

Appendix A

Agencies' Corrective Action Objectives
for Off-Site Soil and Sediment
Corrective Measures Studies

New York State Department of Environmental Conservation

Division of Solid and Hazardous Materials

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Alexander B. Grannis
Commissioner

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

March 26, 2009

Mr. Brian McGinnis
FMC Corporation, Remediation Department
1735 Market Street
Philadelphia, Pennsylvania 19103

Dear Mr. McGinnis:

Re: FMC Corporation, Middleport, NY
EPA ID No. NYD002126845
AOC Docket No. II-RCRA-90-3008(h)-0209
Corrective Action Objectives (CAOs) for the
Off-site Soil & Sediment Corrective Measure Studies (CMSs)

By letter dated August 1, 2008, the United States Environmental Protection Agency (USEPA) and the New York State Department of Environmental Conservation (NYSDEC), hereafter referred to as "the Agencies", in consultation with the New York State Department of Health (NYSDOH), provided FMC with a draft set of Corrective Action Objectives (CAOs) for a Corrective Measures Study (CMS) specific to Air Deposition Area 1. This draft set of CAOs was sent to FMC to initiate a consultation between FMC and the Agencies as required by Task VIII.B in Attachment II of the above referenced AOC. In response, FMC proposed an expanded draft set of CAOs intended for application to all off-site soil & sediment areas where a CMS would be required, not just Air Deposition Area 1. These expanded draft CAOs were discussed at a November 7, 2008 meeting between the Agencies and FMC. After this meeting, FMC and the Agencies exchanged a number of revised drafts of these CAOs, from which the Agencies developed a single draft version. By letters dated December 30, 2008 and January 6, 2009, the Agencies provided certain community stakeholder groups with this draft version of the CAOs for their review and comment. These groups included the Middleport Community Input Group (MCIG), the Village of Middleport Mayor and Trustees, the Town of Royalton Supervisor and Board members, the Town of Hartland Supervisor and Board members, and the Royalton-Hartland School Board President, Board members and Superintendent. In response to the Agencies' solicitation, the MCIG provided comments and a January 12, 2009 revised version of the draft CAOs to the Agencies by E-mail dated January 25, 2009. After review of the MCIG's revised draft CAOs, the Agencies provided this January 12 version to FMC by E-mail dated January 27, 2009. The Agencies also provided this version to the other community stakeholder groups mentioned above by E-mail dated January 29, 2009, and invited them to provide comments. FMC, in turn, provided some suggested revisions to the January 12 version of the draft CAOs to both the Agencies and the MCIG, which were discussed during the February 10, 2009 and March 9, 2009 MCIG meetings. As a result of these discussions, the MCIG provided the Agencies with revisions of their January 12 version of the Draft CAOs by E-mail dated March 12, 2009. Also, by E-mail dated February 26, 2009, the Agencies notified the

above community stakeholder groups that we were preparing to finalize the CAOs and once again invited them to provide comments. In response, the Village of Middleport and the Town of Royalton provided the Agencies with comments which the Agencies have considered in the development of the CAOs. A more comprehensive chronology of events associated with the consultation and public input process summarized above, is presented in this letter's Enclosure No. 1.

In consideration of the input received from FMC and the community stakeholder groups, the Agencies have developed a final set of CAOs which are presented in this letter's Enclosure No. 2. This final set of CAOs reflects substantial contributions from both FMC and local stakeholder groups. The Agencies appreciate the collaborative effort put forth by FMC and the community during the development of these CAOs, and consider that having objectives which are generally agreed upon by all involved parties (i.e., Agencies, Community Groups and FMC) provides for a positive first step in the CMS process.

It is the Agencies' determination that the CAOs in Enclosure No.2, shall be the Agencies' final CAOs for the soil and sediment CMSs that will or may be conducted for the following off-site areas, as delineated by the outcome of the RFI:

- Air Deposition Area 1;
- Air Deposition Area 2 (if necessary);
- Culvert 105 and associated flood zone;
- Tributary One and associated flood zone;
- Jeddo Creek (downstream of Tributary One) and associated flood zone; and
- Johnson Creek (downstream of Jeddo Creek) and associated flood zone.

The Agencies' CAOs shall be used to guide our review of CMS Work Plans and Reports so as to insure that each CMS is as consistent as possible with these objectives. Each Corrective Measures Alternative (CMA) presented in a CMS will be evaluated by the Agencies on the basis of these CAOs and an appraisal made as to the degree to which each CMA satisfies the stated objectives. Also, the Agencies' CAOs will be used as guidance to help us select the final CMA, or CMAs, for each off-site area, in concert with FMC and community input.

