



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

MAR 31 2010

REPLY TO THE ATTENTION OF:  
LU-9J

**CERTIFIED MAIL: 7001 0320 0006 0192 5770**  
**RETURN RECEIPT REQUESTED**

Mr. Paul Nelson  
Vice President, Engineering  
EMD Chemicals, Inc.  
2909 Highland Avenue  
Cincinnati, Ohio 45212

RE: RCRA 3008(h) Administrative Order on Consent  
EMD Chemicals, Inc.  
OHD 086 438 538

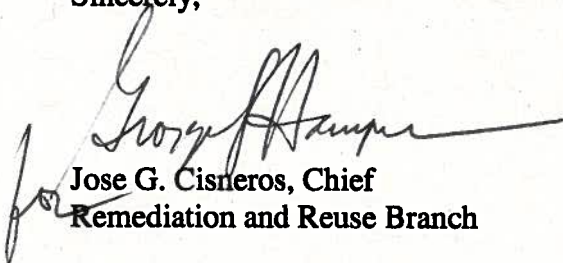
RCRA-05-2010-0014

Dear Mr. Nelson:

I am enclosing a fully executed copy of the 3008(h) Administrative Order on Consent covering the completion of the corrective action work at the subject facility. We look forward to working with your staff on this project.

In accordance with Section V of the Administrative Order on Consent, I am hereby designating Don Heller as the U.S. EPA project manager for this project. If you have any questions, please contact Mr. Heller at (312) 353-1248 or by e-mail at [Heller.Donald@epa.gov](mailto:Heller.Donald@epa.gov).

Sincerely,



Jose G. Cisneros, Chief  
Remediation and Reuse Branch

Enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5

IN THE MATTER OF:	)	EPA ID#: OHD 086 438 538	)
	)		)
EMD Chemicals, Inc.	)	RESPONDENT.	)
2909 Highland Avenue	)		)
Cincinnati, Ohio 45212	)	U.S. EPA Docket No: <u>RCRA-05-2010-0014</u>	)
	)		)

**ADMINISTRATIVE ORDER ON CONSENT**

Proceeding under Section 3008(h) of the Resource Conservation and Recovery Act, as amended, 42 U.S.C. § 6928(h).

**I. JURISDICTION**

1. The Administrator of the United States Environmental Protection Agency ("U.S. EPA") issues this Administrative Order on Consent ("Consent Order") to EMD Chemicals, Inc. ("EMD") under Section 3008(h) of the Solid Waste Disposal Act, commonly referred to as the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §6928(h). The Administrator has delegated the authority to issue orders under Section 3008(h) of RCRA to the Director, Land and Chemicals Division; U.S. EPA, Region 5.

2. EMD owns and operates a chemical distribution facility at 2909 Highland Avenue; Cincinnati, Ohio (the "facility"). This nine-acre facility is located within Cincinnati and Norwood, Ohio. EMD manufactures, stores and distributes organic and inorganic chemicals for industrial customers. Although the site has been used for this purpose since the late 1940's, EMD purchased the property in 1977.

3. EMD agrees not to contest U.S. EPA's jurisdiction to issue this Consent Order, to enforce its terms, or to impose sanctions for violations of the Consent Order.

4. EMD waives any rights to request a hearing on this matter pursuant to Section 3008(b) of RCRA and 40 C.F.R. Part 24, and consents to the issuance of this Consent Order without a hearing under Section 3008(b) of RCRA as a Consent Order issued pursuant to Section 3008(h) of RCRA.

## **II. DEFINITIONS**

5. This Consent Order incorporates the definitions in RCRA, 42 U.S.C. §§ 6901 - 6922k, and the regulations promulgated under RCRA unless otherwise specified.

## **III. PARTIES BOUND**

6. This Consent Order applies to and binds U.S. EPA, EMD, and EMD's successors and assigns. EMD shall be responsible for and liable for any violations of this Consent Order, regardless of EMD's use of employees, agents, contractors, or consultants to perform Work required by this Consent Order.

7. EMD shall, at least 60 days prior to any transfer of any real property located at the facility, give written notice of (i) this Consent Order to the transferee regarding the Consent Order and any Institutional Controls, and (ii) to U.S. EPA and Ohio EPA regarding the proposed transfer, including the name and address of the transferee and the date on which the transferee was notified of the Consent Order and any Institutional Controls.

