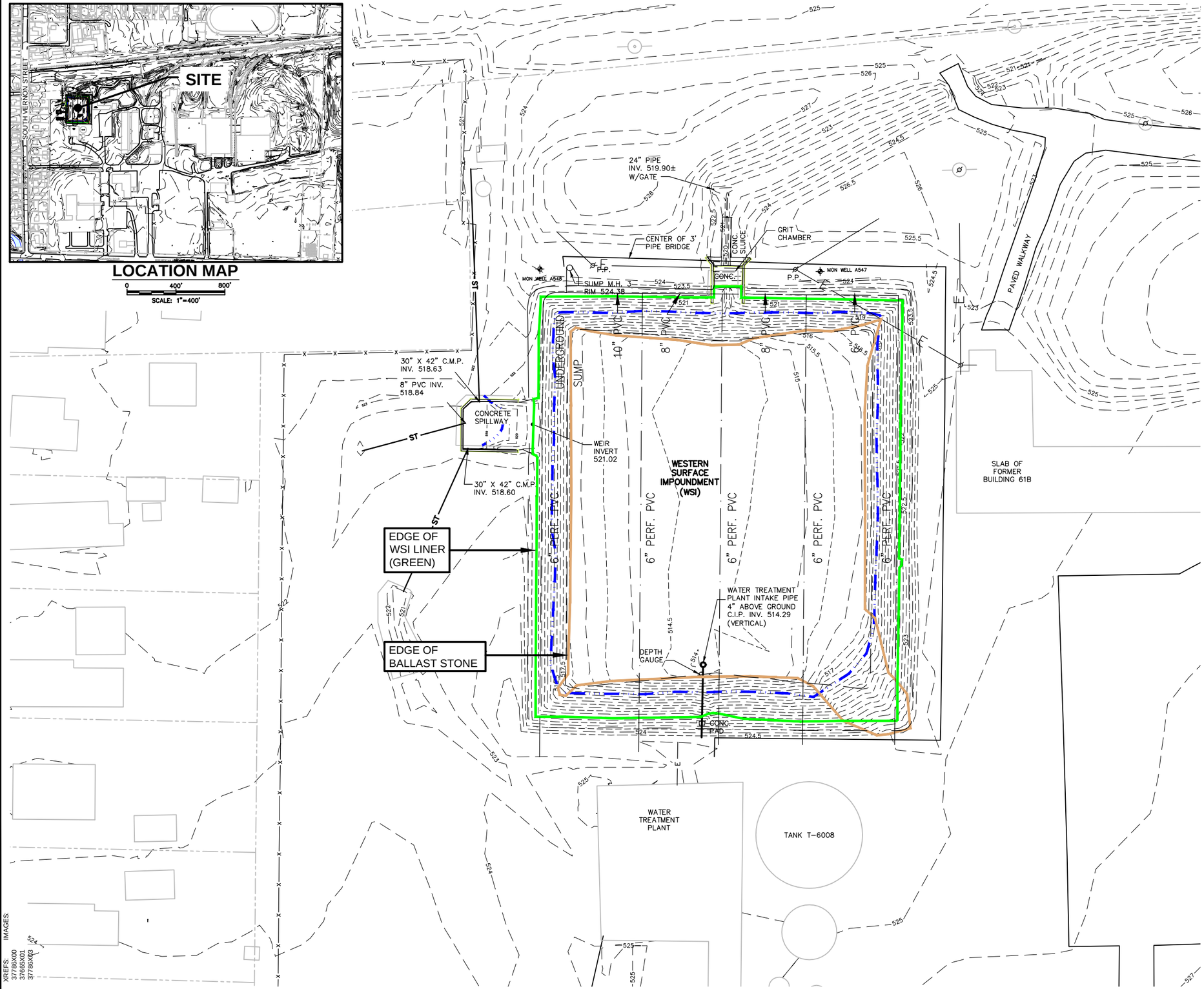
ARCADIS Design & Consultancy for natural and built assets

FIGURE
2

LOCATION MAP

0 400' 800'

SCALE: 1"=400'



LEGEND:

- APPROXIMATE OFFSITE PROPERTY LINE
- APPROXIMATE FMC PROPERTY LINE
- APPROXIMATE LOCATION OF FENCE
- EXISTING 1' CONTOUR ELEVATION
- EXISTING 5' CONTOUR ELEVATION
- OVERHEAD ELECTRIC
- ST — STORM SEWER PIPING
- EDGE OF BALLAST STONE & ACCUMULATED SEDIMENT
- EDGE OF WSI LINER

NOTES:

1. FIGURE INFORMATION BASED ON APRIL 16, 2002 AERIAL SURVEY PROVIDED BY ABRAMS AERIAL SURVEY CORPORATION AND FIELD SURVEY INFORMATION COMPILED FROM: NOVEMBER 13, 2003, APRIL 7, 2005, AND NOVEMBER 2, 2009 FIELD SURVEYS PERFORMED BY McINTOSH AND McINTOSH, P.C.
2. WSI BASE MAP INFORMATION WAS BASED ON A 1-FOOT CONTOUR INTERVAL PROVIDED BY McINTOSH AND McINTOSH.
3. CONTOUR INTERVAL WITHIN THE NOVEMBER 2, 2009 FIELD SURVEY LIMIT IS 0.5 FEET.
4. LEAK LOCATION SURVEY PERFORMED BY LLSI ON SEPTEMBER 13&14, 2011. McINTOSH & McINTOSH PERFORMED THE FIELD SURVEY NOVEMBER 9, 2011 BASED ON REFERENCE MARKINGS BY LLSI.
5. ALL HOLES PATCHED WITH HYPALON LINER FROM MAY 29 TO JUNE 11, 2012. LOCATION 2 WAS ANOMALY DUE TO METAL BRACKET FOR DEPTH GAUGE – NO REPAIR.
6. THIS FIGURE WAS PREPARED FROM A DRAWING BY PARSONS, ENTITLED "DETAIL – WESTERN SURFACE IMPOUNDMENT OPERATION AND MAINTENANCE PLAN", FIGURE 5, DATED APRIL 14, 2015, AT A SCALE OF 1"=50'.

0 50' 100'

GRAPHIC SCALE

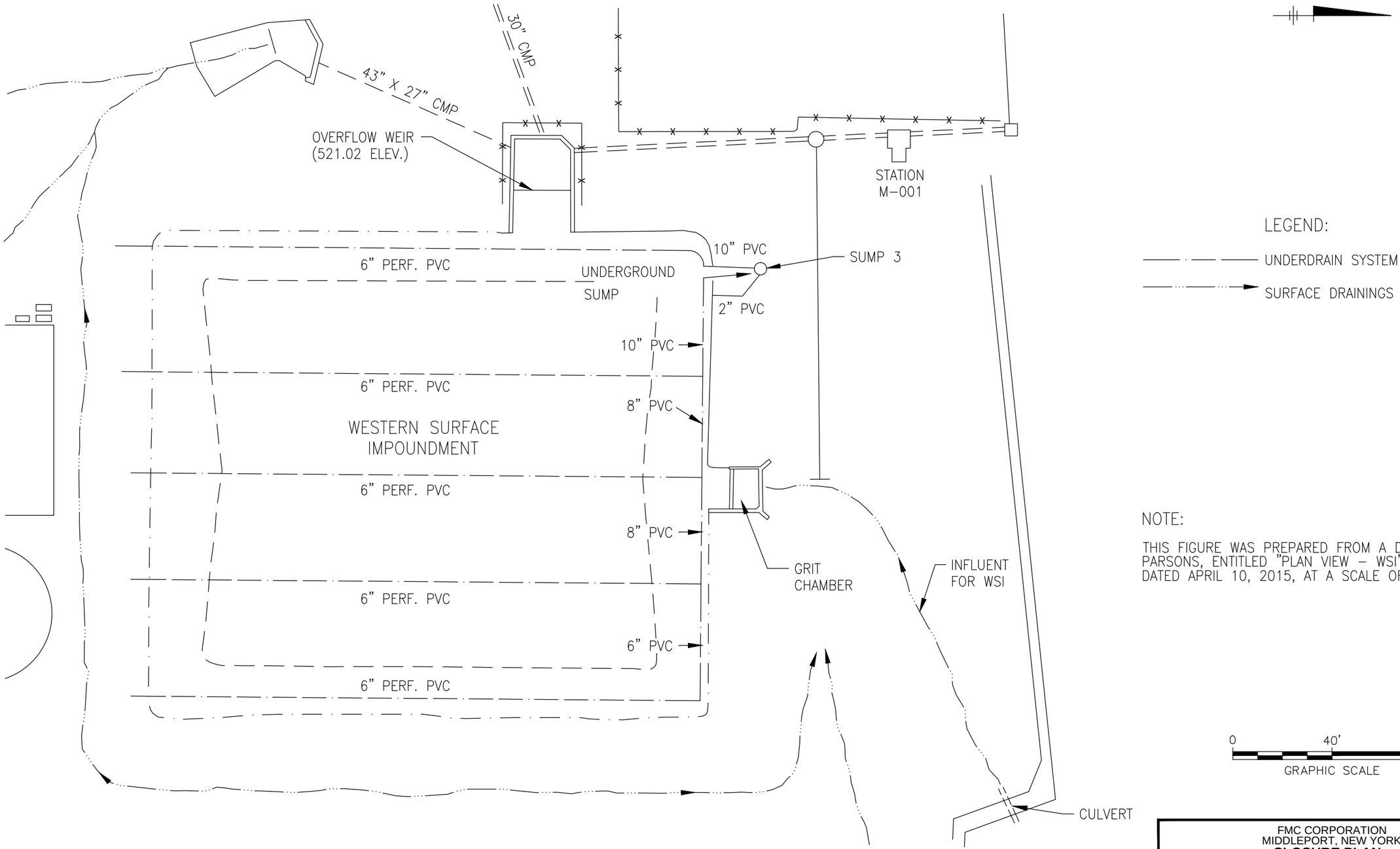
FMC CORPORATION
MIDDLEPORT, NEW YORK
CLOSURE PLAN -
WESTERN SURFACE IMPOUNDMENT

DETAIL - WESTERN SURFACE IMPOUNDMENT

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3

CITY: SYRACUSE, NY DIV/GROUP: EBC-IM/DV DB/LD: L.POSENAUER PM: D.WRIGHT TM: C.GERACI LYR:(OPT)ON=*;OFF=*REF*
G:\ENV\CAD\SYRACUSE\ACTIVE\003778613730000\1CP-WSI\377860D3.dwg LAYOUT: 3 SAVED: 3/28/2016 9:51 AM ACADVER: 19.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ---- PLOTTED: 3/28/2016 10:06 AM BY: POSENAUER, LISA
XREFS: IMAGES:
377860X00
376652X01
377862X03



LEGEND:

UNDERDRAIN SYSTEM

SURFACE DRAININGS

NOTE:

THIS FIGURE WAS PREPARED FROM A DRAWING BY PARSONS, ENTITLED "PLAN VIEW – WSI", FIGURE 4, DATED APRIL 10, 2015, AT A SCALE OF 1" = 40'.

0 40' 80'

GRAPHIC SCALE

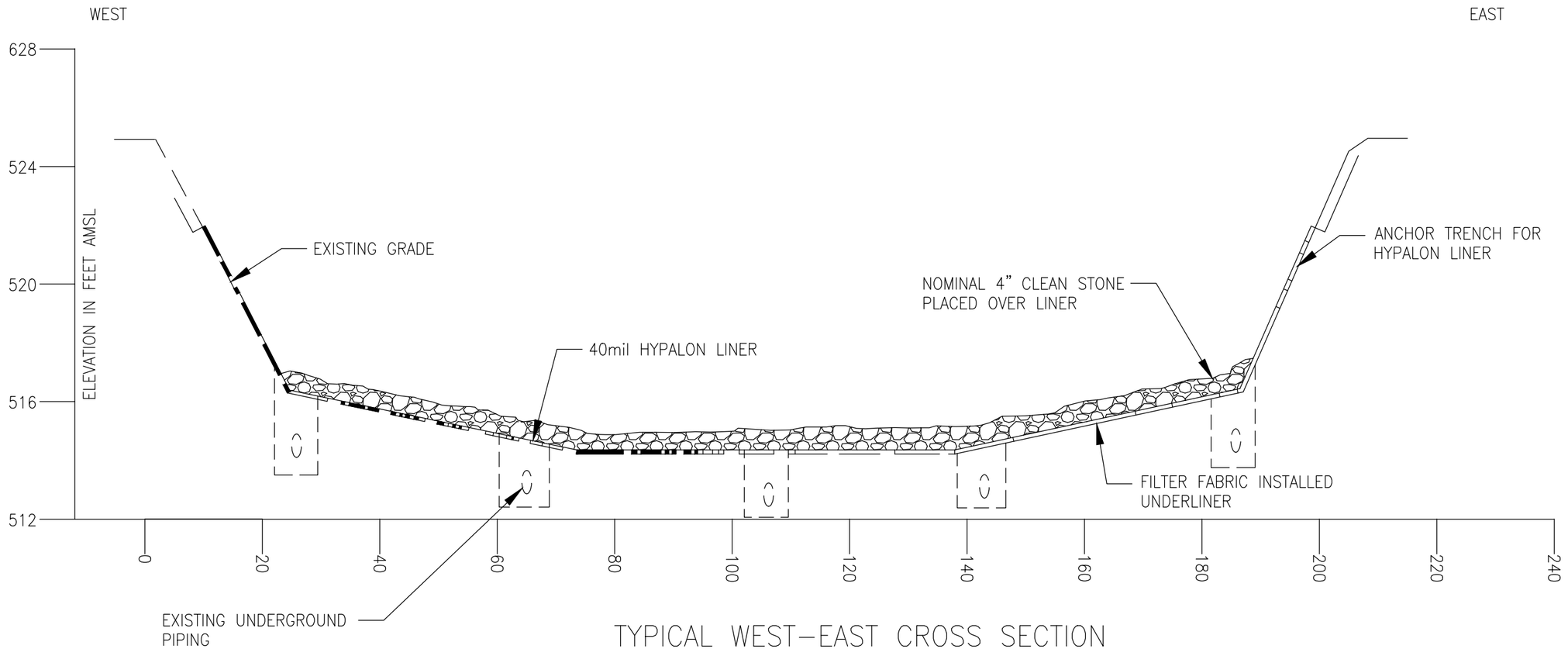
FMC CORPORATION
MIDDLEPORT, NEW YORK
CLOSURE PLAN -
WESTERN SURFACE IMPOUNDMENT

PLAN VIEW - WSI

ARCADIS Design & Consultancy for natural and built assets

FIGURE
4

CITY: SYRACUSE, NY DIV/GROUP: EBC-IM/DV DB/LD: L.POSENAUER PM: D.WRIGHT TM: C.GERACI LYR:(OPT)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACTIB\037786\13730\0001\CP-WSI\377860G04.dwg LAYOUT: 4 SAVED: 3/28/2016 9:50 AM ACADVER: 19.1S (LMS TECH) PAGESETUP: ----
XREFS: IMAGES:
377860X00
PLOTSTYLETABLE: ---- PLOTTED: 3/28/2016 10:06 AM BY: POSENAUER, LISA



TYPICAL WEST–EAST CROSS SECTION
WESTERN SURFACE IMPOUNDMENT

NOTE:

THIS FIGURE WAS PREPARED FROM A DRAWING BY PARSONS, ENTITLED "TYPICAL CROSS SECTION WSI", FIGURE 4, DATED APRIL 9, 2015.

FMC CORPORATION
MIDDLEPORT, NEW YORK
CLOSURE PLAN -
WESTERN SURFACE IMPOUNDMENT

TYPICAL CROSS SECTION
WSI

ARCADIS Design & Consultancy for natural and built assets

FIGURE
5

APPENDIX A
WSI CLOSURE COST ESTIMATE

Appendix A
Closure Cost Estimate - Western Surface Impoundment

Closure Plan - Western Surface Impoundment
FMC Corporation - Middleport, New York

ITEM	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT COST	TOTAL ITEM COST
	Site Preparation				
1	Pre-Construction Site Survey	1	EA	$5,000	$5,000
2	Access Road	1	CY	$5,000	$5,000
3	Temporary Erosion and Sediment Control	2	AC	$3,400	$6,800
4	Decontamination Pad and Misc. Utility Installations/Connections	1	LS	$10,000	$10,000
	WSI Material Removal and Disposition				
5	Dewater WSI and Discharge to Facility WTP	200,000	GAL	$0.05	$10,000
6	Remove/Handle Ballast Stone, Sediment and Hypalon Liner	500	CY	$35.00	$17,500
7	Modify concrete structures	2	LS	$7,500.00	$15,000
8	As-Built Construction Surveys	1	EA	$5,000	$5,000
9	Environmental Monitoring	2	MO	$5,100	$10,200
10	Off-site Disposal of Removed and Misc. Materials	1,000	TON	$35.00	$35,000
	Final Cover System Components and Construction				
11	6" Topsoil (delivered, placed, compacted, w/ analytical)	800	CY	$35.00	$28,000
12	12" Clay (delivered, placed, compacted, w/ analytical)	1,600	CY	$30.00	$48,000
13	General Fill (from Site Stockpile, placement only)	13,000	CY	$6.60	$85,800
14	Geotextile	43,500	SF	$0.22	$9,570
	Restoration				
15	Vegetative Cover (hydroseed, mulch, fertilizer)	1	AC	$3,470	$3,470
16	Misc. Site Restoration	1	LS	$5,000	$5,000
17	Final As-Built Survey	1	EA	$3,500	$3,500
				Subtotal Cost:	$302,840
				Mobilization/Demobilization (5%):	$15,142
				Construction Oversight (10%):	$30,284
				Administration and Engineering (10%)	$30,284
				Contingnecy (10%)	$30,284
				TOTAL ESTIMATED COST (ROUNDED):	$410,000

Note:

1. Cost estimate based on previous experience and vendor estimates.

APPENDIX B
FACILITY CONTACT INFORMATION

Appendix B
Facility Contact Information

Gregory B. Sullivan
Middleport Plant Manager
FMC Corporation – Agricultural Solutions
100 Niagara Street
Middleport, New York 14105

greg.sullivan@fmc.com
Telephone: 315.735.6325

Arcadis of New York, Inc.

6723 Towpath Road

P O Box 66

Syracuse, New York 13214-0066

Tel 315 446 9120

Fax 315 449 0017

www.arcadis.com

CLOSURE PLAN –
EASTERN SURFACE IMPOUNDMENT

ARCADIS Design & Consultancy for natural and built assets

FMC

FMC Corporation
Middleport, New York
EPA ID No. NYD002126845

CLOSURE PLAN – EASTERN SURFACE IMPOUNDMENT

DRAFT – April 2016

CLOSURE PLAN – EASTERN SURFACE IMPOUNDMENT

Prepared for:

FMC Corporation

Middleport, New York

Prepared by:
Arcadis of New York
6723 Towpath Road
P O Box 66
Syracuse
New York 13214-0066
Tel 315 446 9120
Fax 315 449 0017

Our Ref.:

B0037786.1373

Date:

DRAFT – April 2016

CONTENTS

FIGURES

APPENDICES

ACRONYMS AND ABBREVIATIONS

Agencies	NYSDEC and USEPA
AOC	Administrative Order on Consent
CAO	Corrective Action Objective
CMS	Corrective Measures Study
CRA	Conestoga-Rovers & Associates
CSI	Central Surface Impoundment
ESI	Eastern Surface Impoundment
Facility	FMC Agricultural Solutions facility in Middleport, New York
FMC	FMC Corporation
GMP	Groundwater Monitoring Program
HDPE	high-density polyethylene
ICM	Interim Corrective Measure
IRM	Interim Remedial Measure
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
OU	Operable Unit
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
SPDES	State Pollutant Discharge Elimination System
SWMU	Solid Waste Management Unit
USEPA	United States Environmental Protection Agency
WSI	Western Surface Impoundment
WTP	Water Treatment Plant

1 INTRODUCTION

1.1 Overview

This is the Closure Plan for the Eastern Surface Impoundment (ESI Closure Plan) located at FMC Corporation's (FMC's) Agricultural Solutions facility in the Village of Middleport and Town of Royalton, New York ("Facility" or "Site") (Figure 1). By letter, dated March 18, 2015, the New York State Department of Environmental Conservation (NYSDEC) requested that FMC amend its 1986 hazardous waste management facility permit application (under Title 6 of the New York Codes, Rules and Regulations [NYCRR], Part 373) for the Facility. This ESI Closure Plan is a required component of, and is included with, FMC's amended permit application.

