

New York State Department of Environmental Conservation

Division of Solid and Hazardous Materials

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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

March 10, 2008

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
RCRA Facility Investigation (RFI)
FMC & Agencies' February 14, 2008 Meeting
Confirmation of Agreements & Resolution of Outstanding Issues

By letter dated September 24, 2007, 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), issued a series of four (4) directives to FMC in accordance with Section XI of the above referenced AOC. These directives require FMC to perform certain RFI activities related to off-site areas of suspected FMC-related soil contamination (primarily arsenic). In response, FMC requested a meeting by letter dated October 8, 2007 to discuss the Agencies' directives and related matters, as allowed under the AOC. The Agencies granted FMC's request, and an initial meeting of FMC & Agencies' technical staff was held on December 11, 2007. By letter dated December 21, 2007, FMC requested a followup meeting with Agencies' management and technical staffs to discuss outstanding issues from the December 11, 2007 meeting. After the Agencies granted FMC's request, FMC submitted a proposed meeting agenda and its position on issues to be discussed, by letter dated February 7, 2008. The followup meeting was held in USEPA Region II Headquarters in New York City on February 14, 2008. At the close of this meeting, the Agencies indicated that we would furnish FMC with a letter documenting the meeting results pertaining to the Agencies' September 24, 2007 directives. This hereby constitutes the Agencies' stated letter.

This Agencies' letter is arranged in accordance with the directives expressed in our September 24, 2007 letter and the related matters presented in FMC's February 7, 2008 submission and discussed during the February 14, 2008 meeting. Below is the Agencies' understanding of the agreements reached during the aforementioned meeting, and the Agencies' determinations on what we consider to be the outstanding issues:

I. September 24, 2007 Directives #s 1 & 2 - Criterion for Middleport Soil Arsenic Delineation - Agencies' Determination:

The Agencies hereby confirm their determination that the appropriate delineation criterion for arsenic in the Middleport area soil shall be 20 ppm, with consideration given to other influencing factors (e.g., data variability, flood zone topography, wind patterns, etc.) as specified in our September 24, 2007 letter. In reaching this determination we have carefully considered the information submitted by FMC since that time – in particular, FMC’s proposed recalculation of the 2001 Background Study, and the December 11, 2007 and February 14, 2008 meeting discussions.

With regard to the development of the orchard land weighting factor, we agree that FMC has provided a more complete and, in some cases, higher quality aerial photo-history of the Middleport area than was available at the time of the original 2001 study. We agree that analysis of this augmented photo-history suggests that a higher percentage of land was used for orchards during the early years of the arsenic production/usage period (1928-1938) than assumed in the 2001 study. The paucity of high quality photos for this period, available at the time of the 2001 study, apparently lead to the original study design decision to base land use history primarily on aerial photos from the period 1951-1978. This in turn lead to the characterization of two different land usage time periods (1931-1958 and 1968-1978) based partly on an observed decrease in orchard land (5% to 0%) somewhere between these two time periods .

Given the augmented photo-history now provided by FMC, it appears that the sharpest decrease in land used for orchards occurred in the years between 1931 and 1938, with more gradual declines continuing thereafter. This temporal decrease in the amount of orchard land is not reflected in FMC’s proposed revised analysis which estimates orchard land at 25% for the 1931-1958 time period, even though FMC’s own estimates from the individual historic photos indicate it dropping from a high of 23% in 1931 to 4% in 1958. We believe that a more appropriate estimation method would be to time-weight each historic photo’s orchard land based on a specified number of years for which that photo would be applicable. If this methodology were employed for the entire 1928-1977 time period, the Agencies estimate that there would only be a small increase in the orchard land weighting factor from the 3% used in the 2001 study. Since the Agencies consider that such a small increase in orchard land will not have a measurable impact on the results of the study, we see no substantive reason to revise the 2001 study.

With regard to FMC’s proposed addition of existing arsenic data from the Schwab orchard, the Agencies do not see a need for any additional orchard data based on our estimated negligible increase in the orchard land weighting factor as discussed above. However, if additional data were needed to enhance the statistical reliability of the 2001 study, the Agencies would not accept such data unless it were gathered in a completely neutral way, without prior knowledge of the results on the part of the investigator.