8. EMD may transfer any real property located at the facility only if: (1) the institutional controls required by Paragraph 13.1 have been recorded with respect to the facility (or portion of the facility to be transferred); or (2) EMD has obtained an agreement from the transferee, enforceable by the U.S. EPA, to (i) allow access pursuant to Section VII, and to restrict land/water use, pursuant to the Activity and Use Limitations set forth in Appendix B, (ii) record any institutional controls at the facility, pursuant to Paragraph 13.1, and (iii) subordinate its rights to any such institutional controls, and U.S. EPA has approved the agreement in writing. If, after a transfer of the real property, the transferee fails to comply with the agreement provided for in this Paragraph 8, EMD shall take all reasonable steps to obtain the transferee's compliance with such agreement. The U.S. EPA may seek the transferee's compliance with the agreement and/or assist EMD in obtaining compliance with the agreement. This Paragraph will not apply if U.S. EPA and EMD agree that this Consent Order has terminated as to the facility or any relevant portion of the facility.

9. No change in ownership or corporate or partnership status relating to the facility shall alter EMD's obligations under this Consent Order. Any conveyance of title, easement, or other interest in the facility, or a portion of the facility, shall not affect EMD's obligations under this Consent Order.

#### **IV. DETERMINATIONS**

10. After consideration of the Administrative Record, the Director, Land and Chemicals Division; U.S. EPA Region 5 has made the following conclusions of law and determinations:

- a. EMD is a "person" within the meaning of Section 1004(15) of RCRA.
- b. EMD is the owner or operator of a facility that has operated under interim status subject to Section 3005(e) of RCRA.
- c. Certain wastes and constituents found at the facility are hazardous wastes and/or hazardous constituents pursuant to Section 1004(5), 3001 of RCRA and 40 C.F.R. Part 261.
- d. There is or has been a release of hazardous wastes or hazardous constituents into the environment from the facility.
- e. The actions required by this Consent Order are necessary to protect human health or the environment.

#### **V. PROJECT MANAGER**

11. U.S. EPA and EMD must each designate a Project Manager and notify each other in writing of the Project Manager selected within thirty (30) days of the effective date of this Consent Order. Each Project Manager will be responsible for overseeing the implementation of this project. The parties must provide prompt written notice whenever they change Project Managers.

#### **VI. WORK TO BE PERFORMED**

12. Pursuant to Section 3008(h) of RCRA, EMD agrees to and is hereby ordered to perform the actions specified in this section, in the manner and by the dates specified here. EMD represents that it has the technical and financial ability to carry out corrective action at the facility. EMD must perform the work undertaken pursuant to this Consent Order in compliance with RCRA and other applicable federal and state laws and their implementing regulations, and consistent with all relevant U.S. EPA guidance documents as appropriate to the facility. This guidance includes, but is not limited to, relevant portions of U.S. EPA's risk assessment guidance.

13. EMD must perform the final corrective measures, defined as "the Work," specified in the RCRA Final Decision for the EMD facility, which was signed on November 5, 2008, as set forth in further detail in the Statement of Basis, issued for

public comment on August 4, 2008. The following sections of the Statement of Basis, Appendix A, are incorporated into and are fully enforceable under this Consent Order: Scope of Final Corrective Measures, Performance Standards for Final Corrective Measures, and Performance Monitoring of Final Corrective Measures, and any attached figures for the three sections. The Final Corrective Measures include the following actions, provided that in the event of any conflict between the description of the Work set forth in this Consent Order and the Statement of Basis, the Statement of Basis, as implemented by the RCRA Final Decision Document dated November 5, 2008, shall control:

- a. EMD shall construct hydraulic containment along the southern boundary of its property to intercept ground water contaminated by wastes in the West Ravine, thus preventing off-site migration of contaminants above "risk-based levels" (defined in the Statement of Basis as  $1 \times 10^{-5}$  excess lifetime cancer risk and non-cancer hazard quotient of 1). This shall be accomplished with an on-site ground water collection trench installed in the area shown in Figure 3 of the Statement of Basis to the bottom of the perched aquifer and adjacent to a low permeability containment wall.
- b. EMD shall continue operation of the existing French Drain collection system, which prevents the migration of contaminants in ground water above "risk-based levels" at the eastern boundary of the EMD facility.
- d. EMD shall remove the existing off-site Sump 562 and replace it with an upgraded sump located within the on-site collection trench.
- e. EMD shall pump contaminated ground water from the collection trench, the French Drain, and Well P6A to the EMD neutralization plant prior to its permitted discharge to the Cincinnati sewer system and publicly owned treatment works.
- f. EMD shall install a new surface cover and storm water management system over the entire known areal extent of buried waste in the West Ravine, and over the contaminated Former Tank Farm location which overlaps the West Ravine, to reduce the infiltration of surface water. The proposed cover system shall meet the Federal cover design requirements found at 40 C.F.R. §264.553(E)(6)(iv) and shall consist of reinforced concrete over a compacted subgrade, with the permeability range of the concrete from  $10^{-10}$  to  $10^{-11}$  centimeters per second.
- g. EMD shall install an in-situ treatment system for soil and groundwater contamination in the Former Tank Farm area, and performance monitoring of the system. Further details as to the location, design, and required monitoring of the system are set forth in the Statement of

Basis.

- h. EMD shall conduct limited excavation of off-site contaminated soil in the vicinity of Sump 562.
- i. EMD shall remove visible and accessible off-site waste (debris) associated with the mouth of the West Ravine, and incorporate it beneath the on-site surface cover within the West Ravine.
- j. The performance standards for the Work set forth in subparagraphs a-i of this Paragraph are set forth in "Performance Standards for Final Corrective Measures" of the Statement of Basis.
- k. EMD shall conduct performance monitoring of the containment system and the ground water collection and treatment system as set forth in "Performance Monitoring of Final Corrective Measures" of the Statement of Basis.
- l. EMD shall record in the chain of title and monitor:  
(1) institutional controls such as the Uniform Environmental Covenants Act (UECA) restrictions on the chain of title, substantially as set forth in Appendix B, and (2) engineering controls to eliminate potential and future on-site human health exposure pathways.

14. The schedule for construction and performance monitoring of the Work, and the implementation of institutional controls, is included in Appendix C. EMD shall implement the Work set forth in Paragraph 13 according to this schedule or any subsequent revisions to the schedule approved by U.S. EPA.

15. The U.S. EPA Project Manager can agree in writing to extend any or all deadlines in the approved schedule, as long as the deadline for completion of construction is extended no more than ninety (90) days. However, extensions of greater than ninety (90) days in the deadline for completion of construction require approval from the Chief, Remediation and Reuse Branch, Land and Chemicals Division.

16. The parties will communicate frequently and in good faith to assure successful completion of the requirements of this Consent Order.

17. Within sixty (60) days after it completes the construction phase of the Work under this Consent Order, EMD must provide a Final Remedy Construction Completion Report documenting all Work that it has performed in accordance with this Consent Order and the RCRA Final Decision.

18. EMD must include in the Final Remedy Construction Completion Report its Operation and Maintenance Plan for the remedy and its Ground Water Monitoring

Plan. EMD must revise and resubmit the Report, incorporating U.S. EPA's written comments, if any, within sixty (60) days of receipt of comments from U.S. EPA. Upon U.S. EPA's written approval, EMD must implement the approved Operation and Maintenance Plan and Ground Water Monitoring Plan according to the schedules and terms of these Plans.

19. All sampling and analysis conducted under this Consent Order must be performed in accordance with the Region 5 RCRA Quality Assurance Project Plan Policy (April 1998) as appropriate for the facility. U.S. EPA may audit laboratories EMD selects or require EMD to purchase and have analyzed any performance evaluation samples selected by U.S. EPA which are compounds of concern. EMD must notify U.S. EPA in writing at least fourteen (14) days before beginning each separate phase of field work performed under this Consent Order. At the request of U.S. EPA, EMD shall provide or allow U.S. EPA or its authorized representatives to take split or duplicate samples EMD collects under this Consent Order.

## VII. ACCESS

20. Upon reasonable notice, and at reasonable times, and subject to EMD's health and safety policies, U.S. EPA, its contractors, employees, and any designated U.S. EPA representatives may enter and freely move about the facility to, among other things: interview facility personnel and contractors; review EMD's progress in carrying out the terms of this Consent Order; conduct tests, sampling, or monitoring as U.S. EPA deems necessary; use a camera, sound recording, or other documentary equipment; and verify the reports and data EMD submits to U.S. EPA. EMD shall permit such persons to inspect and copy all non-privileged photographs and documents, including all sampling and monitoring data, that pertain to Work undertaken under this Consent Order and that are within the possession or under the control of EMD or its contractors or consultants. Nothing contained in this Consent Order shall preclude EMD from making a claim of Confidential Business Information, pursuant to 40 CFR Part 2, for any materials collected by, or submitted to, the U.S. EPA, its contractors, employees, and any designated U.S. EPA representatives. EMD may request split samples, or copies of all photographs, tapes, videos or other recorded evidence created by U.S. EPA and subject to mandatory disclosure under the Freedom of Information Act.