This closure plan identifies the elements necessary to close the ESI in accordance with Section 373-2.7 and the Administrative Order on Consent (AOC) entered into by FMC, NYSDEC, and the United States Environmental Protection Agency (USEPA) (NYSDEC and USEPA referred to herein jointly as "the Agencies") in July 1991 (Docket No. II RCRA-90-3008(h)-0209). This plan also includes a cost estimate for final ESI closure, in accordance with Section 373-2.8(c).

1.2 ESI Background

The ESI was constructed in the northeastern portion of the Facility in 1978. At that time, the ESI was an unlined, bermed stormwater detention area with a maximum holding capacity of approximately 2 million gallons to receive stormwater runoff from adjacent areas of the Facility. NYSDEC notified FMC in 1985 that the ESI was considered a RCRA-regulated hazardous waste storage/treatment unit under federal and State law. In 1986, FMC submitted a hazardous waste management facility permit application pursuant to applicable regulations, and subsequently managed stormwater in the ESI under the RCRA interim status regulations.

In addition to receiving stormwater runoff from adjacent land, the ESI also received water from the Facility's Central Surface Impoundment (CSI) and/or Western Surface Impoundment (WSI) to mitigate possible overflow conditions within the CSI and/or WSI due to water volume being greater than storage capacity. The mitigation actions were taken under direction of NYSDEC. No written records are available regarding the quantity of water transferred to the ESI.

In March 1988, FMC submitted the *Plan of Closure: Surface Impoundments, FMC Corporation, Middleport, New York, Plant Site* (Conestoga-Rovers & Associates [CRA], 1998) which identified the elements necessary to close the three surface impoundments existing at the Facility at that time, including the ESI. By letters dated May 27, 1988 and July 14, 1988, NYSDEC conditionally approved the 1988 closure plan, with comments subsequently addressed in the August 1988 version of the plan.

In 1987-1988, FMC conducted pre-closure activities identified in a letter dated September 2, 1986. The pre-closure activities included the construction of an engineered cover system around the ESI; removal of standing water from the ESI; and treating the water at the Facility's Wastewater Treatment Plant (WTP) prior to discharge under the Facility's State Pollutant Discharge Elimination System (SPDES) permit. This resulted in the isolation of the ESI so that the only water entering into the ESI was precipitation falling

directly within its limits. By letter dated September 29, 1988, FMC 1) notified the NYSDEC that the ESI had ceased receiving contaminated stormwater and 2) requested an indefinite extension of time to implement final closure of the ESI until completion of the RCRA corrective action process.

NYSDEC, by letter dated October 26, 1988, acknowledged that based on the information presented in FMC's September 29, 1988 letter, the ESI was no longer able to receive surface runoff from adjacent areas and agreed that the ESI no longer received stormwater requiring management as hazardous waste. NYSDEC also granted an extension of 1.5 years from the date of the October 26, 1988 letter for closure of the ESI pursuant to the approved March 1988 closure plan. By letter dated April 25, 1990, FMC requested a further extension of time to close the ESI.

In 1991, the Agencies and FMC signed the AOC which set forth the terms and conditions for performing the RCRA correction action process for the Facility and impacted off-site areas. The AOC also acknowledged the inactive status of the ESI and deferred closure pending the results of an RFI pertaining to the ESI and Solid Waste Management Unit (SWMU) Group C (Figure 2) and, if one is undertaken, the corresponding Corrective Measures Study (CMS). The AOC further specified that FMC may submit a closure plan modification for the ESI based on the results of those studies.

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"). Those soils are not hazardous waste. To date, approximately 99,450 cubic yards of such soils have been placed in the ESI Fill Area. The ESI Fill Area is shown on Figure 2. This area has been designated as SWMU #54 and has been temporarily covered with a 6-inch thick clean soil cover and vegetated. Final action with respect to the ESI Fill Area is to be determined during the RFI/CMS process.

By letter dated September 6, 2012, as part of the RFI/CMS process, the Agencies requested that FMC submit a soil investigation work plan for the Eastern Parcel, which includes the ESI and the ESI Fill Area. The Eastern Parcel Soil Investigation Work Plan (Work Plan; ARCADIS, 2013) proposed RFI activities to supplement existing data from prior investigations dating back to 1973. By letter dated June 17, 2013, the Work Plan was approved by the Agencies, in consultation with the New York State Department of Health (NYSDOH), and was implemented by FMC in 2013. FMC submitted the revised *RCRA Facility Investigation (RFI) Report Volume IX.b – Eastern Parcel (Operable Unit 11)* (Eastern Parcel RFI Report; ARCADIS, 2014) to the Agencies on March 25, 2014. One of the findings from the Eastern Parcel (OU-11) RFI is that RFI information and analytical data are sufficient to support the performance of a CMS for Eastern Parcel soil. The Eastern Parcel RFI report is currently being reviewed by the Agencies. As stated in the Agencies' September 6, 2012 letter requesting an investigation work plan for the Eastern Parcel, groundwater is a separate operable unit (OU-10) and will be addressed under a separate RFI which has not yet been completed.

1.3 Plan Organization

In addition to this introduction, the following sections are provided:

- Section 2 – ESI and Eastern Parcel Description
- Section 3 – ESI Closure Performance Standards

- Section 4 – ESI Closure Activities
- Section 5 – ESI Closure Cost Estimate
- Section 6 – ESI Post-Closure Care and Facility Contact Information
- Section 7 – References

2 ESI AND EASTERN PARCEL DESCRIPTION

2.1 Overview

FMC owns and operates a pesticide formulation facility on approximately 102 acres of land located in the southeast corner of the Village of Middleport and in the Town of Royalton, Niagara County, New York ("Facility") (Figure 1). The entire perimeter of the Facility is fenced with two monitored, gated entrances. The "northern half" of the Facility comprises approximately 63 acres where pesticide manufacturing occurred and formulation is occurring now. This area currently contains several large buildings used for formulation and warehousing.

The majority of the northern portion of the Facility is covered with a clay/asphalt cap and buildings. Stormwater runoff from this portion of the Facility is directed primarily to asphalt-lined or grass-covered swales that drain to the WSI. Water collected in the WSI is pumped to and treated at the Facility's WTP and then discharged, through the Facility's SPDES monitoring station, to a downstream outfall at Tributary One in accordance with the SPDES permit.

2.2 Eastern Parcel Description

The ESI is situated within an area referred to as the Eastern Parcel operable unit (OU), which has been designated as OU-11 by the NYSDEC. The Eastern Parcel is a 24.3-acre parcel within the Facility boundaries that includes the ESI (SMU #50) and the ESI Fill Area (SWMU #54) (Figure 2). The Eastern Parcel also includes SWMU #3 (Former Eastern Process Wastewater Retention Basin, 1964 -1977), which as further described in Section 2.3, was closed in 1977-1978 and the ESI was constructed within its footprint. SWMU #53 (1987-1988 Northern Ditches IRM Soil Containment Cell) is also located within the Eastern Parcel but is outside the footprint of the ESI. SWMU groups were identified, for investigation purposes, by NYSDEC in the 1988 RCRA Facility Assessment based on wastes types and/or locations. SWMU Group C comprises SWMUs #3, #53, and #54. SWMU Group C is in the northern portion of the Eastern Parcel (Figure 2).

The northern portion of the Eastern Parcel, excepting the former location of the ESI, is covered with the Facility's North Site Cover (area inside purple line on Figure 2). The North Site Cover was designed to minimize infiltration of precipitation to the subsurface and direct runoff away from the northern portion of the Facility. The North Site Cover consists of clay/sand/topsoil cover (2 feet minimum thickness). Clean fill soils that have been stockpiled within an approximate 4-acre area on the southern portion of the Eastern Parcel were used to cover and vegetate the excavated soils placed within the ESI Fill Area. The ESI Fill Area cover is being inspected and maintained as part of the North Site Cover inspection, monitoring and maintenance activities.

The Eastern Parcel is abutted to the west by an electrical substation and an overhead electrical lines easement through the Facility; to the south by Route 31, a tractor repair business and an automobile salvage yard; to the east by an agricultural field and wooded land; and to the north by railroad tracks adjoined by an agricultural field. Improvements to the Eastern Parcel (Figure 3) include gravel access roads and portions of the Facility's groundwater remediation and monitoring system components (i.e., two blast-fractured bedrock groundwater recovery trenches [Trenches A and G], four extraction wells, 16

monitoring wells, and associated force main piping to transfer extracted groundwater to the Facility's water treatment plant).

2.3 ESI Description

The ESI was constructed in the northeastern portion of the Facility in 1978, within a portion of the footprint of the closed Eastern Process Wastewater Retention Basin (SWMU #3). The Eastern Basin was an unlined lagoon that received process wastewater from the dithiocarbamate and carbofuran production areas in the 1960s and 1970s. The Eastern Process Wastewater Retention Basin was closed in 1977-1978 by filling/grading existing soil and the ESI was constructed within the footprint of the closed Eastern Basin.

When in service from 1978 to 1988, 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 runoff from an adjacent area of the Facility property. The ESI was drained, taken out of service and ceased to receive any stormwater requiring management as a hazardous waste in 1988. Water from the ESI was treated at the on-site WTP prior to removal from service. Beginning in 1996, after removal of any standing water within the ESI, soils excavated as part of off-site ICMs were placed within the ESI footprint. A temporary clean soil cover was installed over excavated soils as part of the ICMs.

As discussed in Section 1, the ESI has not been closed and has been under inactive status, pursuant to the AOC, pending completion of the RFI/CMS process. However, since 1988, activities associated with the ESI (i.e., removal from service, backfilling/placement of ICMs soils) have been consistent with 1988 Closure Plan activities.

2.4 Monitoring

The ESI is proximate to a series of blast fractured groundwater extraction trenches constructed at the Facility as phased ICMs being implemented pursuant to the terms and conditions of the AOC. To monitor the effectiveness of these ICMs, groundwater monitoring wells were installed. The groundwater monitoring locations proximate to the ESI, including those associated with Trenches A and G of the Facility's groundwater recovery system are shown on Figure 3. These monitoring locations are included in the groundwater monitoring program (GMP) conducted at the Facility by FMC. Details of the GMP, including reporting requirements, are presented in FMC's *Groundwater Monitoring Program for Remedial Systems Effectiveness Monitoring – FMC Middleport Facility*.

With respect to the ESI, the groundwater monitoring data demonstrate the following: 1) placement of impacted soil within the footprint of the ESI and additional abutting area to the south and west (i.e., ESI Fill Area; see Figure 2) during the previous remedial activities has not resulted in increased contaminant concentrations in groundwater; and 2) existing groundwater trench ICMs, in particular blast-fractured Trenches A and G, are effective in capturing overburden and shallow bedrock groundwater from the ESI and the ESI Fill Area (Eastern Parcel RFI Report, 2014).

2.5 Proposed Use

The Eastern Parcel, including the ESI footprint, ESI Fill Area, and other adjacent areas, is the location for the proposed Corrective Action Management Unit (CAMU) as set forth in the *Corrective Measures Study (CMS) Report – Suspected Air Deposition and Culvert 105 Study Areas* (ARCADIS, 2011) and as referenced in the Agencies' *Final Statement of Basis* (May 2013) (proposed CAMU location is shown on Figure 2). The proposed 16.9-acre CAMU would be used for the permanent management of non-hazardous soil and debris generated in the course of remedial actions from study areas south of Pearson/Stone Roads. The northern portion of the proposed location for the CAMU includes the ESI footprint and the ESI Fill Area that is currently being used for management of remediation-derived soil and debris from Agencies-approved remedial actions (see Section 1.2), with final disposition to be determined during the remedy selection (i.e., CMS) process for the Eastern Parcel (OU-11).

3 ESI CLOSURE PERFORMANCE STANDARDS

The ESI closure activities will be completed consistent with the closure performance standards specified in Section 373.2-7(b), as follows:

1. Minimize the need for further maintenance.
2. Control, minimize or eliminate, to the extent necessary to protect human health and the environment, post-closure escape of hazardous wastes, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere.

The AOC (Section VI, Paragraph 4.b) recognizes that final closure steps may be determined based on the results of the RFI for the Facility and, if one is undertaken, the CMS required under the AOC. In addition to the above closure performance standards, if a CMS is to be conducted at the Eastern Parcel, the following Corrective Action Objectives (CAOs) will be applicable to final closure of the ESI:

1. To protect human health and the environment with respect to contaminants associated with the Facility consistent with applicable or relevant and appropriate legal authority, using site-specific data and information, supported by multiple lines of evidence, including site-specific risk assessment, and based on the current and reasonably anticipated future industrial land use of the Eastern Parcel, such that:
    - The post-closure lifetime excess cancer risks fall within the range of 10^{-4} to 10^{-6};
    - The post-closure non-cancer risks do not exceed a Hazard Index of 1; and
    - The “point of departure”, or starting point, for corrective action risk-management decisions for the Facility is to prevent direct contact with contaminated soil, sediment, surface water or groundwater.
2. To use institutional controls, engineering controls, remedial technologies and/or a combination of them consistent with the current and reasonably anticipated future industrial land use of the Facility to the extent it is feasible and cost-effective to do so.
3. To prevent, reduce or manage the off-site migration of contaminated soil, sediment, surface water and groundwater associated with the Facility.
4. To prevent, reduce or manage unacceptable ecological impacts associated with contaminated soil, sediment, surface water or groundwater associated with the Facility, while balancing the adverse ecological impacts that may result from the closure activities themselves.
5. To use best management practices reflecting USEPA's Green Remediation concepts to reduce the demands placed on the environment ("footprint"), to the extent practicable and cost-effective. Such concepts may include clean diesel technology, waste minimization, resource conservation, reduction of greenhouse gas and other air emissions (e.g., by using alternative energy sources, fuel-efficient technology, or minimizing truck trips), ecological and soil preservation, leveraging infrastructure needs, sharing data, minimizing demolition and earth-moving activities, reusing structures and demolition material, and combining other activities that support timely and cost-effective cleanup and reuse.

4 ESI CLOSURE ACTIVITIES

The ESI will be closed in a manner that is consistent with the closure performance standards identified above. Closure will be implemented in accordance with the approved closure plan, including any subsequent modifications approved by the NYSDEC. The AOC recognizes that final closure steps may be determined based upon the results of the RFI pertaining to the ESI and SWMU Group C and, if one is undertaken, the corresponding CMS. The ESI and SWMU Group C are within the northern portion of the Eastern Parcel (Figure 2) and FMC submitted the revised *RCRA Facility Investigation (RFI) Report Volume IX.b – Eastern Parcel (Operable Unit 11)* (Eastern Parcel RFI Report; ARCADIS, 2014) to the Agencies on March 25, 2014. One of the findings from the Eastern Parcel RFI is that RFI information and analytical data are sufficient to support the performance of a CMS for Eastern Parcel soil. The RFI report is currently being reviewed by the Agencies. Groundwater is a separate operable unit (OU-10) and will be addressed under a separate RFI, which has not yet been completed.

In addition to the results obtained from the Eastern Parcel RFI/CMS process, the steps required for ESI final closure will be determined based upon the final decision regarding the proposed CAMU referenced in the CMS for OUs 2, 4, and 5 and the Agencies' *Final Statement of Basis* (May 2013). The northern portion of the proposed location for the CAMU includes the ESI footprint and the ESI Fill Area that is currently being used for temporary placement of soil derived from Agencies-approved interim corrective actions (see Section 1.2). Final disposition of the soil placed in the ESI Fill Area is to be determined during the remedy selection (i.e., CMS) process for the Eastern Parcel (OU-11).

The AOC specifies that FMC may submit a closure plan modification for the ESI based on the results of the RFI/CMS required under the terms and conditions of the AOC. The modified and/or additional steps needed to complete final ESI closure and define the scope of the associated post-closure care, will be determined after completion of the RFI/CMS process. Until that time, the inactive status of the ESI will be maintained in accordance with the AOC (Section VI, Paragraph 4.a). If needed based on the results of the RFI/CMS process, the steps required for final ESI closure and the post-closure scope will be detailed in a closure plan modification for the ESI in accordance with Section 373-2.7(c).

Pending the results of the Eastern Parcel RFI/CMS process and the final decision regarding the proposed CAMU referenced in the CMS for OUs 2, 4, and 5, FMC has identified the following construction activities for final closure of the ESI footprint and ESI Fill Area in accordance with Section 373-2.7(c):

- site preparation, including grading of existing soil to direct surface water runoff to the south, away from the WSI, to the extent practical, and preparation for the cover construction; and
- construction of a cover system over the ESI Fill Area, including the ESI footprint, that is consistent with the final CAMU cover, set forth in the *Corrective Measures Study (CMS) Report – Suspected Air Deposition and Culvert 105 Study Areas* (ARCADIS, 2011) and as referenced in the Agencies' *Final Statement of Basis* (May 2013).

The steps for closure are identified in the subsections below

4.1 Notification of Closure and Time Allowed for Closure

Currently, there are no plans to complete closure of the ESI in the near future. However, when the decision to close the ESI is made, the following actions will be taken:

- FMC will notify the NYSDEC at least 60 days prior to the date of initiating closure activities
- FMC will submit final design drawings and specifications for closure of the ESI. The design drawings will consist of the following:

  i) Final grading plan, including final design contours, drainage systems and closure limits;

  ii) Cross-sections through and typical details for the closure cover; and

  iii) Existing conditions including existing contours, surface features, and monitoring and extraction wells.

Additionally, specifications will be prepared and will include material and installation requirements, health and safety requirements, and testing requirements and frequencies for quality assurance/quality control.

Closure activities will be completed within 180 days following NYSDEC approval of the final design drawings and specifications for closure of the ESI. At the time of closure, applicable procedures will be followed if an extension is necessary.

4.2 Site Preparation

The ESI footprint and ESI Fill Area will be graded as needed to promote positive drainage to the south ditch (to the extent practical) and ensure sufficient bearing capacity to support the final cover. Soil from FMC's on-site stockpile of clean cover soil (Figure 2) will be used (as appropriate) to meet design contours and grading requirements to be specified in the final design drawings and specifications. Dust control, stormwater management, and erosion and sediment control measures will be established/implemented as necessary during site preparation and closure construction activities.

4.3 Final Cover

A composite, low permeability surface cover will be placed over the ESI footprint and ESI Fill Area to provide long-term minimization of surface water entry into this area. A typical section through the cover is illustrated on Figure 4, and, as shown, the cover will consist of:

- 4 inches vegetated topsoil layer
- 20 inches general fill
- geosynthetic drainage composite layer
- 60-mil high density polyethylene (HDPE) flexible membrane liner
- 3 inches select fill (grading layer)

As noted above, soil from FMC's on-site stockpile of clean cover soil (Figure 2) will be used (as appropriate) for grading, as well as cover construction (i.e., general fill). Any imported fill or soil will be subject to the applicable requirements set forth in Section 5.4 of NYSDEC's Division of Environmental Remediation (DER) *Technical Guidance for Site Investigation and Remediation* (DER-10) (NYSDEC, May 2010).