FMC has also questioned whether the weighted 95th percentile should still be used, given that New York State more recently used the 98th percentile in calculating the state-wide arsenic background value for its Brownfield Cleanup program. The selection of the 98th percentile in the case of the NYS Brownfield program and the Agencies’ selection of the weighted 95th percentile in the case of the Middleport study were both based on a careful evaluation of the actual data sets used, and with regard to the implications such selections could have on human health and/or the environment. In considering the Middleport site-specific situation, the Agencies strongly believe that in setting a “delineation” criterion (as opposed to a “remediation” criterion), we should err on the side of ensuring that we do not mistakenly ascribe to “background” any arsenic concentrations that may have resulted from or been influenced by FMC plant operations. Thus,

for the specific purposes of delineation at the Middleport site, we continue to believe that the weighted 95th percentile of the Middleport Site-Specific Arsenic Background Data Set forms an appropriate basis for developing a site-specific delineation criterion, in light of the need to protect against the possibility of mistakenly excluding areas of FMC contaminated soils from further evaluation and the potential effects such improper exclusion could have on human health and/or the environment.

In addition to the results from the 2001 study, other data and analyses further support and justify the use of the 20 ppm arsenic concentration as an appropriate delineation criterion.

First, there is substantial evidence that the mere presence of an historic orchard does not necessarily translate into arsenic concentrations in soil above 20 ppm in every case. Of the 3 orchards sampled in the 2001 study, only 1 had soil arsenic concentrations consistently above 20 ppm. Furthermore, the Agencies compared the FMC soil sampling locations north of Pearson Road with the FMC-identified historic orchards in this same area (FMC Figure 2 - Sampling Work Plan - Tributary One North of Pearson Road, Jeddo Creek and Johnson Creek). Selecting soil sample locations from upstream areas and feeder tributaries so as to avoid any possible influence from historic FMC Plant releases, the Agencies identified approximately 23 such locations which corresponded to historic orchard land. Of the approximate 133 samples collected from these historic orchard areas, only 2 sample results marginally exceeded 20 ppm, and only 8 were above 10 ppm. The Agencies consider this to be strong evidence against making generalized assumptions with regard to levels of arsenic in the soil of former orchards. Indeed, it may be more appropriate to address the occurrence of historic orchards within the Middleport study area using a case-specific approach.

Second, the Agencies evaluated the existing arsenic data from the suspected air deposition area on properties farthest from the FMC Plant in the northwest, west and south directions. Of the approximately 173 sample points evaluated in these outer properties, approximately 77% had arsenic results which were all below 20 ppm. Similarly, the Agencies evaluated arsenic data farthest away laterally from the Culvert 105 ditch and from Tributary One. In the case of both Culvert 105 and Tributary One (South of Pearson Road), about 80% of these laterally distant sample points had arsenic results which were all below 20 ppm. The Agencies consider this to be an indicator that 20 ppm is an appropriate site-specific background criterion since site data seems to fall and remain below 20 ppm as you move away from the suspected source and migration pathway.

Finally, while we find the 20 ppm arsenic concentration to be an appropriate delineation criterion for the Middleport area, we agree that it should not be employed as an absolute or exclusive criterion to define the extent of the FMC-related soil arsenic contamination. As previously stated in our September 24, 2007 letter, other factors such as data variability, wind patterns, ground features and flood zone topography should all be utilized in the delineation process. As noted above, historic land use may also be considered on a site-specific basis. The Agencies consider that the 20 ppm criterion in combination with these and other factors will result in an appropriate delineation of the FMC-related soil arsenic contamination.

II. September 24, 2007 Directive # 3 - RFI Report Volumes Submission Schedule - FMC/Agencies' Agreement:

During the February 14, 2008 meeting, the Agencies and FMC reached agreement on the prioritization for completing various portions of the RFI and on a schedule for submitting certain volumes of the draft RFI Report. In general, FMC and the Agencies agreed that completion of the RFI with respect to FMC-related, off-site soil contamination within and proximal to the Village of Middleport, should be prioritized over other aspects of the RFI. Furthermore, during, and in a phone conversation subsequent to the February 14 meeting (3- 5-08), FMC and the Agencies agreed on a schedule for submitting specific volumes of the draft RFI Report, primarily based on FMC's February 7, 2008 submission. The table below reflects the Agencies understanding of the agreed upon schedule:

Draft RFI Report Volume		Scheduled Submission
1.	RFI Report Volume I - Background and Related Information	April 30, 2008
2.	RFI Report Volume II - Suspected Air Deposition Study Area South of the Erie (State) Barge Canal and West of the Niagara/Orleans County Line	150 days ¹
3.	RFI Report Volume IV - Culvert 105 and Flood Zone	210 days ¹
4.	RFI Report Volume V - Tributary One and Flood Plain South of Pearson/Stone Roads	270 days ¹

FOOTNOTE: 1. The number of days footnoted in the above schedule for submission of RFI Report Volumes II, IV & V, shall be measured from the date of FMC's receipt of this certified letter.

The above agreed upon schedule is hereby approved by the Agencies in accordance with Item 2 in Section XI of above referenced AOC. It was further agreed upon that RFI Report Volumes II, IV & V shall contain a delineation of the FMC-related soil contamination (primarily arsenic) within the areas defined in the above table. Since such delineation is partly dependent upon establishment of an arsenic delineation criterion as expressed by the Agencies' determination in Item I above, it is agreed that in the event FMC files a dispute under Section XXIX of the above referenced AOC, EPA's consideration of such matters as placed in dispute, "shall excuse, toll and/or suspend during the pendency of the dispute resolution process," FMC's obligation to comply with the above approved schedule, in accordance with Item 2 in Section XXIX of the above referenced AOC.

III. September 24, 2007 Directive # 4 - Additional Soil Sampling and Arsenic Analysis in Suspected FMC Arsenic Air Deposition Areas Along/North of the Barge Canal and East of the Niagara/Orleans County Line - Agencies' Determination:

The Agencies hereby confirm their determination that, as stated in our September 24, 2007 directives' letter, additional sampling and arsenic analysis is needed in the following areas to delineate the extent of the FMC-related soil arsenic contamination:

- Along and north of the Barge Canal property between the end of Williams Street and Grid Point SS33 in previous Sampling Area R1d; and
- East of the Niagara / Orleans County Line between Grid Point WW36 in previous Sampling Area R1a and Grid Point D36 in previous Sampling Area R1b.

This determination is partly based on the Agencies' previous determination regarding the criterion for Middleport area soil arsenic delineation, as expressed in Item I above. In addition, this determination is based on the Agencies' evaluation of existing arsenic data proximal to these areas, and our review of historic meteorological wind pattern information, FMC's 1999 Air Deposition Model and ground features in these areas. It is the Agencies' belief that this information strongly suggests the presence within the above identified areas of elevated levels of FMC-related arsenic in soil which warrant investigation and delineation as part of the RFI process. Also, in arriving at this determination, the Agencies reviewed the historical aerial photos provided to us by FMC. From our review of these photos, the Agencies have not identified substantive historic orchard land within or proximal to the above identified areas which could be considered as sole alternative sources of any elevated soil arsenic levels.

As a result of this Agencies' determination and the agreed upon prioritization of RFI activities, the Agencies are hereby requiring FMC to submit an outline and schedule for the future submission of either a separate RFI Work Plan or an Addendum to the July 2004 "Soil Sampling Work Plan - Areas Potentially Affected By Historic Air Deposition" for additional soil sampling and arsenic analysis in the above described areas. The schedule for submission of the work plan or addendum should be consistent with the agreed upon prioritization of RFI activities. FMC must submit this outline and schedule within sixty (60) days of FMC's receipt of this certified letter, unless FMC decides to file a dispute under Section XXIX of the above referenced AOC.

IV. FMC's February 7, 2008 Letter Comment 2 - Data Sufficiency in Specified Areas - FMC/Agencies Agreement:

During the February 14, 2008 meeting, the Agencies and FMC reached agreement on the data sufficiency with regard to FMC-related soil contamination within in the following areas:

- Culvert 105 & flood zone;
- The portion of Tributary One & flood zone south of Pearson Road; and
- The off-site portion of the suspected FMC arsenic air deposition area south of Barge Canal and west of the Niagara / Orleans County Line.