21. If EMD must go beyond the facility's boundary to perform Work required by this Consent Order, EMD must use its best efforts to obtain any additional necessary access agreements from the present owner(s) of such property within thirty (30) days after EMD knows of the need for access. For the purposes of this Section, "best efforts" includes the payment of reasonable sums of money in consideration of access, access easements, land/water use restrictions, restrictive easements, and/or an agreement to release or subordinate a prior lien or encumbrance. Any such access agreement must provide for access by U.S. EPA and its representatives. EMD must submit a copy of any access agreement to U.S. EPA's Project Manager.

If EMD does not obtain agreements for access within thirty (30) days, EMD must notify U.S. EPA in writing within fourteen (14) additional days of both the efforts undertaken to obtain access and the failure to obtain access agreements. U.S. EPA may, at its discretion, assist EMD in obtaining access.

22. Within 30 days of its Installation of the Cover System, pursuant to the schedule set forth in Appendix C or any subsequent schedule approved by the U.S. EPA, Respondent shall submit to the U.S. EPA a current title report prepared by a title company showing all recorded interests in the real property subject to the institutional control. Respondent shall demonstrate that all recorded interests in the real property subject to the institutional control have been subordinated to the institutional control (e.g., as provided in Ohio Revised Code Section 5301.86) except to the extent the release of any particular lien(s) or encumbrance(s) has been waived by U.S. EPA. Within 30 days of U.S. EPA's approval of Respondent's title report and demonstration of subordination of prior recorded interests, Respondent shall record the institutional control in substantially identical form to that set forth in Appendix B, and provide a copy of the original recorded institutional control showing the clerk's recoding stamps.

23. Nothing in this Section limits or otherwise affects U.S. EPA's right of access and entry under applicable law, including RCRA and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. §§ 9601-9675.



**VIII. COST ESTIMATES AND ASSURANCES OF FINANCIAL RESPONSIBILITY FOR COMPLETING THE WORK**

24. Estimated Cost of the Work.
- a. Detailed written estimates, in current dollars, of the estimated cost of all Work to be performed under Section VI of this Consent Order (Cost Estimate) are included in Appendix D. The Cost Estimate accounts for the costs of all foreseeable Work, including: i) all construction work; and ii) performance monitoring of final corrective measures under the Groundwater Monitoring Plan. In addition, the Cost Estimate shall include the annual cost of implementing, maintaining and monitoring institutional controls under the Operations and Maintenance Plan. The Cost Estimate shall be consistent with the requirements of 40 C.F.R. §264.142 and §264.144. References in these regulations to closure and post-closure shall mean the Work to be performed under Section VI of this Consent Order.
  - b. EMD shall annually adjust the Cost Estimate for inflation and for changes in the scope of the Work to be performed, and shall provide a Cost Estimate for the remaining Work to be performed within sixty (60) days prior to the anniversary date of the establishment of the financial assurance instrument(s) until the Work required by this Consent Order is completed. EMD shall submit each annual Cost Estimate to U.S. EPA for review. Upon approval by U.S. EPA, the adjusted Cost Estimate shall establish the amount of financial assurance that must be provided by EMD.
25. Assurances of Financial Responsibility for Completing the Work
- a. Within 30 days of the effective date of the Consent Order, EMD shall establish financial assurance for the benefit of the U.S. EPA. The financial assurance shall be in the form of a trust fund, with the trust fund document substantially identical to the trust fund document set forth in Appendix E, and in an amount equal to the approved Cost Estimate. EMD shall maintain adequate financial assurance until U.S. EPA releases EMD from this requirement under Paragraph 28.c.
  - b. After the end of the first fiscal quarter subsequent to the effective date of the Consent Order and after each fiscal quarter thereafter, EMD shall submit to U.S. EPA a request for approval of reimbursement from the trust fund established pursuant to subparagraph 25.a. above. Any EMD request for approval of