The permeability of this final composite cover over the ESI footprint and ESI Fill Area is expected to be very low due to the use of the HDPE flexible membrane liner material. Therefore, once the final cover is complete, infiltrating precipitation coming into contact with remediation-derived soil and debris in the ESI Fill Area will be substantially reduced. The final surface of the cover would be low-maintenance vegetation (e.g., grass).

Erosion control measures, such as the installation of erosion control matting, will be implemented where required if excessive soil loss occurs prior to or subsequent to development of the vegetative cover.

4.4 Equipment Decontamination

Following completion of the final closure activities, equipment involved in the closure, which may have come in contact with potentially contaminated material, will be decontaminated on site in the equipment decontamination area. Equipment which may include loaders, backhoes, bulldozers, dump trucks, pumps and additional miscellaneous items, will be decontaminated by washing with a high pressure water wash or steam cleaner. All decontaminated equipment will be inspected to ensure all visible sediment has been removed from exposed surfaces.

Decontamination wash water will be collected and treated at the Facility's WTP prior to discharge under the Facility SPDES permit, and collected sediment will be disposed off-site.

4.5 Security

The entire perimeter of the Facility is fenced with two monitored, gated entrances. The Facility fence and security procedures will minimize the potential for trespassers at the Facility and closed ESI footprint and Fill Area. Site security and access control activities, including maintenance of the existing Facility perimeter fence, gates, and signage are detailed in the *Security and Facility Inspection Plan* (Attachment S of FMC's amended permit application).

4.6 Required Notices for Closure

Within 60 days of completing final closure for the ESI footprint and ESI Fill Area, FMC will submit to the Niagara County clerk and to the Commissioner a survey plat indicating the location and dimensions of the closed SWMUs with respect to permanently surveyed benchmarks. This plat will be prepared and certified by a professional land surveyor registered in New York. The plat filed with the County clerk will contain a prominently displayed note stating FMC's obligation to restrict disturbance of the closed ESI footprint and ESI Fill Area.

In addition, FMC will submit to the Niagara county clerk and the NYSDEC Commissioner a record of the type, location, and quantity of hazardous wastes disposed within the surface impoundment.

FMC will record, on the deed to the facility property or on some other instrument which is normally examined during title search, in accordance with State law, a notation that will in perpetuity notify any potential purchaser of the property that:

(1) The land has been used to manage hazardous wastes;

(2) Its use is restricted under Section 373-2.7(g)(3);

(3) The survey plat and record of the type, location, and quantity of hazardous wastes disposed of within each area of the Facility have been filed with the Niagara County clerk and the Commissioner.

4.7 Certification of Closure

Within 60 days of completing final closure for the ESI footprint and ESI Fill Area, FMC and an independent Professional Engineer registered in New York will submit, to the NYSDEC Commissioner, certification that the facility has been closed in accordance with the specifications in the approved closure plan. The certification will be signed by FMC and the Professional Engineer. Final closure certification will also be requested from NYSDEC at that time.

5 ESI CLOSURE COST ESTIMATE

The closure cost estimate for the ESI is provided in Appendix A and was developed in accordance with Section 373-2.8(c) for the ESI final closure steps identified herein. The ESI closure cost estimate is also kept on file at the Facility, as required by Section 373-2.8(c)(4).

FMC will comply with financial assurance requirements specified in Section 373-2.8(d).

6 ESI POST-CLOSURE CARE AND FACILITY CONTACT INFORMATION

Post-closure activities (e.g., maintenance and monitoring activities) are identified in the *Post-Closure Plan - Surface Impoundments* (Attachment Q of FMC's amended permit application). Post-closure care will be performed as part of a Site-wide Site Management Plan that will be prepared by FMC as a required component of the amended permit application (Attachment U). Contact information for the person/office to contact about the ESI or Facility is provided in Appendix B.

7 REFERENCES

ARCADIS. 2009. RCRA Facility Investigation Report Volume I – Background and Related Information. September.

ARCADIS. 2011. DRAFT Corrective Measures Study (CMS) Report – Suspected Air Deposition and Culvert 105 Study Areas. May 2011.

ARCADIS. 2013. Eastern Parcel Soil Investigation Work Plan. May 2013.

ARCADIS. 2014. RCRA Facility Investigation (RFI) Report Volume IX.b – Eastern Parcel. March 2014.

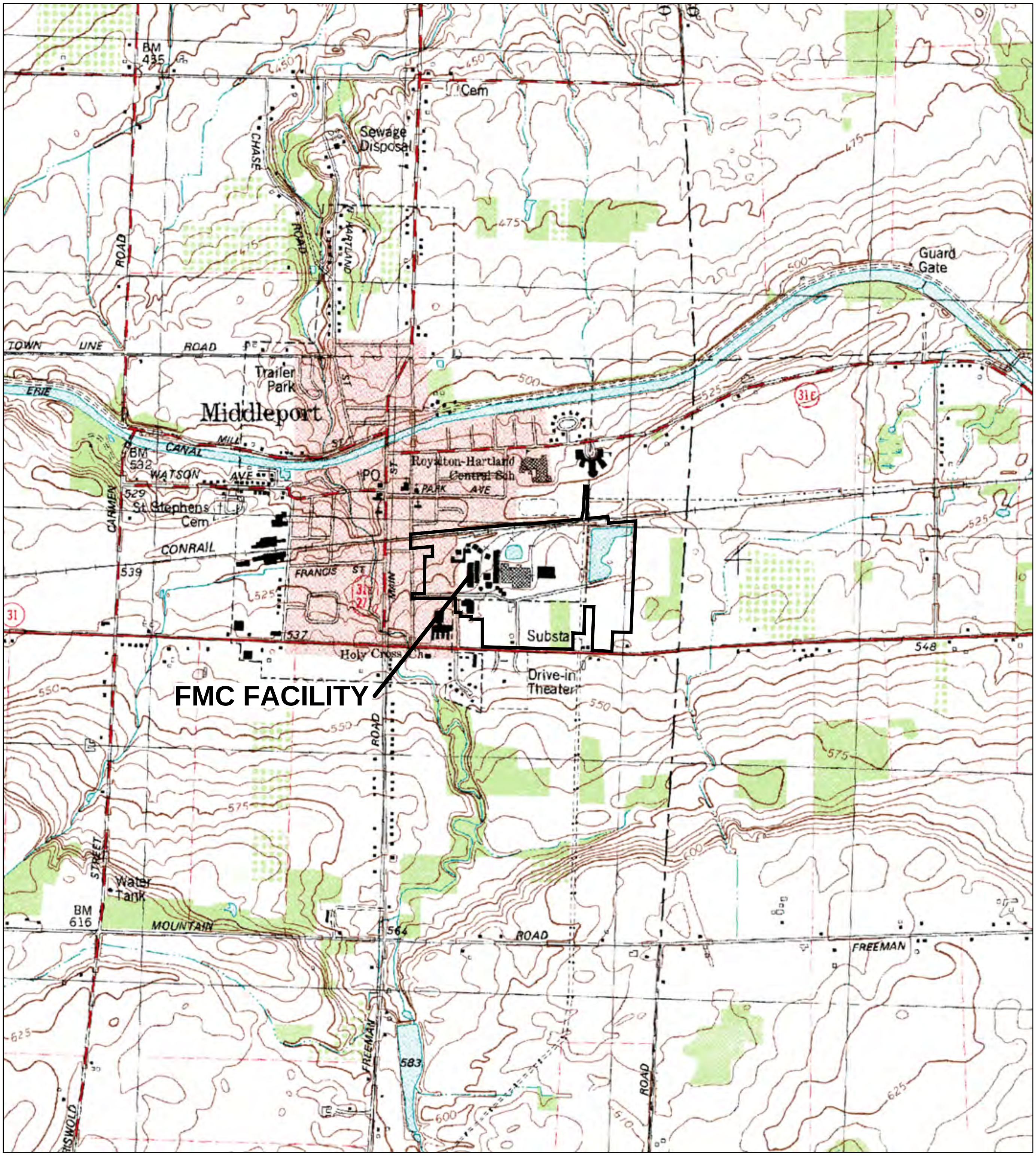
Conestoga-Rovers & Associates. 1988. Plan of Closure: Surface Impoundments, FMC Corporation, Middleport, New York, Plant Site. August 1988.

Conestoga-Rovers & Associates. 1989. North Site Cover Construction Report, FMC Corporation, Middleport, New York, Plant Site. August 1989.

Parsons. 2016. Groundwater Monitoring Program for Remedial Systems Effectiveness Monitoring – FMC Middleport Facility, FMC Corporation, USEPA ID No. NYD002126845, Middleport, New York. DRAFT 2016.

USEPA, et al.1991. Administrative Order on Consent [Docket No. II RCRA-90-3008(h)-0209] entered into by FMC, NYSDEC and USEPA, effective July 2, 1991.

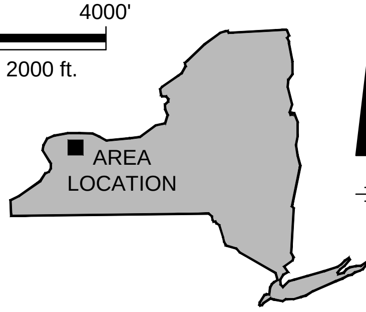
FIGURES



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., MEDINA, NY, 1980.

0 2000' 4000'

Approximate Scale: 1 in. = 2000 ft.



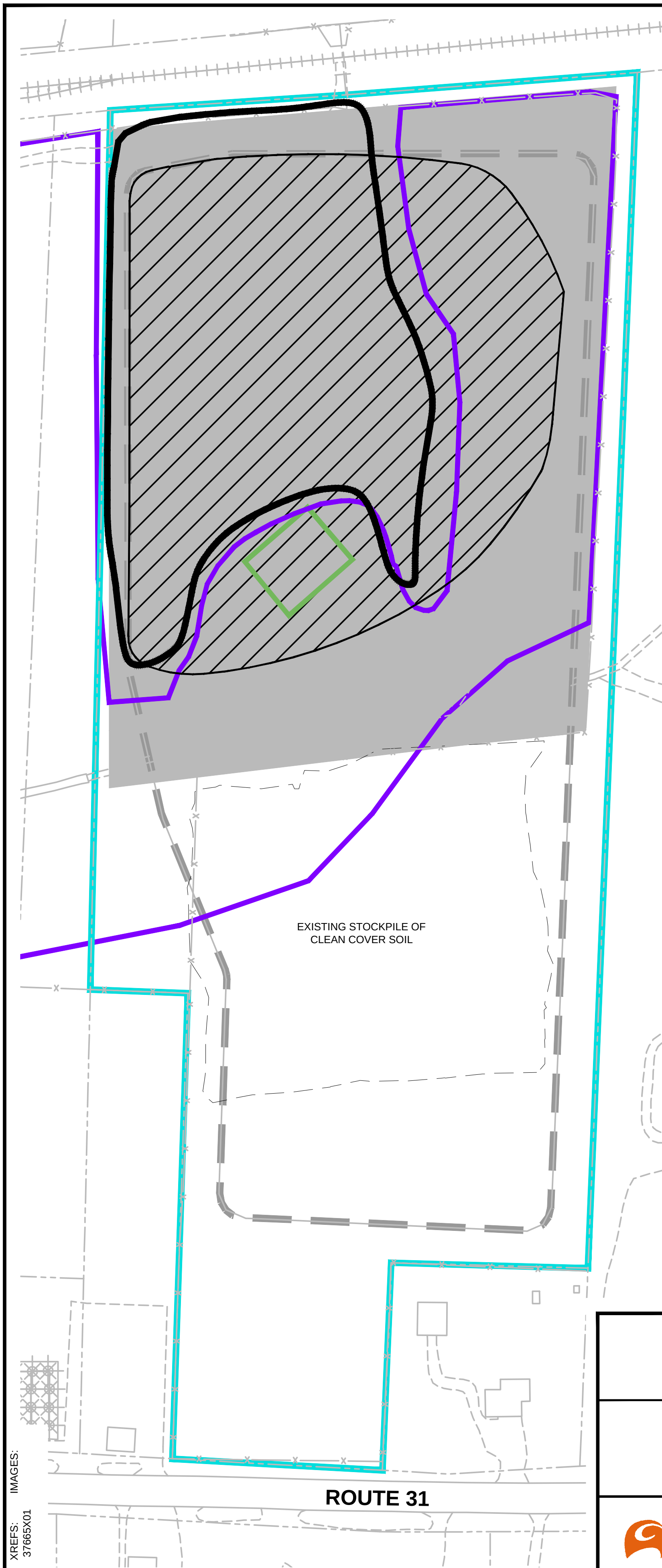
FMC CORPORATION
MIDDLEPORT, NEW YORK

CLOSURE PLAN -
EASTERN SURFACE IMPOUNDMENT

SITE LOCATION MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE **1**



LEGEND:

EXISTING FEATURES:

- EASTERN PARCEL
- APPROXIMATE LIMITS OF NORTH SITE COVER (INSTALLED 1987–1988)
- EXISTING ESI FILL AREA, (FILL EVENTS 1996, 1999, 2003, 2005, 2007, 2008, AND 2011)(SWMU #54)
- 1987–1988 NORTHERN DITCHES IRM SOIL CONTAINMENT CELL (SWMU #53)
- STOCKPILE OF CLEAN COVER SOIL (INSTALLED 1987–1988)

HISTORICAL FEATURES:

- FORMER EASTERN PROCESS WASTEWATER RETENTION BASIN, 1964–1977 (SWMU #3)
- EASTERN SURFACE IMPOUNDMENT, 1978–1988 (SWMU #50)

PROPOSED FEATURES:

- PROPOSED CORRECTIVE ACTION MANAGEMENT UNIT (CAMU)

NOTES:

1. SWMU GROUP C COMPRISES SWMUs #3, #53, AND #54.
2. BASEMAP INFORMATION BASED ON APRIL 15, 2002 AERIAL SURVEY PROVIDED BY ABRAMS AERIAL SURVEY CORPORATION AND INFORMATION COMPILED FROM FIELD SURVEYS PERFORMED BY MCINTOSH AND MCINTOSH, P.C. ON SEPTEMBER 18, 1999; MARCH 28, 20001; APRIL 29, 2004; AUGUST 13, 2004; APRIL 7, 2005; SEPTEMBER 9, 2005; OCTOBER 12, 2005; JUNE 16, 2007; MAY 10, 2007; DECEMBER 13, 2007; OCTOBER 6, 2008; AND OCTOBER 8, 2008. THE HORIZONTAL DATUM IS NORTH AMERICAN DATUM 1983 (NAD83).

0 200' 400'

GRAPHIC SCALE

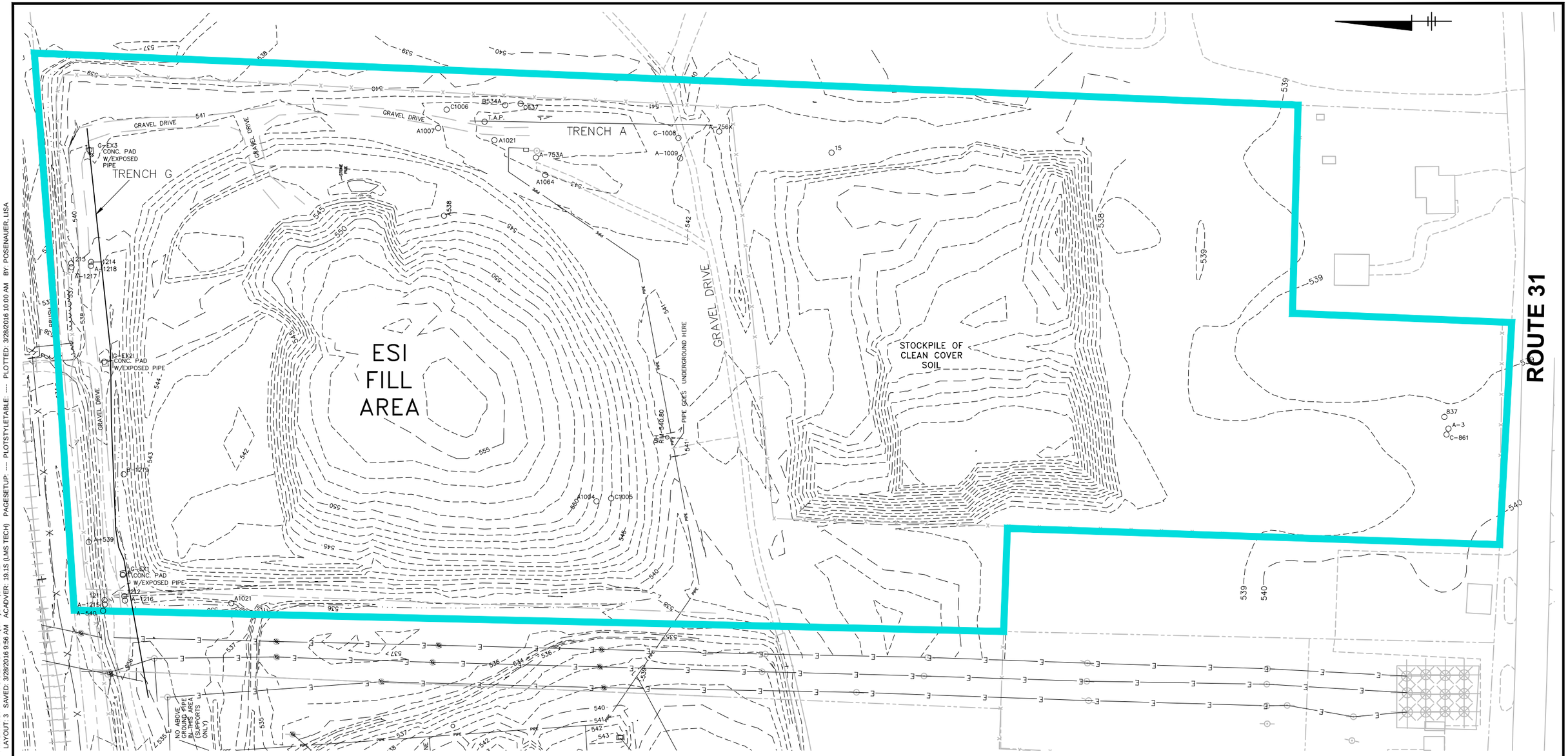
FMC CORPORATION
MIDDLEPORT, NEW YORK

CLOSURE PLAN - EASTERN SURFACE IMPOUNDMENT

SITE FEATURES

ARCADIS Design & Consultancy for natural and built assets

FIGURE 2



LEGEND:

- EASTERN PARCEL
- 542 CURRENT TOPOGRAPHIC CONTOUR (SEE NOTE 1)
- RAILROAD TRACKS
- E OVERHEAD ELECTRICAL LINES
- MONITORING WELL
- PIPE ABOVEGROUND PIPING
- BLAST–FRACTURED BEDROCK GROUNDWATER RECOVERY TRENCH

0 120' 240'

GRAPHIC SCALE

NOTE:

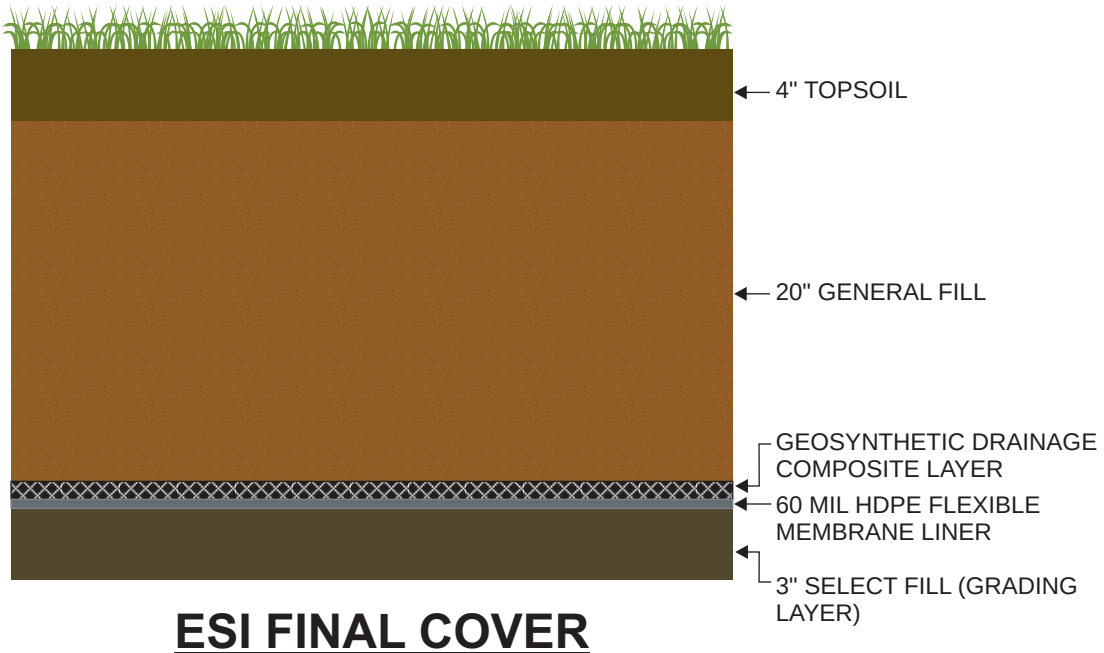
1. SURVEY INFORMATION SHOWN ON THIS DRAWING WAS COMPILED FROM: SEPTEMBER 18, 1999, MARCH 28, 2001, APRIL 29, 2004, AUGUST 13, 2004, APRIL 7, 2005, SEPTEMBER 9, 2005, JULY 31, 2007, JANUARY 3, 2008, OCTOBER 6, 2008, AND OCTOBER 10, 2011 FIELD SURVEYS PERFORMED BY McINTOSH AND McINTOSH, P.C.