The Agencies agree that there is currently sufficient data in the above off-site areas to complete RFI characterization and delineation activities with respect to FMC-related soil contamination, and to support the subsequent development of a Corrective Measures Study (CMS) with respect to this soil contamination. However, the Agencies would like to clarify that circumstances may develop in the future where FMC and/or the Agencies could consider that a need exists for the collection of additional data in these areas. Some of these potential circumstances are described below:

- During the February 14, 2008 meeting, FMC and the Agencies also discussed the Agencies' December 13, 2007 information request pertaining to past FMC/DoD research activities conducted at the FMC facility. Although FMC provided some information in its

February 7, 2008 submission, FMC indicated in the February 14 meeting that it would submit a comprehensive response to this information request once it had completed its investigations. Therefore, the Agencies cannot rule out the possibility that additional data might be needed in the above defined areas with respect to past FMC/DoD research activities, until we have had an opportunity to review FMC's response to our December 13, 2007 information request.

- During the course of delineation of soil contamination in the above identified areas, FMC and/or the Agencies might find it necessary to collect additional data in specific locations to assist in this delineation. The Agencies cannot currently rule out this possibility.
- As FMC is aware, there are certain properties within the above identified areas which were proposed and approved for soil sampling, but where FMC was denied access by the property owner and, as a result, has not performed soil sampling. The Agencies agree that such sampling is not necessary to complete RFI activities and begin the development of a CMS for the soil contamination in the above identified areas. However, the Agencies believe FMC must periodically canvass local records (perhaps annually) to determine if these particular properties are under new ownership, and if so, offer the approved soil sampling an analysis to the new owner(s). Results of FMC's periodic review will be reported to the Agencies.
- As agreed upon during the meeting, additional data may be needed to design and/or implement corrective measures deemed necessary for the soils in these areas as a result of the CMS process.

V. FMC's February 7, 2008 Letter Comment 4 - Development of a Draft CMS Work Plan for a Specified Area - FMC/Agencies Agreement:

During the February 14, 2008 meeting, the Agencies and FMC reached agreement on the time period for FMC's submission of a draft CMS Work Plan for the suspected FMC arsenic air deposition off-site area south of Barge Canal and west of the Niagara / Orleans County Line. FMC's February 7, 2008 submission indicates that FMC will submit this draft CMS Work Plan in April 2008. The Agencies agree with and support beginning the CMS process for this area and encourage FMC to seek public input early in this process.

Items I through V above all stem from the Agencies' September 24, 2007 directives' letter. In response to this letter, the Agencies and FMC held meetings on December 11, 2007 and February 14, 2008 as allowed under Item 1 in Section XI of the above referenced AOC. These meetings were held in an attempt to informally and in good faith resolve issues raised by FMC with regard to the Agencies' September 24, 2007 directives. It is our understanding that these meetings have led to resolution and agreement on specific issues as indicated by Items II, IV & V above. However, it is also our understanding that the issues described by Items I & III above were not resolved during these meetings, and as such the Agencies have provided FMC with our determination on these outstanding issues as expressed in Items I & III. The requirements placed on FMC by the agreements and Agencies' determinations expressed in Items I through V, supercede the Agencies' September 24, 2007 directives. Therefore, in response to this letter FMC must, within fifteen (15) days of FMC's receipt of this letter, either: (1) notify the Agencies in writing of FMC's intention to comply with the Agencies' determinations and submission directives as expressed in Items I through V above; or (2) provide the Agencies with a written notice of dispute on any or all of the Agencies' determinations and submission directives as expressed in Items I through V above, in accordance with Item 1 in Section XI of the above

referenced AOC. Any written notice of dispute must set forth FMC's position, its basis and any actions FMC considers necessary to resolve the dispute, in accordance with Item 1 in Section XI of the above referenced AOC. Any such dispute shall be subject to the dispute resolution procedures as set forth in Section XXIX of the above referenced AOC.

Lastly, it is the Agencies' understanding from the discussion held during the February 14, 2008 meeting, that FMC intends to comply with the Agencies' December 13, 2007 information request pertaining to past FMC/DoD research activities. FMC indicated that it would submit a comprehensive response to this information request once it has completed its investigations. The Agencies request that FMC provide this submission on or prior to April 30, 2008.

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

Sincerely,

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Michael Infurna
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