reimbursement shall include EMD's technical quarterly progress report and a cost summary and certification. EMD's technical quarterly progress report shall be certified by the EMD project manager and shall summarize: (i) work completed during the quarter, including any milestones met, (ii) cost and schedule update, including a discussion of any anticipated changes in project schedule that may require an approved schedule change (as provided under this Order) and any anticipated change in project cost that may impact total project cost by greater than 5 percent, (iii) changes in key project personnel or contractors, (iv) correspondence to/from U.S. EPA, including any milestone reports, and (v) projected work for the next quarter. EMD's cost summary and certification shall include a written cost summary and certification of the complete and accurate total costs incurred and paid by EMD for the fiscal quarter for which reimbursement is sought.

- c. EMD's cost summary and certification for each fiscal quarter shall contain the following statement signed by EMD's Chief Financial Officer or Corporate Controller: "To the best of my knowledge, after thorough investigation and review of EMD's detailed cost documentation for the [fiscal quarter for which reimbursement is sought], I certify that the information contained in or accompanying this submittal is true, accurate, and complete. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment."
- d. With her approval of this Consent Order, the Director of the Land and Chemicals Division, Region 5, U.S. EPA hereby designates the Section Chief, Corrective Action Section 1; Remediation and Reuse Branch; Land and Chemicals Division; as the individual authorized to approve EMD's requests for reimbursement. If the LCD Division Director's designee agrees that EMD's certifications are complete and EMD is meeting the milestone requirements of the U.S. EPA-approved schedule, the designee will approve EMD's request for reimbursement, and will authorize the Trustee of the trust fund established pursuant to subparagraph 25.a. above to reimburse EMD according to EMD's reimbursement request. The designee may approve a partial distribution if he considers that some of the costs have been adequately documented but that others have not. Any decision by the designee to disapprove the disbursement of any costs is subject to the dispute resolution provisions, Section XI of this Consent Order.

26.a. EMD may also use one or more of the financial assurance forms described in subparagraphs i - vi below. Any other financial assurance documents provided pursuant to this Consent Order shall be submitted to U.S. EPA for review in draft

form at least forty-five (45) days before they are due to be filed and shall be satisfactory in form and substance as determined by U.S. EPA:

- i. A trust fund established for the benefit of U.S. EPA, administered by a trustee who has the authority to act as a trustee under Federal or State law and whose trust operations are regulated and examined by a Federal or State agency, and that is acceptable in all respects to the U.S. EPA. The trust agreement shall provide that the trustee shall make payments from the fund as the Director of the Land and Chemicals Division, Region 5, shall direct in writing (A) to reimburse EMD from the fund for expenditures made by EMD for Work performed in accordance with this Consent Order, or (B) to pay any other person whom the Director of the Land and Chemicals Division determines has performed or will perform the Work in accordance with this Consent Order. The trust agreement shall further provide that the trustee shall not refund to the grantor any amounts from the fund unless and until U.S. EPA has advised the trustee that the Work under this Consent Order has been successfully completed.
- ii. A surety bond unconditionally guaranteeing performance of the Work in accordance with this Consent Order, or guaranteeing payment at the direction of U.S. EPA into a standby trust fund that meets the requirements of the trust fund in subparagraph i above, ("Performance Bond"). The surety company issuing the bond shall, at a minimum, be among those listed as acceptable sureties on Federal Bonds as set forth in Circular 570 of the U.S. Department of the Treasury.
- iii. An irrevocable letter of credit, payable at the direction of the Director, Land and Chemicals Division, into a standby trust fund that meets the requirements of the trust fund in subparagraph i above. The letter of credit shall be issued by a financial institution (A) that has the authority to issue letters of credit, and (B) whose letter-of-credit operations are regulated and examined by a Federal or State agency.