FMC CORPORATION
MIDDLEPORT, NEW YORK
CLOSURE PLAN -
EASTERN SURFACE IMPOUNDMENT

SITE PLAN

ARCADIS Design & Consultancy for natural and built assets

FIGURE
3



ESI FINAL COVER

NOT TO SCALE

FMC CORPORATION - MIDDLEPORT, NEW YORK

CLOSURE PLAN -
EASTERN SURFACE IMPOUNDMENT

FINAL COVER

ARCADIS Design & Consultancy for natural and built assets

FIGURE
4

APPENDIX A
ESI CLOSURE COST ESTIMATE

Appendix A
Closure Cost Estimate - Eastern Surface Impoundment

Closure Plan - Eastern Surface Impoundment
FMC Corporation - Middleport, New York

ITEM	ITEM DECSRIPTION	ESTIMATED QUANTITY	UNIT	UNIT COST	TOTAL ITEM COST
	Site Preparation				
1	Pre-Construction Site Survey	1	EA	$10,000	$10,000
2	Perimeter Access Road Subgrade (General Fill)	400	CY	$19.87	$7,948
3	Perimeter Access Road Gravel	400	CY	$29.38	$11,752
4	Perimeter Access Road Non-Woven Geotextile	9,000	SF	$0.22	$1,980
5	Temporary Erosion and Sediment Control	18	AC	$3,400	$61,200
6	Stormwater Management (basin, culverts, etc.)	1	LS	$80,000	$80,000
7	Operating Support Facilities	1	LS	$139,900	$139,900
8	Utility Installations and Connections	1	LS	$13,200	$13,200
9	Existing Groundwater Conveyance System (reroute/retrofit)	1	LS	$10,000	$10,000
10	Monitoring Well Modification	19	EA	$1,500	$28,500
	Earthwork				
11	ESI Regrading	18,000	CY	$5.60	$100,800
12	As-Built Construction Surveys	1	EA	$7,800	$7,800
13	Environmental Monitoring	1	YR	$60,900	$60,900
14	Utility Services for Support Facilities	1	YR	$9,600	$9,600
	Final Cover Construction				
15	Final Cover Anchor Trench	2,300	LF	$10	$22,310
16	Final Cover Drainage Features (perimeter ditch, mid-slope swales, etc.)	1	LS	$77,100	$77,100
	Final Cover System Components				
17	4" Topsoil (delivered, placed, compacted, w/ analytical)	4,900	CY	$35.00	$171,500
18	20" General Fill (from Site stockpile, placement only)	23,600	CY	$6.60	$155,760
19	Geosynthetic Drainage Composite	420,500	SF	$0.70	$292,248
20	60-mil HDPE Flexible Membrane Liner	438,800	SF	$0.81	$353,234
21	3" Select Fill Layer (from Site stockpile, placement only)	3,400	CY	$6.60	$22,440
	Restoration				
22	Vegetative Cover (hydroseed, mulch, fertilizer)	16	AC	$3,470	$55,520
23	Misc. Site Restoration	1	LS	$10,000	$10,000
24	Final As-Built Survey	1	EA	$8,460	$8,460
				Subtotal Cost:	$1,712,152
				Mobilization/Demobilization (5%):	$85,608
				Construction Oversight (10%):	$171,215
				Administration and Engineering (10%):	$171,215
				Contingency (10%):	$171,215
				TOTAL ESTIMATED COSTS (ROUNDED):	$2,300,000

Note:

1. Cost estimate based on previous experience and vendor estimates.

APPENDIX B
FACILITY CONTACT INFORMATION

Appendix B
Facility Contact Information

Gregory B. Sullivan
Middleport Plant Manager
FMC Corporation – Agricultural Solutions
100 Niagara Street
Middleport, New York 14105

greg.sullivan@fmc.com
Telephone: 315.735.6325

Arcadis of New York, Inc.

6723 Towpath Road

P O Box 66

Syracuse, New York 13214-0066

Tel 315 446 9120

Fax 315 449 0017

www.arcadis.com

POST CLOSURE PLAN

ARCADIS Design & Consultancy for natural and built assets

FMC

FMC Corporation

Middleport, New York

EPA ID No. NYD002126845

POST-CLOSURE PLAN – SURFACE IMPOUNDMENTS

DRAFT – March 2016

POST-CLOSURE PLAN – SURFACE IMPOUNDMENTS

FMC Corporation

Middleport, New York

EPA ID No. NYD002126845

Prepared for:

FMC Corporation

Prepared by:

Arcadis of New York, Inc.

6723 Towpath Road

P O Box 66

Syracuse

New York 13214-0066

Tel 315 446 9120

Fax 315 449 0017

Our Ref.:

B0037786.1373

Date:

March 2016

CONTENTS

FIGURES

APPENDICES

ACRONYMS AND ABBREVIATIONS

Agencies	NYSDEC and USEPA
AOC	Administrative Order on Consent
CMS	Corrective Measures Study
CSI	Central Surface Impoundment
ESI	Eastern Surface Impoundment
Facility	Agricultural Solutions facility located in Middleport, New York
FMC	FMC Corporation
ICM	Interim Corrective Measure
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
SPDES	State Pollutant Discharge Elimination System
USEPA	United States Environmental Protection Agency
WSI	Western Surface Impoundment
WTP	Water Treatment

1 INTRODUCTION

1.1 Overview

This is the Post-Closure Plan for surface impoundments at the FMC Corporation (FMC) Agricultural Solutions facility in the Village of Middleport and Town of Royalton, New York ("Facility" or "Site") (Figure 1). By letter dated March 18, 2015, the New York State Department of Environmental Conservation (NYSDEC) requested that FMC amend its May 1986 hazardous waste management facility permit application (under Title 6 of the New York Codes, Rules and Regulations [NYCRR], Part 373) for the Facility. Per Section 373-1.5(a)(2)(xiii), this Post-Closure Plan is a required component of, and is included with, FMC's amended permit application.

This Post-Closure Plan identifies the activities to be conducted, following closure of the surface impoundments, in accordance with Sections 373-2.7(g) and 373-2.11(f). This plan also includes a cost estimate for post-closure care of the surface impoundments, in accordance with Section 373-2.8(e).

1.2 Background

At the time of the 1986 application, FMC managed hazardous wastes in five container storage areas and managed contaminated surface water runoff as hazardous waste in three surface impoundments (Western, Central, and Eastern Surface Impoundments) subject to Part 373 permitting requirements. The five container storage areas were certified clean closed by 1996, with NYSDEC approval provided by letter dated August 24, 2001. In March 1988, FMC submitted the Plan of Closure: Surface Impoundments, FMC Corporation, Middleport, New York, Plant Site (1988 Closure Plan) which identified the elements necessary to close the three surface impoundments. By letters dated May 27, 1988 and July 14, 1988, NYSDEC conditionally approved the 1988 Closure Plan, with comments subsequently addressed in the August 1988 version of the plan. The Central Surface Impoundment (CSI) was certified closed in 1989, with NYSDEC approval provided by letter dated March 22, 1990.

FMC partially closed the Western Surface Impoundment (WSI) in 1988. Since then, the WSI has been used to manage non-hazardous surface water 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 by FMC, NYSDEC, and the United States Environmental Protection Agency (USEPA) (NYSDEC and USEPA together, "the Agencies") in July 1991. FMC ceased receiving contaminated surface water runoff in the Eastern Surface Impoundment (ESI) as of 1988; the ESI no longer serves as a surface impoundment. With NYSDEC's approval, non-hazardous 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, which specifies that final closure of the WSI and ESI is subject to the results of the RCRA Facility Investigation (RFI) and Corrective Measures Study (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 of at the Facility in units subject to Part 373 permitting requirements. 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 Section 373-1.1(d)(1)(xii). Nonetheless, NYSDEC requested the amended application on March 18, 2015, and FMC has submitted it accordingly.

1.3 Plan Organization

In addition to this introduction, the following sections are provided:

- Section 2 – Facility and Surface Impoundments Description
- Section 3 – Post-Closure Activities
- Section 4 – Post-Closure Cost Estimate
- Section 5 – Post-Closure Notices
- Section 6 – Post-Closure Plan Amendment

2 FACILITY AND SURFACE IMPOUNDMENTS DESCRIPTION

2.1 Facility and ICMs

FMC owns and operates a pesticide formulation facility on approximately 102 acres of land. The Facility location is shown on Figure 1. The northern portion of the Facility comprises approximately 63 acres where historical pesticide manufacturing/formulation activities occurred. This area currently contains several large buildings used for pesticide formulation and warehousing. The majority of the northern portion of the Facility is covered with the buildings and an engineered cover comprised of either asphalt or vegetated soil over clay (North Site Cover). Surface water runoff from this portion of the Facility is directed primarily to asphalt-lined or grass-covered swales that drain to the WSI. Water collected in the WSI is pumped to and treated at the Facility's water treatment plant (WTP) and then discharged, through the Facility's monitoring station, to a downstream outfall at Tributary One (Outfall 001) in accordance with the Facility's State Pollutant Discharge Elimination System (SPDES) permit (NYSDEC permit number NY0000345). Use of the WSI as a non-hazardous surface water impoundment ensures that Facility runoff meets the SPDES-permitted discharge criteria and enables control and containment of a potential release of hazardous materials at the Facility. The approximate limits of the North Site Cover and WSI watershed, and the locations of the WSI, the WTP, and the SPDES monitoring station are shown on Figure 2.

The AOC authorizes the use of the WSI as an ICM for the control, containment, and collection for treatment of contaminated and/or potentially contaminated surface water runoff. The AOC also authorizes various groundwater collection systems as ICMs. Groundwater beneath the WSI and the asphalt-lined swales (including both overburden and shallow bedrock groundwater) is collected through underdrains that lead to 16 sumps, and then is pumped to the WTP for treatment. In addition, bedrock groundwater at the Facility is collected through a deep recovery well and 13 shallow recovery wells set in seven blast-fractured bedrock trenches that control groundwater migration. This collected water is also treated at the WTP.

2.2 Surface Impoundments Status

As previously summarized in Section 1, the CSI is certified closed, and the WSI and ESI are not closed. The CSI closure and post-closure documentation, and the WSI and ESI closure status are discussed below.

2.2.1 CSI

The CSI was certified closed in 1989, with NYSDEC approval provided by letter dated March 22, 1990. The CSI Closure Certification and NYSDEC approval letter are provided in Appendix A, along with documentation showing that required Post-Closure Notices were performed, as required by Section 373-2.7(i).

2.2.2 WSI

In 1988, NYSDEC approved FMC's request to effect closure of the WSI in two phases. The first phase was to remove and dispose of soil, sediment, and the existing liner in the WSI and install a new liner for use of the WSI as a collection basin for non-hazardous surface water runoff from the northern portion of the Facility. The first phase was completed in 1988 and documented in the Final Construction Report, Interim Closure, Western Surface Impoundment (1989). The runoff collected in the WSI was sampled and analyzed to confirm that it no longer exhibited hazardous waste characteristics for arsenic, which in turn demonstrated that pre-closure activities (e.g., North Site Cover) in other areas of the Facility were proving effective in reducing arsenic concentrations in surface water runoff.

In 1990, FMC requested a modification to the 1988 Closure Plan to defer the final phase of WSI closure (backfill and cover installation) in order to allow continued use of the WSI as a nonhazardous surface water impoundment. The proposed modifications were presented in the Modifications to Plan of Closure, Western Surface Impoundment, FMC Corporation, Middleport, New York (1990 Modified WSI Closure Plan). This WSI closure modification was incorporated into the AOC (Section VI, Paragraph 6.j) as part of the ICM provisions. As specified in the AOC, use of the WSI as a nonhazardous surface water impoundment is contingent upon continued operation of the WSI underdrain system, implementation of a formal WSI monitoring program, and implementation of a contingency plan in the event that the WSI is found to contain hazardous wastes.

FMC's Western Surface Impoundment (WSI) Operations Plan (WSI Operations Plan) contains the WSI Monitoring Work Plan and the WSI Contingency Plan as required by AOC Section VI, Paragraphs 6.j(2) and 6.j(3), respectively. The 2016 draft version of the WSI Operations Plan is an update from the

Western Surface Impoundment (WSI) Operations Plan, Revision No. 1 (1994) which incorporates a 1993 revision to the WSI surface water sampling and analyses program; a 1995 revision to the WSI sediment sampling and analyses protocol; revisions to the WSI operations, maintenance and monitoring (OM&M) functions as recommended in the North Site Cover Evaluation Final Report (2012); the design and construction of a WSI berm extension (2013-2015); and proposed changes to the WSI monitoring program described therein. The Amended Permit Application includes a WSI Closure Plan (draft 2016) that anticipates continued operation of the WSI as a non-hazardous surface water runoff collection basin for the foreseeable future, with final closure subject to the results of the RFI/CMS process, as specified in the AOC.

2.2.3 ESI

FMC ceased receiving or managing contaminated surface water runoff in the ESI as of 1988; the ESI no longer serves as an impoundment. With NYSDEC's approval, the footprint of the former ESI was used to place soil generated from off-site interim corrective actions between 1996 and 2011. The Amended Permit Application includes an ESI Closure Plan (draft 2016), which outlines the additional steps needed to complete final ESI closure. However, as with the WSI, the AOC specifies that final closure of the ESI is subject to the results of the RFI/CMS process. A draft RFI Report for the ESI and surrounding Eastern Parcel portion of the Facility was provided to NYSDEC in March 2014. In the interim, the inactive status of the ESI will be maintained in accordance with the AOC (Section VI, Paragraph 4.a). If needed based on the results of the RFI/CMS process, the steps required for final ESI closure and the post-closure scope will be detailed in a closure plan modification for the ESI in accordance with Section 373-2.7(c).

3 POST-CLOSURE ACTIVITIES [SECTION 373-2.7(G) AND 2.11(F)]

The specific post-closure activities for the surface impoundments will, to some extent, be dependent on the final closure of the WSI and ESI and the final corrective measure to be determined for the Facility under the RCRA Corrective Action program. Post-closure activities at the Facility will be consistent with Section 373-2.11(f)(2) applicable requirements and are expected to include the components of the OM&M programs for remedial systems (ICMs) currently in place at the Facility, consisting of the following:

1. maintenance of an engineered cover system installed over the northern portion of the Facility (North Site Cover), including the cover systems for the closed CSI and ESI (to be completed in the future);
2. use of the WSI for the collection of non-hazardous surface water runoff from the northern portion of the Facility;
3. collection of shallow groundwater/surface water from 16 underdrains and/or sumps, including the WSI underdrain and sump;
4. extraction of shallow bedrock groundwater from 13 wells installed in seven blast-fractured bedrock trenches and one deep bedrock groundwater extraction well; and,

5. treatment of collected groundwater and surface water at the Facility's WTP, prior to discharge under the terms and conditions of the Facility's SPDES permit.

Expected OM&M activities and associated health and safety requirements for these ICMs are identified in the following plans:

Plan Title	Activities
Western Surface Impoundment (WSI) Operations Plan (WSI Operations Plan)	Operation of the WSI and WSI underdrain sump and pump; inspection and maintenance of the WSI components; and sampling and analysis of WSI surface water and sediment
North Site Cover Operations and Maintenance Plan (North Site Cover O&M Plan)	Operation of swale underdrain sumps and pumps; and inspection and maintenance of the North Site Cover (vegetated and asphalt covers)
Groundwater Extraction System Operations and Maintenance Plan (Groundwater Extraction O&M Plan)	Operation, inspection, and maintenance of groundwater recovery trenches, pumps, and force mains
Groundwater Monitoring Program for Remedial Systems Effectiveness Monitoring (GMP)	Sampling and analysis of groundwater collected from designated on-site and off-site monitoring wells for specified constituents and parameters
Quality Assurance Project Plan (QAPP)	Sampling procedures and analytical methods, including quality assurance, data validation, and data reporting procedures
Security and Facility Inspection Plan	Site security and access control activities, including maintenance of existing Facility perimeter fence, gates, and signage.
Health and Safety Plan (HASP)	Minimum health and safety requirements to be followed during work conducted as part of RCRA corrective action activities or associated with existing ICMs at the Site or in off-Site areas.

In addition to the above plans, post-closure activities will include operation and maintenance of the WTP for treatment of surface water collected in the WSI and groundwater/surface water collected by the above referenced groundwater extraction and collection systems pursuant to the terms and conditions of the Facility's SPDES permit. In accordance with the terms and conditions of the AOC, status reports on the above activities will be provided to the NYSDEC quarterly.

Post-closure care for the surface impoundments will be performed as part of a Site-wide Site Management Plan (SMP) that will be prepared by FMC as a required component of FMC's amended

permit application. Contact information for the person/office to contact about the surface impoundments or Facility during the post-closure care period is provided in Appendix B.

4 POST-CLOSURE COST ESTIMATE [SECTION 373-2.8 (E)]

As identified above, post-closure activities at the Facility are expected to include the components of the OM&M programs for remedial systems (ICMs) currently in place at the Facility. By letter dated December 15, 2015, FMC provided estimated post-closure costs to NYSDEC (Attachment O of the Amended Part 373 Permit Application). A copy of that estimate is provided in Appendix C.