It is important to note that the Agencies' CAOs are "goals" to be strived for during the CMS process, and should not be considered as rigid "pass/fail" criteria. Failure of a proposed CMA to completely satisfy all CAOs, may not necessarily disqualify it from selection as the final CMA, or one of the final CMAs. Such selection must be based on a number of factors which will be thoroughly evaluated during the CMS process. Furthermore, the Agencies are not necessarily opposed to modifying the CAOs in the future should circumstances change and sufficient justification is provided in support of such proposed modifications. However, if such proposals entail significant modification of the Agencies' CAOs, we would likely again conduct a consultation and public review process prior to adopting modified CAOs, so that all involved parties are able to provide input on the proposed modifications.

If you have questions concerning this letter or its enclosure, you may contact either Mr. Matt Mortefolio (NYSDEC) at (518) 402-8594 or Mr. Michael Infurna (USEPA) at (212) 637-4177.

Sincerely,

Matt Mortefolio, P.E.

Matt Mortefolio, P.E.
NYSDEC Project Coordinator
Bureau of Solid Waste & Corrective Action

Matt Mortefolio
For M.I.

Michael Infurna
USEPA Project Coordinator
Environmental Planning and Protection Division

Enclosures

cc: w/enc. - J. Maedl, Mayor, Village of Middleport
D. Seaman, Seaman, Jones, Hogan & Brooks (Village of Middleport)
R. Lang, Supervisor, Town of Royalton
W. Annable, Supervisor, Town of Hartford
P. Riegle, President, Royalton-Hartland Central School Board
P. Bona, Superintendent, Royalton-Hartland Central School District
W. Arnold, Chairperson, MCIG
D. Watts, New Jersey Institute (MCIG)

ecc: w/enc.- M. Hinton, DEC Region 9, Buffalo
T. Girard, DOH, Troy

ENCLOSURE NO. 1
Chronology
Of
FMC Corrective Action Objectives
Development Process

1. August 1, 2008: (Letter) - [Agencies to FMC] - Provides Draft CAOs to FMC for Air Deposition Area 1 CMS, and invites them to consult with the Agencies on the development of final CAOs.
2. August 25, 2008 (Letter) - [FMC to Agencies] - FMC accepts Agencies offer to consult on the development of final CAOs and will provide tentative meeting dates.
3. October 16, 2008 (E-mail) - [Agencies to FMC] - Requests FMC to provide meeting dates for CAO consultation.
4. October 31, 2008 (E-mail) - [FMC to Agencies] - Provides FMC revised Draft CAOs for meeting discussions.
5. November 7, 2008 (Meeting) - [Agencies/FMC Meeting] - Consultation meeting to discuss Draft CAOs. FMC and the Agencies agree to expand applicability of CAOs to all off-site areas subject to a CMS.
6. November 14, 2008 (E-mail) - [FMC to Agencies] - Provides Agencies a revised version of the Draft CAOs for discussion purposes.
7. December 1, 2008 (E-mail) - [Agencies to FMC] - Provides FMC another revised version of the Draft CAOs for discussion purposes.
8. December 12, 2008 (E-mail) - [FMC to Agencies] - Provides Agencies another revised version of the Draft CAOs for discussion purposes.
9. December 30, 2008 (Letter) - [Agencies to MCIG] - Agencies provide MCIG with revised Draft CAOs and invite MCIG to comment on them.
10. January 6, 2009 (Letters) - [Agencies to Village, School & Towns] - Agencies provide Village of Middleport, Royalton-Hartland School, Town of Royalton and Town of Hartland with revised Draft CAOs and invite them to provide comments.
11. January 25, 2009 (E-mail) - [MCIG to Agencies] - MCIG provides Agencies with comments on the Draft CAOs and January 12, 2009 MCIG revised version of the Draft CAOs.
12. January 27, 2009 (E-mail) - [Agencies to FMC] - Agencies provide FMC with January 12, 2009 MCIG revised version of the Draft CAOs.
13. January 29, 2009 (E-mails) - [Agencies to Village, School & Towns] - Agencies provide Village of Middleport, Royalton-Hartland School, Town of Royalton and Town of

Hartland with January 12, 2009 MCIG revised version of the Draft CAOs and again invite them to provide comments.