- iv. A policy of insurance that (A) provides U.S. EPA with rights as a beneficiary which are acceptable to U.S. EPA; and (B) is issued by an insurance carrier that (i) has the authority to issue insurance policies in the applicable jurisdiction(s), and (ii) whose insurance operations are regulated and examined by a Federal or State agency. The insurance policy shall be issued for a face amount at least equal to the current Estimated Cost of the Work to be performed under this Consent Order, except where costs not covered by the insurance policy are covered by another financial assurance instrument, as permitted in subparagraph 26.e. of this Section. The policy shall provide that the insurer shall make payments as the Director, Land and Chemicals Division, shall direct in writing (A) to reimburse EMD for expenditures made by EMD for Work performed in accordance with this Consent Order, or (B) to pay any other person whom the Director, Land and Chemicals Division, determines has performed or will perform the Work in accordance with this Consent Order, up to an amount equal to the face amount of the policy. The policy shall also provide that it may not be canceled, terminated or non-renewed and the policy shall remain in full force and effect in the event that (A) EMD is named as a debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or (B) U.S. EPA notifies the insurer of EMD's failure to perform, under Paragraph 29 of this Section.
- v. A corporate guarantee executed in favor of the U.S. EPA by one or more of the following: (A) a direct or indirect parent company, or (B) a company that has a "substantial business relationship" with EMD (as defined in 40 C.F.R. § 264.141(h)), to perform the Work to be performed under Section VI of this Consent Order or to establish a trust fund as permitted by subparagraph i above; provided, however, that any company providing such a guarantee shall demonstrate to the satisfaction of the U.S. EPA that it satisfies the financial test requirements of 40 C.F.R. § 264.143(f) with respect to the portion of the Cost Estimate that it proposes to guarantee.
- vi. A demonstration by EMD that it meets the financial test criteria of 40 C.F.R. § 264.143(f) with respect to the Cost Estimate, provided that all other requirements of 40 C.F.R. § 264.143(f) are satisfied.

- b. If EMD seeks to establish financial assurance by using a Performance Bond, or a letter of credit, EMD shall at the same time establish, and thereafter maintain, a standby trust fund, which meets the requirements of subparagraph 26.a.i. and iii. above, into which funds from the other financial assurance instrument can be deposited, if the financial assurance provider is directed to do so by U.S. EPA, pursuant to Paragraph 29.b.
- c. EMD shall submit all original executed and/or otherwise finalized instruments to U.S. EPA's Regional Comptroller (MF-10J), 77 W. Jackson Blvd., Chicago, IL 60604-3590, within fifteen (15) days after date of execution or finalization as required so that the documents are legally binding. EMD shall also provide copies to the U.S. EPA Project Manager, and the U.S. EPA Associate Regional Counsel, as set forth in Paragraph 54.
- d. If at any time EMD provides financial assurance for completion of the Work by means of a corporate guarantee or financial test, EMD shall also comply with the other relevant requirements of 40 C.F.R. § 264.143(f), 40 C.F.R. § 264.151(f), and 40 C.F.R. § 264.151(h)(1) relating to these methods, unless otherwise provided in this Consent Order, including but not limited to, (i) initial submission of required financial reports and statements from the guarantors' chief financial officer and independent certified public accountant; (ii) annual re-submission of such reports and statements within ninety (90) days after the close of each of the guarantors' fiscal years; and (iii) notification to U.S. EPA within ninety (90) days after the close of any of the guarantors' fiscal years in which any such guarantor no longer satisfies the financial test requirements set forth at 40 C.F.R. Part 264.143(f)(1). EMD further agrees that if EMD provides financial assurance by means of a corporate guarantee or financial test, EMD or its corporate guarantor will promptly provide any additional financial information requested by U.S. EPA. For purposes of the corporate guarantee or the financial test described above, references in 40 C.F.R. § 264.143(f) to "the sum of current closure and post-closure costs and the current plugging and abandonment cost estimates" shall mean "the sum of all environmental remediation obligations" (including obligations under CERCLA, RCRA, UIC, TSCA and any other state or tribal environmental obligation) guaranteed by such company or for which such company is otherwise financially obligated in addition to the Cost Estimate.
- e. EMD may combine more than one mechanism to demonstrate financial assurance for the Work to be performed under Section VI of this Consent Order.
- f. EMD may satisfy its obligation to provide financial assurance for the

Work by providing a third party that assumes full responsibility for the Work and otherwise satisfies the obligations of the financial assurance requirements of this Consent Order; however, EMD shall remain responsible for providing financial assurance in the event such third party fails to do so and any financial assurance from a third party shall be in one of the forms provided in subparagraphs 26.a.i. through 26.a.vi., above.