5 POST-CLOSURE NOTICES [SECTION 373-2.7(I) AND (J)]

No later than 60 days after certification of final closure of the WSI and ESI, FMC will:

1. submit to the local zoning authority or the authority with jurisdiction over local land use, the Niagara County Clerk, and the NYSDEC Commissioner a record of type, location, and quantity of hazardous waste disposed within each cell or disposal unit to the best of FMC's knowledge, in accordance with Section 373-2.7(i)(1); and
2. record a notification on the deed to the Facility property regarding the WSI and ESI in accordance with Section 373-2.7(i)(2)(i) and submit a certification to the NYSDEC Commissioner that this notification has been recorded.

No later than 60 days after completion of the established post-closure care period, FMC will submit a Certification of Completion of Post-Closure Care pursuant to Section 373-2.7(j) to certify that the post closure care period was performed in accordance with the specifications in this Post-Closure Plan.

6 POST-CLOSURE PLAN AMENDMENT [SECTION 373-2.7(H)]

FMC may request a written request for modification of this Post-Closure Plan during the active life of the Facility or during the post-closure period (assumed to be 30 years) in accordance with Section 373-2.7(h).

REFERENCES

ARCADIS. 2012. North Site Cover Evaluation Final Report. Arcadis of New York Inc. June 2012.

Conestoga-Rovers & Associates. 1988. Plan of Closure: Surface Impoundments, FMC Corporation, Middleport, New York, Plant Site. August 1988.

Conestoga-Rovers & Associates. 1989. Final Construction Report, Interim Closure, Western Surface Impoundment, FMC Middleport Plant Site, Middleport, New York, March 1989.

Conestoga-Rovers & Associates. 1990. Modifications to Plan of Closure, Western Surface Impoundment, FMC Corporation, Middleport, New York. March 1990.

Conestoga-Rovers & Associates. 1994. Western Surface Impoundment (WSI) Operations Plan Revision #1. January 1994.

Parsons. 2016. Groundwater Extraction System Operations and Maintenance Plan, FMC Middleport Site, EPA ID No. NYD002126845. Draft.

Parsons. 2016. Groundwater Monitoring Program for Remedial Systems Effectiveness Monitoring (GMP), FMC Middleport Site, EPA ID No. NYD002126845. Draft.

Parsons. 2016. North Site Cover Operations and Maintenance Plan, FMC Middleport Site, EPA ID No. NYD002126845. Draft.

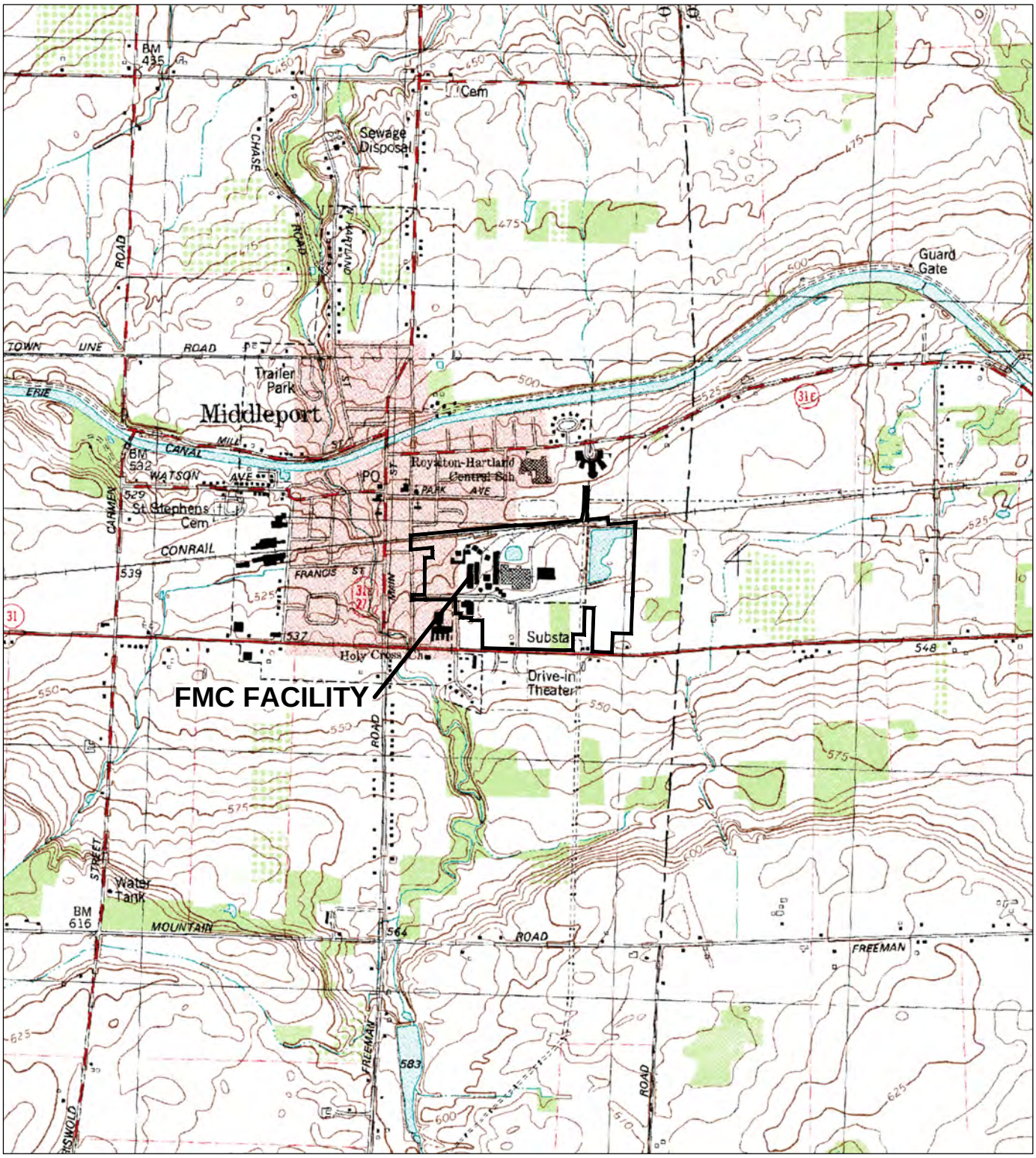
Parsons. 2016. Quality Assurance Project Plan (QAPP), FMC Middleport Site, EPA ID No. NYD002126845. Draft.

Parsons. 2016. Western Surface Impoundment (WSI) Operations Plan, FMC Middleport Site, EPA ID No. NYD002126845. Draft.

Parsons. 2016. Health and Safety Plan, FMC Middleport Site, EPA ID No. NYD002126845. Draft.

USEPA, NYSDEC, and FMC. 1991. Administrative Order on Consent [Docket No. II RCRA-90-3008(h)-0209] entered into by FMC, NYSDEC and USEPA, effective July 2, 1991.

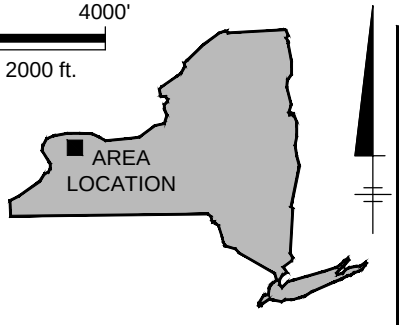
FIGURES



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., MEDINA, NY, 1980.

0 2000' 4000'

Approximate Scale: 1 in. = 2000 ft.

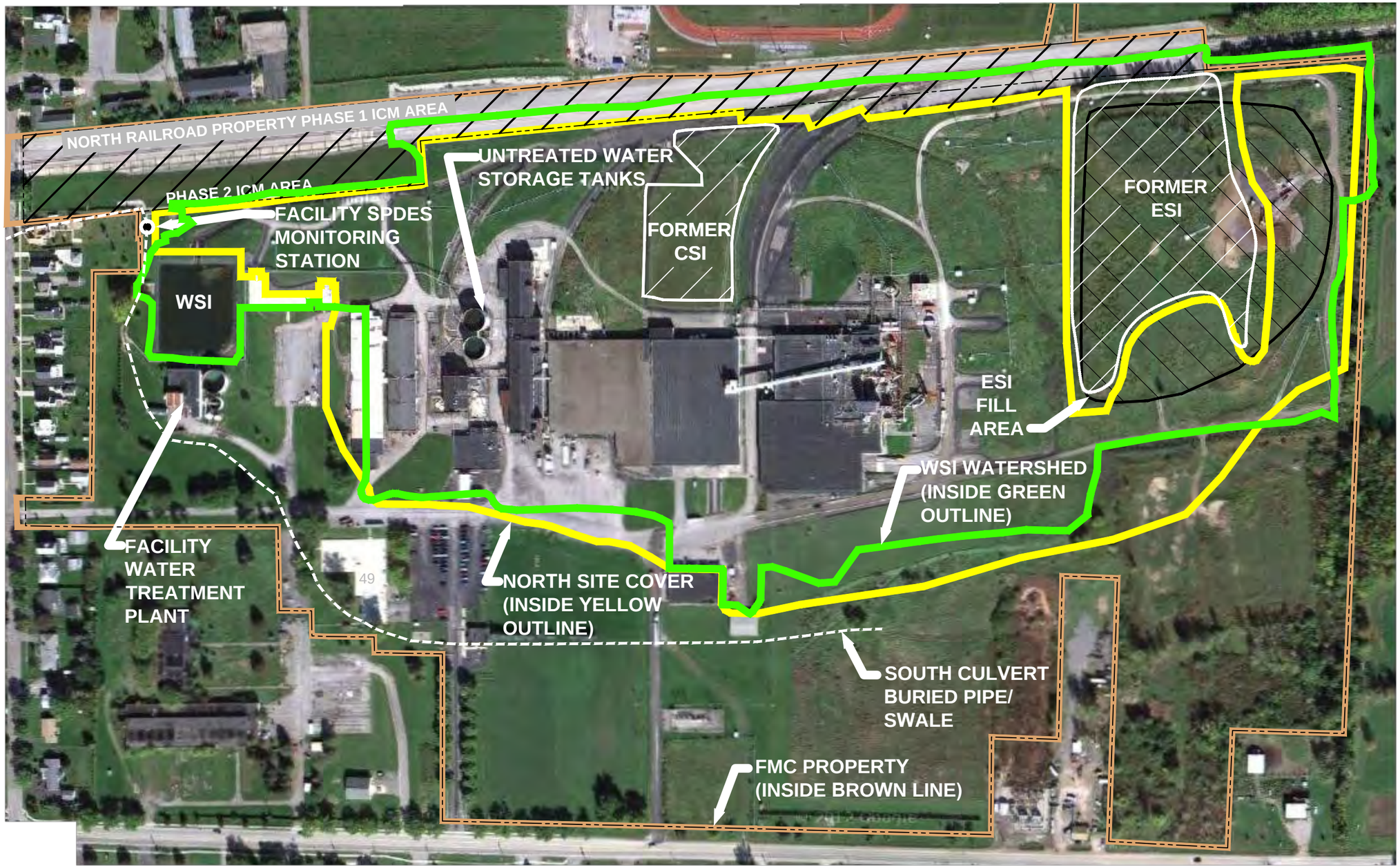


FMC CORPORATION
MIDDLEPORT, NEW YORK
POST CLOSURE PLAN

LOCATION MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1



NOTES:

1. LOCATIONS AND LINES ARE APPROXIMATE.
2. PHOTOGRAPH DATED SEPTEMBER 2011 (GOOGLE).
3. WSI = WESTERN SURFACE IMPOUNDMENT
   CSI = CENTRAL SURFACE IMPOUNDMENT
   ESI = EASTERN SURFACE IMPOUNDMENT

0 240' 480'

GRAPHIC SCALE

FMC CORPORATION
MIDDLEPORT, NEW YORK
POST CLOSURE PLAN

SITE PLAN

ARCADIS Design & Consultancy for natural and built assets

FIGURE
2

APPENDIX A

CSI CLOSURE AND POST-CLOSURE DOCUMENTATION

225.03.10

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233

Thomas C. Jorling
Commissioner

MAR 22 1990

RECEIVED
MAR 29 1990
FMC - MIDDLEPORT
ENVIRONMENTAL

Mark E. Diamond
Health, Safety, and Environment
FMC Corporation
100 Niagara Street
Middleport, New York 14105

RE: Certification of Closure
Central Surface Impoundment (CSI)
EPA ID No. NYD002126845

Dear Mr. Diamond:

The Department has received and reviewed your March 1, 1990 submittal containing additional information on the CSI Closure requested by our February 5, 1990 letter. Based on the review of this information, as well as the previously submitted Closure Certification Document, the Department accepts the certification of closure for the CSI and acknowledges that the unit in question has been closed in accordance with applicable regulations and the approved closure plan. FMC must therefore immediately implement the Post-Closure Plan as it appears in Section 4.0 of the Closure Plan for the CSI.

The analytical results from the five (5) CSI sediment/soil samples which were included with the Certification documents are currently being evaluated by staff with regards to their acceptability. The QA/QC documentation transmitted with the data will be assessed to determine if it substantiates the data. Since the approved Closure Plan only requires the sampling and analysis of the sediment/soil samples by FMC, and does not require an evaluation of the data prior to certification, the Department hereby accepts FMC's closure certification. It is the Department's intention to address this CSI sampling data in future correspondence.

Under Part 373-3.8(d)(8), the Department hereby notifies FMC that it is no longer required to maintain financial assurance for closure of the Central Surface Impoundment. However, FMC must maintain financial assurance for the other regulated units and, under 373-3.9(f) must maintain financial assurance for post-closure care of all units.

Should you have any questions or concerns over this matter please contact Mr. Matt Mortefolio, of my staff, at 518/457-9253.

Sincerely,

Paul R. Counterman

Paul R. Counterman, P.E.
Director
Bureau of Hazardous Waste Facility Management
Division of Hazardous Substances Regulation

cc: M. Mortefolio

FMC Corporation

Agricultural Chemical Group
100 Niagara Street
Middleport New York 14105
716 735 3761 Twx 710 267 1790
Cable Fmcacd ntl

FMC

March 15, 1990

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

bc: 210.08.03
w/o encl.
D.C. Landgraf
W.K. Bruner
R.A. Peacock
R.S. Troell
W.C. Leung
225.03.10 (1990)

Niagara County Clerk
Niagara County Court House
Hawley and Park Avenue
Lockport, NY 14094

Mr. Thomas Arlington
Assessor & Building Inspector
5316 Royalton Road
Gasport, NY 14067

Mrs. Margaret Droman
Village Clerk
Main Street
Middleport, NY 14105

Re: Revised Survey Plat
Central Surface Impoundment Closure
FMC Corporation
Middleport, New York Plant
EPA I.D. No. NY002126845

Dear Sir/Madam:

FMC Corporation (FMC) closed the Central Surface Impoundment (CSI), regulated as a hazardous waste management unit under 6 NYCRR Subpart 373-3, and located at its Middleport New York plant site, in the fall of 1989. In accordance with 6 NYCRR section 373-3.7(f)(2), a survey plat of the closed CSI was submitted to the New York State Department of Environmental Conservation (NYSDEC) and other appropriate officials by letter dated November 8, 1989 (M.E. Diamond, FMC to T.C. Jorling, NYSDEC). The NYSDEC subsequently requested that FMC revise the survey plat to indicate "through the use of a bold boundary line, the actual extent of the regulated hazardous waste surface impoundment" and also "indicate the overall dimensions of said impoundment ..." FMC has prepared and is now submitting a revised survey plat (certified copy) for your records and in fulfillment of the regulatory requirement. The enclosed survey plat supercedes and should replace that which was submitted last November.

If you have any questions concerning this matter, please call me at 716/735-3761.

Yours very truly,

Mark E. Diamond

Mark E. Diamond
Health, Safety and Environmental
Affairs Manager

Enclosure
WCL/krb-#1488

pc: Mr. Thomas Jorling, Commissioner, NYSDEC, Albany
Mr. Paul Counterman, NYSDEC, Albany (w/o encl.)
Mr. Roger Murphy, NYSDEC, Albany "
Mr. Matthew Mortefolio, NYSDEC, Albany "
Mr. Peter Buechi, NYSDEC, Buffalo "

FMC Corporation

Agricultural Chemical Group
100 Niagara Street
Middleport New York 14105
716 735 3761 Twx 710 267 1790
Cable Fmcaccdintl

March 1, 1990

bc: 210.08.03
225.03.10
RS Troell
RA Peacock
R Pyle - CRA
WK Bruner
DC Landgraf
WC Leung

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

New York State Department of
Environmental Conservation
50 Wolf Road
Albany, New York 12233

Attn: Mr. Paul R. Counterman, P.E.
Director, Bureau of Hazardous
Waste Facility Management
Division of Hazardous Substances
Regulation

Re: Certification of Closure
Central Surface Impoundment
FMC Corporation
Middleport, New York Plant
EPA ID. No. NYD002126845

Dear Mr. Counterman:

By letter dated November 7, 1989, FMC Corporation (FMC) submitted a Certification of Closure and associated documents for the Central Surface Impoundment (CSI) located at FMC's Middleport, New York facility. The New York State Department of Conservation (NYSDEC) subsequently commented on the November 1989 submittal by letter dated February 5, 1990. FMC's response to NYSDEC's comments are as follows:

NYSDEC Comment No. I.1.

In addition to the final topographic contours depicted on the submitted plat, FMC must indicate through the use of a bold boundary line, the actual extent of the regulated hazardous waste surface impoundment. FMC must also indicate the overall dimensions of said impoundment to comply with 6NYCRR Part 373-3(f)(2). The revised Survey Plat is to be submitted to the Department and those other agencies identified in the regulations (i.e., 373-3.7(f)(2)), with an appropriate cover letter explaining the revision.

Response to Comment No. I.1.

The Survey Plat has been revised in accordance with the NYSDEC comments. The revised Certified Survey Plat is enclosed as Attachment 1 to this letter and will be re-submitted to the appropriate officials and/or agencies, in accordance with 6NYCRR 373-3.7(f)(2), along with an explanation of the revisions made.

NYSDEC Comment No. II.2.

The Engineer's Certification letter must display the stamp of the independent professional engineer registered in New York State who performed the review. The letter must be re-submitted with the proper stamp.

Response to Comment No. II.2.

The stamp of the New York State registered professional engineer who performed the review of the closure activities has been applied to the Engineer's Certification letter. A copy of this letter is enclosed in Attachment 2.

NYSDEC Comment No. III.3.

In Appendix E, on pages 19 and 20, two sample results (i.e., Sample No.'s S2263JA24 and S2263JA25) appear in these data sets which do not seem to be applicable to the CSI closure. These sample ID No.'s are identical to ones from the Northern Ditches Restoration Project, and are for samples of potentially contaminated soils from below the North ditch cover material. If this is true, revised pages must be submitted deleting these two sample results, to avoid confusing them with the CSI Closure Project.

Response to Comment No. III.3.

Sample numbers S2262JA24, S2263JA25 and S2263JA40 were collected during remediation of the north ditch and were included in the final report for that program. These data have been deleted from pages 19 and 20 of Appendix E. Copies of the revised pages are enclosed in Attachment 3.

NYSDEC Comment No. IV.4.

To verify that the proper vegetative cover was applied as specified by Appendix C, Section F of the approved Closure Plan, the Final Construction Report must identify the actual seed types used, the seed mixture ratios used and, the application concentration (i.e.,lbs/acre) of the seed mixture.

Response to Comment No. IV.4.

Page 16 of the Final Construction Report has been revised to include the seed type used, mixture ratios, and the application concentration. The revised page is enclosed as Attachment 4 to this letter.

NYSDEC General Comment

Also, the NYSDEC notes that certain levels of arsenic and lead in the soil used for closure (i.e., fills, clays, and topsoils), appear to be elevated above the background level of available off-site soil data. These results are located in Appendix E of the Final Construction Report (e.g., arsenic 80.9 ppm.). The levels of contaminants in the cover soils as well as other plant locations must be considered during the Corrective Action process.