14. February 3, 2009 (E-mail) - [FMC to MCIG] - FMC expresses some concerns over the January 12, 2009 MCIG revised version of the Draft CAOs and requests to discuss these concerns with the MCIG.
15. February 3, 2009 (E-mail) - [Agencies to MCIG] - Agencies inform MCIG that we have no problems with the January 12, 2009 MCIG revised version of the Draft CAOs.
16. February 10, 2009 (Meeting) - [MCIG Meeting] - FMC, Agencies and MCIG discuss FMC proposed revisions to January 12, 2009 MCIG revised version of the Draft CAOs.
17. February 20, 2009 (E-mail) - [MCIG to Agencies] - MCIG informs Agencies that they do not have any revisions to their January 12, 2009 revised version of the Draft CAOs at this time.
18. February 26, 2009 (E-mail) - [FMC to MCIG] - FMC provides MCIG with new suggested revisions to the January 12, 2009 MCIG revised version of the Draft CAOs for discussion purposes.
19. February 26, 2009 (E-mails) - [Agencies to Village, School & Towns] - Agencies inform Village of Middleport, Royalton-Hartland School, Town of Royalton and Town of Hartland that we are nearing finalization of the Draft CAOs and again invite them to provide comments.
20. March 3, 2009 (E-mail) - [Agencies to MCIG] - Agencies inform MCIG that we have no problems with the January 12, 2009 MCIG revised version of the Draft CAOs or FMC's suggested revisions to them, and requests MCIG's opinion of FMC's proposed revisions.
21. March 3, 2009 (E-mail) - [MCIG to Agencies] - MCIG indicates that they will discuss FMC's proposed revisions to their January 12, 2009 revised version of the Draft CAOs at the March 9, 2009 MCIG meeting.
22. March 7, 2009 (E-mail) - [Town of Royalton to Agencies] - Town of Royalton provides comments in support of the January 12, 2009 MCIG revised version of the Draft CAOs.
23. March 9, 2009 (Meeting) - [MCIG Meeting] - FMC, Agencies and MCIG discuss FMC newly proposed revisions to January 12, 2009 MCIG revised version of the Draft CAOs.
24. March 12, 2009 (E-mail) - [MCIG to Agencies] - MCIG provides Agencies with some revisions of the MCIG revised version of the Draft CAOs that were discussed with FMC.
25. March 16, 2009 (E-mail) - [Village of Middleport to Agencies] - Village of Middleport provides the Agencies with their comments on the Draft CAOs (Hard Copy dated March 24, 2009).

ENCLOSURE NO. 2

Final FMC Corrective Action Objectives

AGENCIES' FINAL CORRECTIVE ACTION OBJECTIVES

FMC Corporation, Middleport, New York Facility

Applicable to the off-Site study areas pertaining to soil and sediment
(i.e., excluding the FMC plant site and the FMC-owned N. RR Property)

March 26, 2009

1. To protect human health and the environment relative to FMC-related contamination, in accordance with, and/or in consideration of, applicable, or relevant and appropriate laws, rules and guidance, using site-specific data and information, supported by multiple lines of evidence, including site-specific risk assessment, and based on current and reasonably anticipated future land use(s). Reasonably anticipated future land uses will be identified in consultation with the community.
 - A. Achieve unrestricted use (i.e., without the need for institutional or engineering controls) of current and reasonably anticipated future residential properties within these study areas.
 - B. Reduce and manage potential human health risks associated with FMC-related contaminants in soil and sediment, keeping in mind that risk is a function of contaminant concentration and routes, likelihood of exposure, and other factors, such that:
 - Excess human health carcinogenic risks are reduced such that the lifetime excess cancer risks fall within the range appropriate for residential communities (i.e., 10^{-4} to 10^{-6});
 - Human health non-carcinogenic risks are reduced such that non-cancer risks do not exceed the level appropriate for residential communities (i.e., Hazard Index ≤ 1.0); and
 - The “point of departure”, or starting point for corrective action risk-management decisions pertaining to arsenic in soil, is the site-specific residential background considering site-specific histories of use for current and reasonably anticipated future residential properties within these study areas.
 - C. With agreement by the property owner, and based on current and reasonably anticipated future non-residential use of a property, a combination of institutional and/or engineering control methods may be acceptable as corrective measures as long as they are determined to render adequate, long-term protection of human health and the environment.
 - D. Eliminate, reduce or control existing or potential adverse ecological impacts due to elevated concentrations of FMC-related contaminants in soil and/or sediments, while balancing adverse ecological impacts that may result from the remediation activities themselves.
 - E. Eliminate, reduce or control the potential for migration of FMC-related contaminants in soil and/or sediment, while balancing adverse ecological impacts that may result from any such measures themselves.
2. Minimize disturbance and disruption of the community so that the character of the neighborhoods can be maintained.

3. Inform and engage affected property owners and local residents in meaningful participation throughout the cleanup process, including the CMS, and corrective measures, design and implementation phases.

4. Consistent with the above objective, use best management practices of USEPA's Green Remediation concepts (i.e., clean diesel technology, waste minimization, resource conservation, reduction of greenhouse gas and other air emissions (e.g., by using alternative energy sources and/or fuel-efficient technology, minimizing truck trips, etc.), ecological and soil preservation) to reduce the demands placed on the environment ("footprint"). In keeping with the Green Remediation strategies site cleanup and reuse can mutually support one another by leveraging infrastructure needs, sharing data, minimizing demolition and earth-moving activities, re-using structures and demolition material, and combining other activities that support timely and cost-effective cleanup and reuse. Early consideration of green remediation opportunities offers the greatest flexibility and likelihood for related practices to be incorporated throughout a project life.