Response to General Comment

FMC has not found the soils and clays used for closure to contain arsenic and lead concentrations above background levels. These materials (collectively referred to as cover soils) have been extensively sampled and analyzed for pesticides, base neutral acids (BNAs), and metals throughout the North Site Cover, Northern Ditches Restoration, and surface impoundment closure activities. The cover soils used in all three programs were initially sampled at the source in June 1987. Two samples were collected from the proposed borrow pits and analyzed for pesticides and metals. The arsenic and lead concentrations in the two samples are summarized in Attachment 5 and averaged 4.0 ppm and 19.0 ppm, respectively. Based on these results, it was determined at that time that cover soils from this source were below background levels for the area (based on literature references for western New York) and were suitable for use. Additional samples of the cover soils were taken during the North Site Cover construction and the Northern Ditches Restoration programs. The arsenic and lead concentrations for these samples are also summarized in Attachment 5 and averaged 10.1 ppm for arsenic and 41.2 ppm for lead, both of which are consistent with literature references to background for the area.

As required by the closure plan for the surface impoundments, four samples of topsoil, fill, and clay were collected in May 1988 and were analyzed for BNAs, pesticides, and metals. As noted by NYSDEC, the average arsenic concentration (60 ppm) for the four samples was above levels identified in the literature as background. Following the QA/QC review of these data, concerns as to reliability and possible laboratory problems were communicated to the laboratory. It was than determined to collect replicate samples. The analytical results for these replicates averaged less than 1 ppm for arsenic and 32 ppm for lead, well within background values.

Based on the foregoing work and analyses, FMC firmly believes that the cover soils used in the closure of the Central Surface Impoundment, as well as in the North Sites Cover and Northern Ditches Restoration programs, did not contain arsenic or lead levels in excess of background values. Therefore, we do not understand the Corrective Action process, as referenced by NYSDEC, to have any particular applicability to the areas where cover soils have been used or applied at the site.

If you have any questions concerning this letter or matters discussed, please call me at (716/735-3761).

Your very truly,

Mark E. Diamond
Health, Safety and Environmental
Affairs Manager

MED/KRB-#1474

pc: Mr. R. Murphy, NYSDEC, Albany
Mr. M. Mortefolio, NYSDEC, Albany
Mr. P. Buechi, NYSDEC, Buffalo
Mr. Y. Erk, NYSDEC, Buffalo

DC 210.08.03
225.03.10
DC Landgraf
WE Bruner
RA Peacock
RS Troell
R Pyle CRA

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233

Thomas C. Jorling
Commissioner

FEB - 5 1990

Mr. Mark E. Diamond
Health, Safety, Environmental Affairs Manager
FMC Corporation
Agricultural Chemical Group
100 Niagara Street
Middleport, NY 14105

RE: FMC Middleport
Central Surface Impoundment (CSI) Closure Certification
EPA ID No. NYD002126845

Dear Mr. Diamond:

The New York State Department of Environmental Conservation (NYSDEC) staff, has completed review of the submitted CSI Closure Certification documents which include: 1) the Survey Plat for the unit in question; 2) the Engineer's Certification letter and; 3) the Final Construction Report. The staff's review of these documents have found them, for the most part, to be complete. However, certain minor deficiencies exist in them which must be corrected before the NYSDEC can accept the Certification of Closure for this unit. These deficiencies are expressed in the following attachment.

The CSI Sediment/Soil sampling data is currently undergoing a QA/QC review by NYSDEC staff and may be addressed in future correspondence.

Also, the NYSDEC notes that certain levels of arsenic and lead in the soils used for closure (i.e., fills, clays, and topsoils), appear to be elevated above the background levels of available off-site soil data. These results are located in Appendix E of the Final Construction Report (e.g., arsenic 80.9 ppm.). The levels of contaminants in the cover soils as well as other Plant locations must be considered during the Corrective Action process.

To provide an acceptable closure certification, please provide the NYSDEC with revised plans, pages, or sections (if applicable) which correct the deficiencies presented in this letter's attachment. These revisions should be submitted no later than March 1, 1990.

If you have any questions or concerns on this matter, please contact Mr. Matt J. Mortefolio of my staff at 518/457-9253.

Sincerely,

Paul R. Counterman

Paul R. Counterman, P.E.
Director
Bureau of Hazardous Waste Facility Management
Division of Hazardous Substances Regulation

Attachment

cc: w/att. - M. Mortefolio

ATTACHMENT

Deficiencies in Certification Documents

I Survey Plat:

1. In addition to the final topographic contours depicted on the submitted plat, FMC must indicate through the use of a bold boundary line, the actual extent of the regulated hazardous waste surface impoundment. FMC must also indicate the overall dimensions of said impoundment to comply with 6NYCRR Part 373-3(f)(2). The revised Survey Plat is to be submitted to the Department and those other agencies identified in the regulations (i.e., 373-3.7(f)(2)), with an appropriate cover letter explaining the revision.

II Engineers Certification:

2. The Engineer's Certification letter must display the stamp of the independent professional engineer registered in New York State who performed the review. The letter must be re-submitted with the proper stamp.

III Final Construction Report:

3. In Appendix E, on pages 19 and 20 two sample results (i.e., Sample No.'s S2263JA24 and S2263JA25) appear in these data sets which do not seem to be applicable to the CSI closure. These sample ID No.'s are identical to ones from the Northern Ditches Restoration Project, and are for samples of potentially contaminated soils from below the North ditch cover material. If this is true, revised pages must be submitted deleting these two sample results, to avoid confusing them with the CSI Closure Project.

4. To verify that the proper vegetative cover was applied as specified by Appendix C, Section F of the approved Closure Plan, the Final Construction Report must identify the actual seed types used, the seed mixture ratios used and, the application concentration (i.e., lbs/acre) of the seed mixture.

FMC Corporation

Agricultural Chemical Group
100 Niagara Street
Middleport New York 14105
716 735 3761 Twx 710 267 1790
Cable Fmcacdintl

bc: 210.08.03*
DC Landgraf-Phil*
WK Bruner-Phil*
RA Peacock*
RS Troell-Prin*
WC Leung*
R Pyle-CRA*
225.03.10 (1989)*

November 7, 1989
Revised: November 16, 1989
Note: Revisions underlined

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

New York State Department of
Environmental Conservation
50 Wolf Road, Room 604
Albany, New York 12233

Attn: Mr. Thomas C. Jorling
Commissioner

Re: Certification of Closure
Central Surface Impoundment
FMC Corporation
Middleport, New York Plant
EPA ID No. NYD002126845

Dear Mr. Jorling:

FMC Corporation (FMC) is now submitting a Certification of Closure for the Central Surface Impoundment located at FMC's Middleport, New York facility to the New York State Department of Environmental Conservation (NYSDEC). This document, prepared pursuant to the provisions of 6 NYCRR Section 373-3.7(f), and signed on behalf of FMC, as owner and operator of the Middleport facility, by its plant manager at Middleport and by an independent New York State registered professional engineer, is enclosed. In addition, for your information and files, enclosed is a copy of the report, "Final Construction Report - Closure of the Central Surface Impoundment, FMC Corporation, Middleport, New York," dated October 1989.

The closure of the Central Surface Impoundment was completed in accordance with the "Plan of Closure: Surface Impoundments, FMC Corporation, Middleport, New York Plant Site," dated March 7, 1988, as amended by submittal of March 12, 1988, and approved by NYSDEC by letter dated May 27, 1988, following a legislative public hearing and

receipt of comments. Closure was completed on September 9, 1989, in accordance with the schedule submitted by FMC in letters dated November 8, 1988, and April 7, 1989, and approved by NYSDEC by letter dated April 25, 1989.

If there are any questions regarding this matter or the enclosed documents, please contact me at the above address or phone at 716/735-3761.

Yours very truly,

Mark E. Diamond

Mark E. Diamond
Health, Safety, Environmental
Affairs Manager

Enclosures

MED:BH/1051

pc: Mr. P. Counterman, NYSDEC, Albany
Mr. P. Beuchi, NYSDEC Region 9, Buffalo
Mr. R. Murphy, NYSDEC, Albany *
Mr. M. Mortefolio, NYSDEC, Albany *
Mr. C. Allen, NYSDEC, Albany *
Mr. Y. Erk, NYSDEC Region 9, Buffalo *
Ms. S. Stanish, NYSDOH, Albany *
Mr. F. Langone, U.S. Environmental Protection Agency, Region II, New York *
Mr. M. Hopkins, NCHD *
Ms. M. Droman, Village Clerk, Village of Middleport, New York *

*(w/o enclosure)

FMC Corporation

Agricultural Chemical Group
100 Niagara Street
Middleport New York 14105
716 735 3761 Twx 710 267 1790
Cable Fmcacdintl

bc: 210.08.03
DC Landgraf-Phil
WK Bruner-Phil
RA Peacock
RS Troell-Prin
WC Leung
R Pyle-CRA (w/o encl)
225.03.10 (1989)(w/o encl)

November 8, 1989

Mr. Thomas C. Jorling
Commissioner
New York State Department of
Environmental Conservation
50 Wolf Road
Albany, New York 12233-0001

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: Survey Plat
Central Surface Impoundment Closure
FMC Corporation
Middleport, New York Plant
EPA ID No. NYD002126845

Dear Sir:

FMC Corporation (FMC) closed the Central Surface Impoundment, located at its Middleport, New York plant site on September 9, 1989 and submitted the certification of closure to the New York State Department of Environmental Conservation (NYSDEC) by letter dated, November 8, 1989. FMC is now submitting to the appropriate officials, as required by 6NYCRR 373-3.7(f)(2), the enclosed survey plat indicating the location and dimensions of the closed Central Surface Impoundment with respect to permanently surveyed benchmarks. This survey plat has been prepared and certified by a professional land surveyor registered in New York State.

If you have any questions or require any further information, please call me at 716/735-3761.

Yours very truly,

Mark E. Diamond

Mark E. Diamond
Health, Safety, Environmental
Affairs Manager

Enclosure

MED:BH/1054

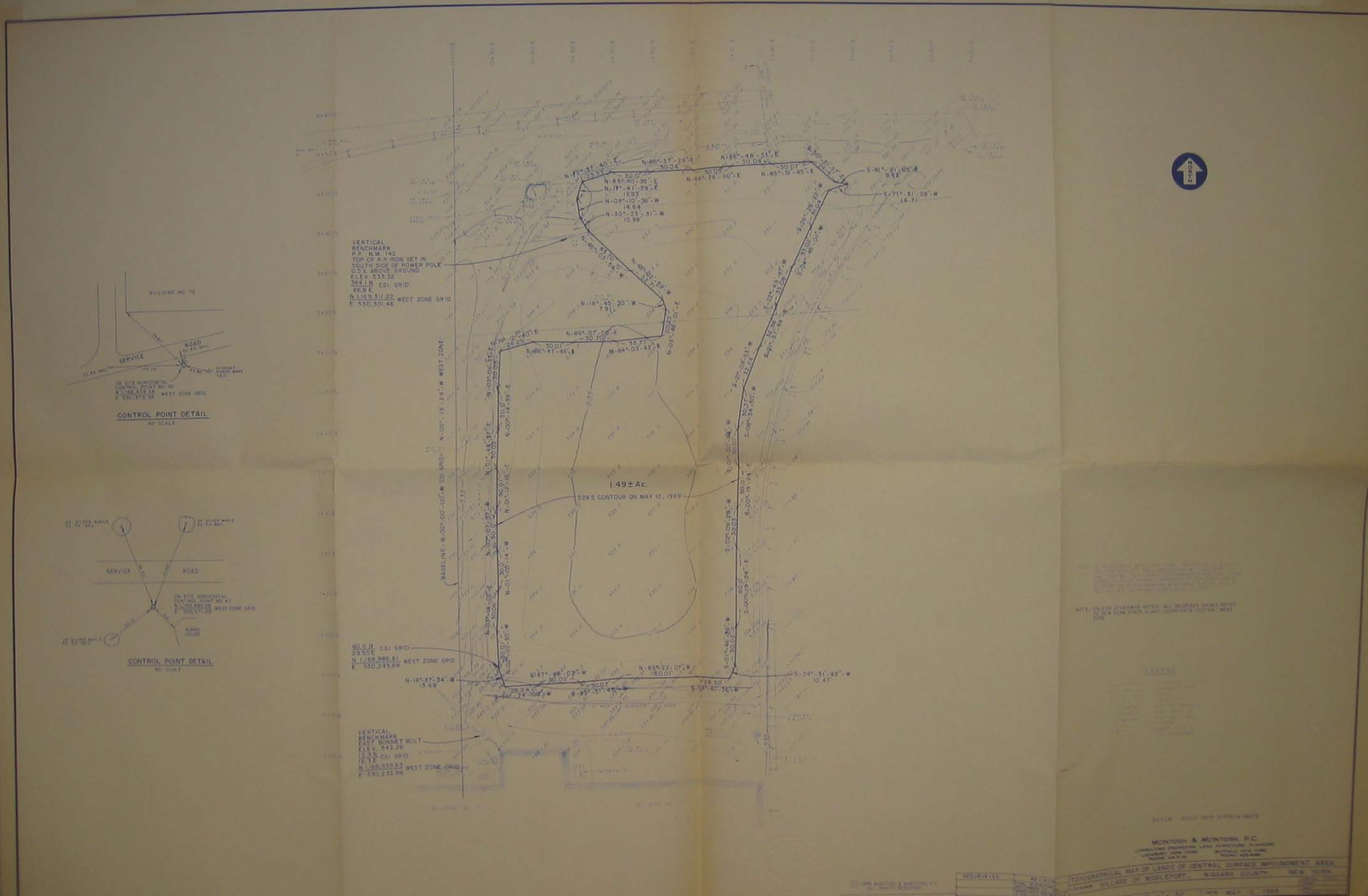
pc: Mr. P. Counterman, NYSDEC, Albany
Mr. R. Murphy, NYSDEC, Albany (w/o enclosure)
Mr. M. Mortofolio, NYSDEC, Albany (w/o enclosure)
Mr. P. Beuchi, NYSDEC, Buffalo
Niagara County Clerk
Mr. T. Arlington, Assessor & Building Inspector
Mrs. M. Droman, Village Clerk, Village of Middleport, NY

ATTACHMENT 1

FMC CORPORATION
MIDDLEPORT, NEW YORK PLANT

SURVEY PLAT

CENTRAL SURFACE IMPOUNDMENT
FOLLOWING FINAL COVER CONSTRUCTION


VERTICAL BENCHMARK
P.P. N.M. 142
TOP OF R.R. IRON SET IN SOUTH SIDE OF POWER POLE
0.5± ABOVE GROUND
ELEV. 533.32
86.9 E
N 1,169,311.22 WEST ZONE GRID
E 530,301.46
BUILDING NO. 72
SERVICE
ROAD
CONTROL POINT DETAIL
NO SCALE
SERVICE
ROAD
CONTROL POINT DETAIL
NO SCALE
BASELINE - N-00°-00'-00"-W CSI GRID - N-00°-19'-24"-W WEST ZONE
1.49 ± Ac.
529.5 CONTOUR ON MAY 12, 1989
N-86°-48'-51"-E
N-86°-37'-26"-E
N-86°-26'-00"-E
N-85°-51'-45"-E
S-81°-31'-03"-E
S-71°-31'-26"-W
N-17°-41'-29"-E
N-08°-10'-36"-W
N-30°-23'-31"-W
N-18°-45'-30"-W
N-89°-07'-06"-E
N-84°-03'-42"-E
N-89°-22'-07"-E
160.01
N-18°-37'-34"-W
13.69
S-24°-31'-42"-W
10.47
VERTICAL BENCHMARK
EAST BONNET BOLT
ELEV. 542.26
N 1,168,986.81 WEST ZONE GRID
E 530,245.89
N 1,168,939.63 WEST ZONE GRID
E 530,232.96
McINTOSH & McINTOSH, P.C.
TOPOGRAPHICAL MAP OF LANDS OF CENTRAL SURFACE IMPOUNDMENT AREA
VILLAGE OF MIDDLEPORT, NIAGARA COUNTY, NEW YORK

ATTACHMENT 2

CLOSURE CERTIFICATION LETTER

October 31, 1989

Mr. Robert Pyle
Conestoga-Rovers & Associates, Ltd.
7703 Niagara Falls Boulevard
Niagara Falls, NY 14301

Re: Central Surface Impoundment at
FMC Corporation
Middleport, New York
Mc & Mc Job No. 8916

Dear Bob:

This letter will certify that I have reviewed the Final Construction Report for the subject project. Based on my visit to the site, this report, dated October 1989, and the work performed are in agreement with the Plan of Closure for Surface Impoundments at this site.

Yours truly,

Michael F. Patterson

Michael F. Patterson, P.E.
Vice President, McIntosh & McIntosh, P.C.
Lockport, New York

Jackson E. Pattey, Jr.
Plant Manager, FMC Corporation
Middleport, New York

STATE OF NEW YORK
MICHAEL F. PATTERSON
LIC. NO. 048774
LICENSED PROFESSIONAL ENGINEER

Michael F. Patterson

TOTAL P.02

ATTACHMENT 3

REVISED PAGES 19 AND 20 OF APPENDIX E TO
FINAL CONSTRUCTION REPORT
CLOSURE OF THE CENTRAL SURFACE IMPOUNDMENT

FMC MIDDLEPORT PLANT SITE

PREPARED FOR: CONESTOGA ROVERS

Metals Analysis for: ARSENIC

Date Sampled: 5-12-88 TO 5-13-88
Date Received: 5-13-88

SAMPLE ID CUST.	HAS #	EPA METHOD	DATE PREPARED	DATE ANALYZED	DETECTION LIMIT	RESULT PPM	QC *
S2262JA-1	447-003	200.7	6-7-88	6-10-88	5.39	80.9	95
S2262JA-2	447-004	200.7	6-7-88	6-10-88	3.94	39	95
S2262JA-3	447-005	200.7	6-7-88	6-10-88	4.92	44.1	95
S2262JA-4	447-006	200.7	6-7-88	6-10-88	3.43	79	95
S2262JA-5	447-007	200.7	6-7-88	6-10-88	0.05	<DL	95

*THIS INDICATES A 95% CONFIDENCE LIMIT ACHIEVED WITH AN EPA QUALITY CONTROL SOLUTION ANALYZED ALONG WITH YOUR SAMPLE.

Data Release Authorized by: DF Calland Date: 7/6/88
Section Manager

HUNTINGDON ANALYTICAL SERVICES, INC.
ENVIRONMENTAL REPORT ELAP #10833

PREPARED FOR: CONESTOGA ROVERS

Metals Analysis for: LEAD

Date Sampled: 5-12-88 TO 5-13-88
Date Received: 5-13-88

SAMPLE ID CUST.	HAS #	EPA METHOD	DATE PREPARED	DATE ANALYZED	DETECTION LIMIT	RESULT PPM	QC *
S2262JA-1	447-003	200.7	6-7-88	6-10-88	5.39	53.7	95
S2262JA-2	447-004	200.7	6-7-88	6-10-88	3.94	58.3	95
S2262JA-3	447-005	200.7	6-7-88	6-10-88	4.92	61.4	95
S2262JA-4	447-006	200.7	6-7-88	6-10-88	3.43	48.1	95
S2262JA-5	447-007	200.7	6-7-88	6-10-88	0.05	<DL	95

*THIS INDICATES A 95% CONFIDENCE LIMIT ACHIEVED WITH AN EPA QUALITY CONTROL SOLUTION ANALYZED ALONG WITH YOUR SAMPLE.

Data Release Authorized by: D F Cullen Date: 7/6/88

ATTACHMENT 4

REVISED PAGE 16 OF

FINAL CONSTRUCTION REPORT
CLOSURE OF THE CENTRAL SURFACE IMPOUNDMENT

FMC MIDDLEPORT PLANT SITE

The grass seed was applied at a rate of 240 pounds per acre and consisted of 140 pounds of Kentucky Bluegrass, 70 pounds of Creeping Red Fescue and 30 pounds of Perennial Ryegrass.

Sheet runoff from the completed impoundment is directed to two existing asphalt lined swales north and west of the CSI. New asphalt lined swales were constructed east and south of the impoundment to provide drainage relief for the entire impoundment cover.

A topographical survey of the completed final cover was performed on September 25, 1989 by McIntosh and McIntosh of Lockport, New York and is presented on Plan 3. Two cross-sections through the closed impoundment are presented on Figure 3.2 and 3.3.

3.4.5 Project Closeout

All equipment which may have come in contact with potentially contaminated sediment was transferred to the Site decontamination pad and cleaned using a high pressure water wash. Decontamination wash waters were collected and treated at the on-Site Surface Water Treatment Plant. All exposed surfaces of decontaminated equipment were visually inspected to ensure all visible dust and dirt was removed.

FMC has commenced post-closure activities for the monitoring, inspection and maintenance of the final cover in accordance with Part 4.0 of the Plan of Closure.

ATTACHMENT 5

TOPSOIL/CLAY SOURCE SAMPLE DATA

SAMPLE SUMMARY

FMC Corporation
Middleport, New York
EPA I.D. No. NYD002126845

March 1990

ATTACHMENT 5

TOPSOIL/CLAY SOURCE SAMPLE DATA

SAMPLE SUMMARY

SAMPLE I.D./LOCATION	SAMPLE DATE	ARSENIC (PPM)	LEAD (PPM)
Initial Soils Qualifications			
Test Pit - 1	June 1987	4.7	16
Test Pit - 4	June 1987	3.3	22
North Site Cover Construction			
2261-51 - 1B	09/08/87	7.2	66.8
- 3B	09/08/87	7.7	76.5
- 4B	09/08/87	7.7	80.7
- 5B	09/08/87	7.0	82.9
- 6B	09/08/87	8.9	18.7
- 8B	09/21/87	15.0	49.3
- 9B	09/21/87	9.8	49.4
- 10B	09/21/87	18.5	59.1
- 12B	11/02/87	12.5	26.0
- 13B	11/02/87	12.2	18.6
- 14B	11/13/87	12.7	<5.1
- 15B	11/13/87	13.5	8.0
- 16B	11/13/87	7.4	13.3
North Ditch Restoration Project			
2261-51 - 17B	11/13/87	7.3	34.1
- 18B	11/13/87	7.2	<45.4
- 19B	12/10/87	6.7	25.2

FMC Corporation

Agricultural Chemical Group
100 Niagara Street
Middleport New York 14105
716 735 3761 Twx 710 267 1790
Cable Fmcacdint'l

bc: 210.08.03
DC Landgraf-Phil
WK Bruner-Phil
RA Peacock
RS Troell-Prin
WC Leung
R Pyle-CRA (w/o encl)
225.03.10 (1989)(w/o encl)

November 7, 1989

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

New York State Department of
Environmental Conservation
50 Wolf Road, Room 604
Albany, New York 12233

Attn: Mr. Thomas C. Jorling
Commissioner

Re: Certification of Closure
Central Surface Impoundment
FMC Corporation
Middleport, New York Plant
EPA ID No. NYD002126845

Dear Mr. Jorling:

FMC Corporation (FMC) is now submitting a Certification of Closure for the Central Surface Impoundment located at FMC's Middleport, New York facility to the New York State Department of Environmental Conservation (NYSDEC). This document, prepared pursuant to the provisions of 6 NYCRR Section 373-3.7(f), and signed on behalf of FMC, as owner and operator of the Middleport facility, by its plant manager at Middleport and by an independent New York State registered professional engineer, is enclosed. In addition, for your information and files, enclosed is a copy of the report, "Final Construction Report - Closure of the Central Surface Impoundment, FMC Corporation, Middleport, New York," dated November 1989.

The closure of the Central Surface Impoundment was completed in accordance with the "Plan of Closure: Surface Impoundments, FMC Corporation, Middleport, New York Plant Site," dated March 7, 1988, as amended by submittal of March 27, 1988, following a legislative public

hearing and receipt of comments. Closure was completed on September 9, 1989, in accordance with the schedule submitted by FMC in letters dated November 8, 1988, and April 7, 1989, and approved by NYSDEC by letter dated April 25, 1989.

If there are any questions regarding this matter or the enclosed documents, please contact me at the above address or phone at 716/735-3761.

Yours very truly,

Mark E. Diamond

Mark E. Diamond
Health, Safety, Environmental
Affairs Manager

Enclosures

MED:BH/1051

pc: Mr. P. Counterman, NYSDEC, Albany
Mr. P. Beuchi, NYSDEC Region 9, Buffalo
Mr. R. Murphy, NYSDEC, Albany *
Mr. M. Mortefolio, NYSDEC, Albany *
Mr. C. Allen, NYSDEC, Albany *
Mr. Y. Erk, NYSDEC Region 9, Buffalo *
Ms. S. Stanish, NYSDOH, Albany *
Mr. F. Langone, U.S. Environmental Protection Agency, Region II, New York *
Mr. M. Hopkins, NCHD *
Ms. M. Droman, Village Clerk, Village of Middleport, New York *

*(w/o enclosure)

October 31, 1989

Mr. Robert Pyle
Conestoga-Rovers & Associates, Ltd.
7703 Niagara Falls Boulevard
Niagara Falls, NY 14301

Re: Central Surface Impoundment at
FMC Corporation
Middleport, New York
Mc & Mc Job No. 8916

Dear Bob:

This letter will certify that I have reviewed the Final Construction Report for the subject project. Based on my visit to the site, this report, dated October 1989, and the work performed are in agreement with the Plan of Closure for Surface Impoundments at this site.

Yours truly,

Michael F. Patterson, P.E.
Vice President, McIntosh & McIntosh, P.C.
Lockport, New York

Jackson E. Pettrey, Jr.
Plant Manager, FMC Corporation
Middleport, New York

APPENDIX B
FACILITY CONTACT INFORMATION

Appendix B - Facility Contact Information

Gregory B. Sullivan
Middleport Plant Manager
FMC Corporation – Agricultural Solutions
100 Niagara Street
Middleport, New York 14105

greg.sullivan@fmc.com
Telephone: 315.735.6325

APPENDIX C
POST-CLOSURE COST ESTIMATE

ESTIMATED POST-CLOSURE COSTS
OPERATION, MAINTENANCE, AND MONITORING OF INTERIM CORRECTIVE MEASURES
FMC CORPORATION
MIDDLEPORT, NEW YORK FACILITY
December 2015

FMC Corporation (FMC) has implemented various interim corrective measures (ICMs) at its Middleport, NY Facility (Facility) and in off-site study areas under the terms and conditions of an Administrative Order on Consent (AOC), Docket No. II RCRA-90-3008(h)-0209, which was entered into by FMC, the New York State Department of Environmental Conservation (NYSDEC), and the United States Environmental Protection Agency (USEPA), effective July 2, 1991.

ICMs and associated activities underway at the Facility are intended to address impacted groundwater, soil and surface water and consist of the following:

i.) an engineered cover system installed over the northern portion of the Facility (North Site Cover);

ii.) use of the Western Surface Impoundment (WSI) for the collection of non-hazardous stormwater runoff from the northern portion of the Facility;

iii.) shallow groundwater/surface water collection from 16 underdrains and/or sumps, including the WSI underdrain and sump;

iv.) shallow bedrock groundwater extraction from 13 wells installed in seven blast-fractured bedrock trenches and one deep bedrock groundwater extraction well;

v.) treatment of collected groundwater and surface water at the Facility's Water Treatment Plant prior to discharge under the terms and conditions of the Facility's State Pollutant Discharge Elimination System Permit.

These Facility ICMs are anticipated to be in place after closure of the Facility's two surface impoundments not currently closed (WSI and Eastern Surface Impoundment (ESI)). The operation, maintenance, and monitoring (OM&M) activities associated with the above actions are described in existing plans (referenced in Table 1) submitted under the AOC and in the *Post-Closure Plan – Surface Impoundments* (Draft November 2015). These plans are referenced in Table 1.

In addition to the above Facility ICMs, FMC conducts OM&M activities as part of ICMs previously completed in off-site study areas: the North Railroad Property Phase 1 and Phase 2 ICM areas; the North Commercial/Industrial Area Wooded Parcel; and Culvert 105 Sediment Chamber at Margaret Droman Park. The OM&M activities for these off-site ICM areas are described in plans (referenced in Table 1) approved by the NYSDEC and USEPA under the terms and conditions of the AOC.

Estimated costs for continued OM&M activities for the ICMs at the Facility and in off-site ICM areas are presented in Table 1. The estimated costs are based on FMC's actual costs incurred in 2015 to hire a third-party contractor to implement the activities. Consistent with prior cost estimates submitted by FMC for this project, a discount rate is applied to the unit costs to develop a 30-year cost.

Post-Closure Cost Estimate for Operations, Maintenance, and Monitoring of Interim Corrective Measures
FMC Corporation - Middleport, New York Facility
December 2015

Item #	Description	Unit	Quantity	Unit Cost [1] (Materials and Labor)	Estimated Annual Cost	Annual Subtotals Cost	30-Year Present Worth of Annual Cost [2]
A.	**SURFACE WATER MANAGEMENT IN THE WSI, NORTH SITE COVER, NORTH RAILROAD PROPERTY PHASE 1 & 2 INTERIM CORRECTIVE MEASURES (ICM) AREAS, NORTH COMMERCIAL/INDUSTRIAL AREA WOODED PARCEL, and CULVERT 105 SEDIMENT CHAMBER AT MARGARET DROMAN PARK [3]**					**$ 96,000**	**$ 1,882,000**
1.	WSI routine inspection, monitoring, liner testing, maintenance/repair and routine surface water/sediment sampling and analyses.	EA	1	$15,000	$ 15,000		
2.	North Site Cover (including drainage swales, asphalt areas, and storm water attenuation structures) inspection, cleaning, mowing, tree removal, rodent control, asphalt sealing, and vegetative cover repair.	EA	1	$40,000	$ 40,000		
3.	North Railroad Property Phase 1 & 2 ICM cover system inspection, monitoring, cover maintenance, routine surface water sampling and analyses, quarterly and annual data management and reporting.	EA	4	$6,000	$ 24,000		
4.	Culvert 105 Sediment chamber inspection, sediment removal (as needed), surface water/sediment sampling and analyses, annual data management and reporting.	EA	1	$6,000	$ 6,000		
5.	North Commercial/Industrial Area Wooded Parcel inspection, mowing, storm water sampling and analyses, data management and annual certification[4].	EA	1	$11,000	$ 11,000		
B.	**SURFACE WATER AND GROUNDWATER EXTRACTION/COLLECTION AND TREATMENT SYSTEMS[5]**					**$ 1,377,000**	**$ 26,990,000**
6.	Inspection, operations and routine maintenance of shallow groundwater/surface water collection underdrain and sumps, bedrock groundwater extraction wells and trenches and associated ancillary equipment.	EA	1	$50,000	$ 50,000		
7.	Operations, inspection, and routine maintenance of the Water Treatment Plant, including storage tanks, forcemains and air stripper. This includes purchase of water treatment materials and chemicals, waste characterization, process sample analyses and routine sampling, analyses and reporting required by the Facility SPDES permit.	EA	1	$975,000	$ 975,000		
8.	Utilities (water, electric, gas) for the Water Treatment Plant and groundwater/surface water collection systems.	EA	1	$22,000	$ 22,000		
9.	Off-Site Waste disposal (i.e., trash, spent carbon, spent brine, spent ion exchange resin, filter cake, sediment, excavated soil and debris).	EA	1	$275,000	$ 275,000		
10.	Periodic equipment repair, upgrade and/or replacement for the extraction wells, underdrains, sumps, forcemains systems, Water Treatment Plant and storage tanks.	EA	1	$55,000	$ 55,000		

Post-Closure Cost Estimate for Operations, Maintenance, and Monitoring of Interim Corrective Measures
FMC Corporation - Middleport, New York Facility
December 2015

Item #	Description	Unit	Quantity	Unit Cost [(1)] (Materials and Labor)	Estimated Annual Cost	Annual Subtotals Cost	30-Year Present Worth of Annual Cost [(2)]
C.	**GROUNDWATER MONITORING PROGRAM [(6)]**					**$ 163,000**	**$ 3,195,000**
11.	Quarterly hydraulic monitoring and semiannual sampling.	Event	4	$12,000	$ 48,000		
12.	Annual hydraulic and sampling for four indicators and 5-year GIPL groundwater sampling.	Event	1	$40,000	$ 40,000		
13.	Monitoring well maintenance, repair & replacement.	EA	1	$10,000	$ 10,000		
14.	Laboratory sample analyses, data validation and database management.	EA	1	$65,000	$ 65,000		
D.	**OPERATION AND MAINTENANCE OF SITE ACCESS CONTROLS**					**$ 20,000**	**$ 392,000**
15.	Inspection and routine maintenance of Facility perimeter fence, gates and signage.	EA	1	$10,000	$ 10,000		
16.	Maintenance of Facility roadways that are not associated with the North Site Cover.	EA	1	$10,000	$ 10,000		
E.	**TECHNICAL SUPPORT**					**$ 160,000**	**$ 3,136,000**
17.	Quarterly reporting and annual post-closure certification.	EA	5	$20,000	$ 100,000		
18.	Miscellaneous engineering and general administrative costs.	EA	1	$60,000	$ 60,000		
F.	**CONTINGENCY**					**$ 331,200**	**$ 6,492,000**
19.	20% Contingency (of Items 1 through 16)	%	20%	$1,656,000	$ 331,200		
					TOTALS	**$ 2,147,200**	**$ 42,087,000**
					ROUNDED TOTALS	**$ 2,150,000**	**$ 42,100,000**

Notes:

(1) Unit cost estimates based on actual costs incurred by FMC in 2015 for independent contractors to implement.

(2) The 30-year present worth is estimated based on a 3% discount rate (ref: 2015 Discount Rates for Office of Management and Budget for OMB Circular No. A-94).

(3) Cost estimates for Category A Items (#1-5) based on the operations and maintenance of the North Site Cover, WSI for collection of non-hazardous storm water, North Railroad Property Phase 1 & 2 ICMs and Culvert 105 sediment chamber in accordance with the *North Site Cover Operations and Maintenance (O&M) Plan (May 2015 Draft); Western Surface Impoundment (WSI) Operations Plan (May 2015 Draft); Culvert 105 Sediment Chamber MH-N9 at Margaret Droman Park – 2007 Early Actions Monitoring and Maintenance Plan (June 2011); North Commercial/Industrial Area Wooded Parcel Site Management Plan Relative to 2007 Early Action Remedial Work (June 2011); and* Operation, Maintenance and Monitoring Plans for the North Railroad Property Phase 1 and 2 ICMs (June 2011 and March 2012, respectively).

(4) For Item 5, cost estimate for implmentation of the *North Commercial/Industrial Area Wooded Parcel Site Management Plan Relative to 2007 Early Action Remedial Work* (June 2011) was approved by NYSDEC and USEPA by letter dated August 8, 2012.

(5) Cost estimate for Categroy B Items (#6-10) is based on the operations and maintenance of groundwater extraction wells and groundwater/surface water collection underdrains and sumps and the Water Treatment Plant in accordance with the *North Site Cover Operations and Maintenance (O&M) Plan (May 2015 Draft); Groundwater Extraction System Operations and Maintenance (O&M) Plan (May 2015 Draft);* and terms and conditions of the Facility's *New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) permit (permit number NY0000345) (2002).*

(6) Cost estimate for Category C Items (#11-14) is based on the *Groundwater Monitoring Program for Remedial Systems Effectiveness Monitoring* (May 2015 Draft).

(7) Cost estimates to be reveiwed on an annual basis and adjusted for inflation.

Financial Assurance

original

Trust Agreement

Trust Agreement, the "Agreement," entered into as of June 26, 2003 by and between FMC Corporation, a Delaware corporation, the "Settlor," and Wachovia Bank, National Association, a national bank, the "Trustee."

Whereas, the New York State Department of Environmental Conservation (hereinafter referred to as "NYSDEC") has established certain regulations applicable to the Settlor, requiring that an owner or operator of a hazardous waste management facility shall provide assurance that funds will be available when needed for facility closure, and post-closure facility monitoring and maintenance (hereinafter referred to as "Closure and Post Closure"), and

Whereas, the Settlor has elected to establish a trust to provide all or part of such financial assurance for the facilities identified herein, and

Whereas, the Settlor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee,

Now, Therefore, the Settlor and the Trustee agree as follows:

Section 1. Definitions.

As used in this Agreement:

(a) The term "Settlor" means the owner or operator who enters into this Agreement and any successors or assigns of the Settlor.

(b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

(c) The term "Commissioner" means the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's duly appointed designee.

Section 2. Identification of Facilities and Cost Estimates.

This Agreement pertains to the facilities and cost estimates identified on attached Schedule A

Section 3. Establishment of Fund.

The Settlor and the Trustee hereby establish a trust fund (hereinafter referred to as the "Fund") for the benefit of NYSDEC. The Settlor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B annexed hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible, nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Settlor, any payments necessary to discharge any liabilities of the Settlor established by NYSDEC.

Section 4. Payment for Closure, Post-closure.

The Trustee shall make payments from the Fund as the Commissioner shall direct, in writing, to provide for the payment of the costs of Closure and Post-closure of the facilities covered by this Agreement. The Trustee shall reimburse the Settlor or other persons as specified by the Commissioner from the Fund for the expenditures of such covered activities in such amounts as the Commissioner shall direct in writing. In addition, the Trustee shall refund to the Settlors such amounts as the Commissioner specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund.

Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management.

The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Settlor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his or her duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(a) Securities or other obligations of the Settlor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940,

15 USCA 80a-2(a) (see section 370.1(e)), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;

(b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and

(c) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment.

The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 USCA 80a-1 et seq. (see 6 NYCRR 370.1(e)), including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee.

Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such

securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To accept additions to the Fund from sources other than the Settlor of the Trust.

(f) To contest, compromise, or otherwise settle any claim in favor of the Fund or Trustee, or in favor of third persons and against the Fund or Trustee.

Section 9. Taxes and Expenses.

All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the trustee to the extent not paid directly by the Settlor, and all of the proper charges and disbursements of the Trustee shall be paid from the Fund

Section 10. Annual Valuation.

The Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Settlor and to the Commissioner, a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days prior to the anniversary date of establishment of the Fund. The failure of the Settlor to object in writing to the Trustee within 90 days after the statement has been furnished to the Settlor and the Commissioner shall constitute a conclusively binding assent by the Settlor, barring the Settlor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel.

The Trustee may from time to time consult with counsel, who may be counsel to the Settlor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation.

The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Settlor.

Section 13. Successor Trustee.

The Trustee may resign or the Settlor may replace the Trustee, but such resignation or replacement shall not be effective until the Settlor has appointed a successor Trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Settlor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instruction. The successor trustee shall specify the date on which it assumes administration of the trust in writing sent to the Settlor, the Commissioner, and the present Trustee by certified mail, return receipt requested, 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee.

All orders, requests, and instructions by the Settlor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Settlor may designate by amendment to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Settlor's orders, requests, and instructions. All orders, requests, and instructions by the Commissioner to the Trustee shall be in writing, signed by the Commissioner, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Settlor or NYSDEC hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Settlor and/or NYSDEC except as provided for herein.

Section 15. Notice of Nonpayment.

The Trustee shall notify the Settlor and the Commissioner, by certified mail, return receipt requested, within 10 days following the expiration of the 30-day period after the anniversary of the establishment of the Trust, if no payment is received from the Settlor during that period. After the pay-in period is completed, the Trustee shall not be required to send a notice of nonpayment.

Section 16. Amendment of Agreement.

This Agreement may be amended by an instrument in writing executed by the Settlor, the Trustee, and the Commissioner or by the Trustee and the Commissioner if the Settlor ceases to exist.

Section 17. Irrevocability and Termination.

Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Settlor, the Trustee, and the Commissioner, or by the Trustee and the Commissioner if the Settlor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Settlor.

Section 18. Immunity and Indemnification.

The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Settlor or the Commissioner issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Settlor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Settlor fails to provide such defense.

Section 19. Choice of Law.

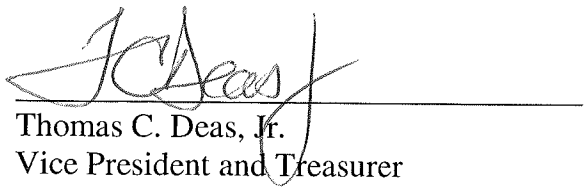
This Agreement shall be administered, construed, and enforced according to the laws of the State of New York.

Section 20. Interpretation.

As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in 6 NYCRR 373-2.8(j)(1) as such regulations were constituted on the date first above written.

FMC Corporation



Thomas C. Deas, Jr.
Vice President and Treasurer

Wachovia Bank, National Association

Alan Finn
Vice President

State of Commonwealth of Pennsylvania)
) SS
County of County of Philadelphia)

On this 15th day of July, 2003, before me personally came Alan G. Finn to me known who, by me duly sworn, did depose and say that (s)he resides in Hamilton Sq NJ; that (s)he is the Vice President of Wachovia Bank, National Association, the banking institution described in and which executed the within Trust Fund Agreement; and that (s)he signed his/her name thereto by authority of such banking institution.

Julia A. Fabregas
Notary Public

Notarial Seal
Julia A. Fabregas, Notary Public
Philadelphia, Philadelphia County
My Commission Expires Feb. 28, 2005
Member, Pennsylvania Association of Notaries

State of Pennsylvania)
) SS
County of Philadelphia)

On this 26th day of June, 2003, before me personally came Thomas C. Deas, Jr. to me known who, by me duly sworn, did depose and say that he resides in Haverford, Pennsylvania; that he is the Vice President and Treasurer of FMC Corporation, the corporation described in and which executed the within Trust Agreement; that he knew the seal of said corporation; that the seal affixed to said instrument was such corporate seal; that it was so affixed by order of the board of directors of said corporation, and that he signed his name thereto by like order.

Mary Ellen DiVito
~~Notary Public~~ COMMISSIONER OF DEEDS

MARY ELLEN DIVITO
COMMONWEALTH OF PENNSYLVANIA
COMMISSIONER OF DEEDS
My Commission Expires April 20, 2004

Trust Agreement

Schedule A

This Trust Agreement addresses the following facilities and closure and post-closure cost estimates.

Facilities

FMC Corporation-Agricultural Chemicals Division
100 Niagara Street
Middleport, NY 14105
EPA Identification Number: NYD002126845
Site Specific Remediation Number: 9-32-014

Current facility closure and post-closure cost estimate

$1,958,984 Closure
$4,180,064 Post Closure

Portion of facility closure and post-closure cost estimate for which financial assurance is demonstrated by this Trust Agreement

$1,958,984 Closure
$4,180,064 Post Closure

Trust Agreement

Schedule B

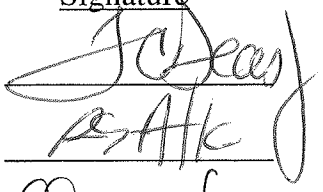
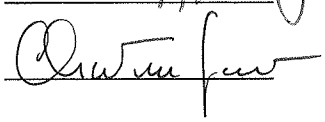
The following is a description of the property that comprises the trust fund (the "Fund") established under this Trust Agreement.

None at the time of trust establishment. Funding of this Standby Trust Agreement is contingent upon drafts against that primary Letter of Credit No. NY-00928-30024811 issued by Citibank, N.A. on February 1, 1999, and Letter of Credit No. NY-00928-30035329 issued by Citibank, N.A. on June 20, 2003.

Trust Agreement

Exhibit A

The following is the initial list of those persons (with their titles and specimen signatures appearing opposite their names) designated by the Settlor to give all orders, requests and instructions to the Trustee on behalf of the Settlor.

Name	Title	Signature
Thomas C. Deas, Jr.	Vice President & Treasurer	
Louis S. Houck	Director, Finance	
Charmienne Ganao	Manager, Corporate Finance	

FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104
USA

215.299.6000
fmc.com

March 29, 2017

Via Federal Express

Commissioner
New York State Department of Environmental Conservation
Division of Solid and Hazardous Materials
625 Broadway
Albany, NY 12233-7250

Re: Standby Trust Agreement, dated June 26, 2003, for Letters of Credit No. 00928-30035329, 00928-33024811 and 63666243 (EPA # NYD002126845-Middleport)

Dear Commissioner:

In accordance with the regulations covering annual increases in financial assurance to account for inflation, we have directed Citibank, the issuer of the above-referenced Letters of Credit to increase the total amount outstanding by $100,711. We are enclosing a new Schedule A and a new Schedule B for the companion Standby Trust Agreement for which US Bank is the Trustee. Please place these new schedules reflecting the increased financial assurance amount with the Standby Trust and discard the old Schedules A and B.

Sincerely,

James N. Tota, CTP
Manager, Treasury Operations

Enclosure

Trust Agreement

Schedule A

This Trust Agreement addresses the following facilities and closure and post-closure cost estimates.

Facilities

FMC Corporation-Agricultural Chemicals Division
100 Niagara Street
Middleport, NY 14105
EPA Identification Number: NYD002126845
Site Specific Remediation Number: 9-32-014

Current facility closure and post-closure cost estimate

$2,399,855 Closure
$5,447,858 Post Closure

Portion of facility closure and post-closure cost estimate for which financial assurance is demonstrated by this Trust Agreement

$2,399,855 Closure
$5,447,858 Post Closure

Trust Agreement

Schedule B

The following is a description of the property that comprises the trust fund (the "Fund") established under this Trust Agreement.

None at the time of trust establishment. Funding of this Standby Trust Agreement is contingent upon drafts against the following Letter of Credit in accordance with its terms.

Letter of Credit No. NY-00928-30024811 issued by Citibank, N.A. on February 1, 1999; Letter of Credit No. NY-00928-30035329 issued by Citibank, N.A. on June 20, 2003; Letter of Credit No. 63666243 issued by Citibank, N.A. on October 4, 2012 and subsequently amended (increased) on April 11, 2016 and further amended (increased) on March 29, 2017.

Citibank, N.A.

NORTH AMERICAN TRADE FINANCE

JUNE 23, 2003

AT THE REQUEST OF: FMC CORPORATION, 1735 MARKET STREET, PHILADELPHIA, PA. 19103, WE AMEND OUR REFERENCED LETTER OF CREDIT IN ITS ENTIRETY AS FOLLOWS:

QUOTE:
COMMISSIONER
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ATTN: DIVISION OF SOLID & HAZARDOUS MATERIALS
625 BROADWAY
ALBANY, NEW YORK 12233-7250

RE: LETTER OF CREDIT NO. NY-00928-30024811

DEAR SIR OR MADAM:

WE HEREBY ESTABLISH AND OPEN OUR IRREVOCABLE STANDBY LETTER OF CREDIT NO. NY-00928-30024811 IN YOUR FAVOR, AT THE REQUEST AND FOR THE ACCOUNT OF FMC CORPORATION, 1735 MARKET STREET, PHILADELPHIA, PENNSYLVANIA 19103 UP TO THE AGGREGATE AMOUNT OF SIX MILLION SIXTY THOUSAND TWO HUNDRED SIXTY FIVE AND 00/100 US DOLLARS ($6,060,265.00) AVAILABLE UPON PRESENTATION OF:

(1) YOUR SIGHT DRAFT, BEARING REFERENCE TO THIS LETTER OF CREDIT NO. NY-00928-30024811, AND

(2) YOUR SIGNED STATEMENT READING AS FOLLOWS: "I CERTIFY THAT THE AMOUNT OF THE DRAFT IS PAYABLE PURSUANT TO REGULATIONS ISSUED UNDER AUTHORITY OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW."

THIS LETTER OF CREDIT IS EFFECTIVE AS OF FEBRUARY 1, 1999 AND SHALL EXPIRE ON APRIL 25, 2000, BUT SUCH EXPIRATION DATE SHALL BE AUTOMATICALLY EXTENDED FOR A PERIOD OF AT LEAST ONE YEAR ON APRIL 25, 2000 AND ON EACH SUCCESSIVE EXPIRATION DATE THEREAFTER, UNLESS, AT LEAST 120 DAYS BEFORE THE CURENT EXPIRATION DATE, WE NOTIFY BOTH YOU AND FMC CORPORATION BY CERTIFIED MAIL, RETURN RECEIPT REQUESTED, THAT WE HAVE DECIDED NOT TO EXTEND THIS LETTER OF CREDIT BEYOND THE CURENT EXPIRATION DATE. IN THE EVENT YOU ARE SO NOTIFIED, ANY UNUSED PORTION OF THE CREDIT SHALL BE AVAILABLE UPON PRESENTATION OF YOUR SIGHT DRAFT AND THE ABOVE-REFERRED TO SIGNED STATEMENT FOR 120 DAYS AFTER THE DATE OF RECEIPT BY BOTH YOU AND FMC CORPORATION, AS SHOWN ON THE SIGNED RETURN RECEIPTS.

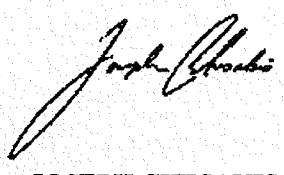
CITIBANK, N.A. AGREES THAT WHENEVER THIS LETTER OF CREDIT IS DRAWN ON, UNDER AND IN COMPLIANCE WITH THE TERMS OF THIS LETTER OF CREDIT, THAT CITIBANK N.A. SHALL DULY HONOR SUCH DRAFT UPON PRESENTATION TO CITIBANK N.A. AND CITIBANK N.A. SHALL DEPOSIT THE AMOUNT OF THE DRAFT INTO THE STANDBY TRUST FUND OF FMC CORPORATION IN ACCORDANCE WITH THE COMMISSIONER'S INSTRUCTIONS.

Citibank, N.A.

WE CERTIFY THAT THE WORDING OF THIS LETTER OF CREDIT IS IDENTICAL TO THE WORDING SPECIFIED IN 6 NYCRR 373-2.8 (j) (3), AS SUCH REGULATIONS WERE CONSTITUTED ON THE DATE SHOWN IMMEDIATELY BELOW.

THIS LETTER OF CREDIT IS SUBJECT TO AND GOVERNED BY THE LAWS OF THE STATE OF NEW YORK AND THE 1993 REVISION OF THE UNIFORM CUSTOMS AND PRACTICE FOR DOCUMENTARY CREDITS OF THE INTERNATIONAL CHAMBER OF COMMERCE (PUBLICATION 500).
UNQUOTE

VERY TRULY YOURS,



JOSEPH CHESAKIS
VICE PRESIDENT
AUTHORIZED SIGNATURE

Citibank,N.A.

OUR REFERENCE NO : 30035329

DATE : MAY 07, 2010

L/C AMENDMENT

IRREVOCABLE STANDBY LC

FROM:
CITIBANK,N.A.
C/O ITS SERVICER, CITICORP NORTH AMERICA, INC.
3800 CITIBANK CENTER
BUILDING B, 3RD FLOOR
TAMPA, FL 33610

AMENDMENT(S) TO STANDBY LETTER OF CREDIT

CREDIT NO.
30035329

ADVISING BANK:

APPLICANT:
F.M.C. CORPORATON
1735 MARKET STREET
PHILADELPHIA PA 191030000 U.S.A.

BENEFICIARY:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERV
ENVIRONMENTAL CONSERVATION, DIV.
OF SOLID AND HAZARDOUS MATERIALS
625 BROADWAY
ALBANY NY 122337250 U.S.A.

DEAR SIR(S),

THE LETTER OF CREDIT REFERENCED ABOVE IS AMENDED AS FOLLOWS:

L/C AMOUNT INCREASED BY: USD 84,142.00

NEW L/C AMOUNT AFTER AMENDMENT: USD 1,116,307.00

ALL OTHER TERMS AND CONDITIONS OF THE ORIGINAL CREDIT INSTRUMENT REMAIN UNCHANGED.

THIS AMENDMENT(S) IS AN INTEGRAL PART OF THE ORIGINAL CREDIT AND MUST BE ATTACHED THERETO.

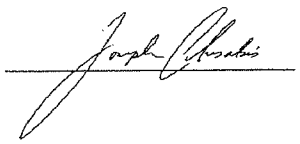
Citibank,N.A.

OUR REFERENCE NO : 30035329

PLEASE DIRECT ANY INQUIRIES, QUOTING OUR REFERENCE NUMBER, TO:

CUSTOMER SERVICE DEPARTMENT,
CITIBANK,N.A. C/O ITS SERVICER, CITICORP NORTH AMERICA, INC.3800 CITIBANK CENTERBUILDING B, 3RD FLOORTAMPA, FL 33610
TEL: 866-498-8670()
FAX: ()

WEBSITE:WWW.TRANSACTIONSERVICES.CITIGROUP.COM (CLICK ON TRADE SERVICES AND FINANCE)



AUTHORIZED SIGNATURE
CITIBANK,N.A.

OUR REFERENCE NO : 63666243

DATE : MAR. 29, 2017

L/C AMENDMENT

IRREVOCABLE STANDBY LC

FROM:
CITIBANK,N.A.
C/O ITS SERVICER, CITICORP NORTH AMERICA, INC.
3800 CITIBANK CENTER
BUILDING B, 3RD FLOOR
TAMPA, FL 33610

AMENDMENT(S) TO STANDBY LETTER OF CREDIT

CREDIT NO.
63666243

ADVISING BANK:

APPLICANT:
FMC CORPORATION
1735 MARKET STREET,
PHILADELPHIA PA 19103 U.S.A.

BENEFICIARY:
COMMISSIONER
NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
ATTN: DIVISION OF SOLID AND
HAZARDOUS MATERIALS
625 BROADWAY
ALBANY NY 12233-7250 U.S.A.

DEAR SIR(S),

THE LETTER OF CREDIT REFERENCED ABOVE IS AMENDED AS FOLLOWS:

L/C AMOUNT INCREASED BY: USD 100,711.00

NEW L/C AMOUNT AFTER AMENDMENT: USD 671,141.00

ALL OTHER TERMS AND CONDITIONS OF THE ORIGINAL CREDIT INSTRUMENT REMAIN UNCHANGED.

THIS AMENDMENT(S) IS AN INTEGRAL PART OF THE ORIGINAL CREDIT AND MUST BE ATTACHED THERETO.

OUR REFERENCE NO : 63666243

PLEASE DIRECT ANY INQUIRIES, QUOTING OUR REFERENCE NUMBER, TO:

CUSTOMER SERVICE DEPARTMENT,
CITIBANK,N.A. C/O ITS SERVICER, CITICORP NORTH AMERICA, INC.3800 CITIBANK CENTERBUILDING B, 3RD FLOORTAMPA, FL 33610
TEL: 866-498-8670()
FAX: ()

WEBSITE:WWW.TRANSACTIONSERVICES.CITIGROUP.COM (CLICK ON TRADE SERVICES AND FINANCE)

AUTHORIZED SIGNATURE
CITIBANK,N.A.

AON

Via Regular Mail

October 7, 2015

Dale A. Desnoyers, Director
Division of Environmental Remediation
New York Department of Environmental Conservation
625 Broadway, 12th Floor
Albany, NY 12233-7011

Attn: Financial Assurance

RE: FMC Corporation – NYD002126845
Hazardous Waste Certificate of Liability Insurance
Effective October 1, 2015 to October 1, 2016

Dear Dale:

Attached please find the FMC Corporation – NYD002126845 Hazardous Waste Certificate of Liability Insurance for the renewal.

Thank you.

Cordially,

Cathy Seeman

CC: Charles W. Scott, Jr.
Director Risk Management
FMC Corporation
1735 Market Street
Philadelphia, PA 19103

Enclosures.

Aon Risk Solutions
One Liberty Place | 1650 Market Street | Suite 1000 | Philadelphia, PA 19103
t +1.215.255.2000 | www. aon.com
California License #OB42920

HAZARDOUS WASTE FACILITY CERTIFICATE OF LIABILITY INSURANCE

1. AIG Specialty Insurance Company, (the "Insurer"), of 175 Water Street, New York, NY 10038 hereby certifies that it has issued a policy of liability insurance (the "Policy") covering bodily injury and property damage to FMC Corporation, (the "Insured"), of 1735 Market Street, Philadelphia, PA 19103 in connection with the Insured's obligation to demonstrate financial responsibility under 6 NYCRR Part 370 et seq. The coverage applies at NYD002126845, FMC Corporation, 100 Niagara Street, Middleport, NY 14105 for sudden and nonsudden accidental occurrences. The limits of liability are $5,500,000 each occurrence and $11,000,000 annual aggregate for sudden and nonsudden accidental occurrences, exclusive of legal defense costs. The coverage is provided under policy number 333270, issued on October 1, 2015.

2. The Insurer further certifies the following with respect to the insurance described in Paragraph 1:

   a. Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy.

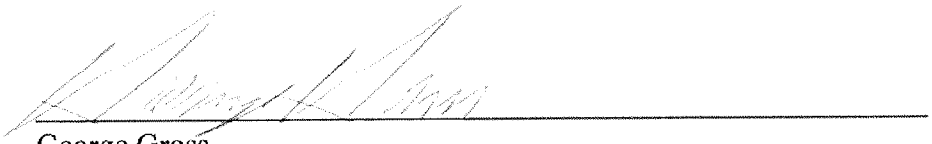
   b. The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with the right of reimbursement from the Insured for any payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated by virtue of the insured's satisfying the financial test for liability coverage as established by the New York State Department of Environmental Conservation (hereinafter "NYSDEC") or by the Commissioner of NYSDEC (hereinafter referred to as the "Commissioner") and as specified in 6 NYCRR Part 370 et seq.

   c. Whenever requested by the Commissioner, the Insurer agrees to furnish to the Commissioner a signed duplicate original of the policy and all endorsements.

   d. Cancellation of the insurance, whether by the Insurer or the insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner and operator of the hazardous waste management facility, will be effective only upon written notice, certified mail, return receipt requested, and only after the expiration of sixty (60) days after a copy of such written notice is received by the Commissioner.

   e. Any other termination of the insurance will be effective only upon written notice, certified mail, return receipt requested, and only after the expiration of thirty (30) days after a copy of such written notice is received by the Commissioner.

I hereby certify that the wording of this instrument is identical to the wording specified in 6 NYCRR 373-2.8(j)(8) as such regulation was constituted on the date first above written, and that the Insurer is authorized by the Superintendent of the New York State Department of Insurance to conduct the business of an Insurer or is eligible to provide insurance as an excess or surplus lines insurer in the State of New York.



George Gross
Attorney-in-Fact, Authorized Representative of
AIG Specialty Insurance Company
175 Water Street
New York, NY 10038
Date:

ATTACHMENT D

Permit Modification Log

PERMIT MODIFICATION LOG

The name of the specific document being modified (sections, and/or attachments)	Modified page numbers		Date of Revised pages	The effective date of permit modification	The nature of the modifications
	Old	New			