- g. If at any time U.S. EPA determines that a financial assurance mechanism provided pursuant to this Section is inadequate, U.S. EPA shall notify EMD in writing. If at any time EMD becomes aware of information indicating that any financial assurance mechanism(s) provided pursuant to this Section is inadequate, EMD shall notify U.S. EPA in writing of such information within fifteen (15) business days. Within ninety (90) days of receipt of notice of U.S. EPA's determination, or within ninety (90) days of EMD's becoming aware of such information, EMD shall establish and maintain adequate financial assurance for the benefit of the U.S. EPA which satisfies all requirements set forth in this Section. Any and all financial assurance documents provided pursuant to this Consent Order shall be submitted to U.S. EPA for review in draft form at least forty-five (45) days before they are due to be filed and shall be satisfactory in form and substance as determined by U.S. EPA.
- h. EMD's inability or failure to establish or maintain financial assurance for completion of the Work shall in no way excuse performance of any other requirements of this Consent Order.

27. Any and all financial assurance instruments provided pursuant to Paragraphs 26.a., 26.b., 26.d. or 26.f. shall be automatically renewed at the time of their expiration unless the financial assurance provider has notified both EMD and the Regional Project Manager at least one hundred twenty (120) days prior to expiration, cancellation or termination of the instrument of a decision to cancel, terminate or not renew a financial assurance instrument. Under the terms of the financial assurance instrument, the one hundred twenty (120) days will begin to run with the date of receipt of the notice by both the Regional Project Manager and the EMD. Furthermore, if EMD has failed to provide alternate financial assurance and obtain written approval for such alternate financial assurance within ninety (90) days following receipt of such notice by both EMD and the Regional Project Manager, then the Regional Project Manager will so notify the financial assurance provider in writing prior to the expiration of the instrument, and the financial assurance provider shall immediately deposit into the standby trust fund, or a newly created trust fund approved by U.S. EPA, the remaining funds obligated under the financial assurance instrument for the performance of the Work in accordance with this Consent Order.

28. Modification of Amount and/or Form of Financial Assurance

a. Reduction of Amount of Financial Assurance. Upon approval of the annual Cost Estimate by U.S. EPA, EMD may propose, for approval by U.S. EPA, any changes in the form or amount of financial assurance necessary to demonstrate financial responsibility. If the corporate guarantee or financial test method is used, the approved Cost Estimate will be used in the demonstration. If a method other than the corporate guarantee or financial test is used, EMD shall follow the procedures set forth in Paragraph 28.b.ii. of this Section to propose a change in the form or terms of the financial assurance. If U.S. EPA decides to accept such a proposal, U.S. EPA shall notify EMD of its decision in writing. After receiving U.S. EPA's written decision, EMD may reduce the amount of the financial assurance only in accordance with and to the extent permitted by such written decision. In the event of a dispute, EMD may reduce the amount of the financial assurance required hereunder only in accordance with the final U.S. EPA Dispute Decision resolving such dispute. No change to the form or terms of any financial assurance provided under this Section, other than a reduction in amount, is authorized except as provided in Paragraph 28.b. below.

b. Change of Form of Financial Assurance.

i. If EMD desires to change the form or terms of financial assurance, EMD may, at the same time that EMD submits the annual Cost Estimate, or such other time agreed to by U.S. EPA, submit a written proposal to U.S. EPA for approval to change the form of financial assurance. The submission of such proposed revised or alternative form of financial assurance shall be as provided in subparagraph 28.b.ii. below.

ii. A written proposal for a revised or alternative form of financial assurance shall specify, at a minimum, the cost of the remaining Work to be performed, the basis upon which such cost was calculated, and the proposed revised form of financial assurance, including all proposed instruments or other documents required in order to make the proposed financial assurance legally binding. U.S. EPA shall approve the proposed revised or alternative form of financial assurance if the U.S. EPA determines that the proposed revised or alternate form of financial assurance satisfies all requirements set forth or incorporated by reference in this Section. U.S. EPA shall notify EMD in writing of its decision to accept or reject a revised or alternative form of financial assurance submitted pursuant to this Paragraph, including a description of the reason for rejection, if the proposal is rejected. Within ten (10) days after receiving a written decision approving the

proposed revised or alternative financial assurance, EMD shall execute and/or otherwise finalize all instruments or other documents required in order to make the selected financial assurance legally binding in a form substantially identical to the documents submitted to U.S. EPA as part of the proposal, and such financial assurance shall be fully effective. EMD shall submit all executed and/or otherwise finalized instruments or other documents required in order to make the selected financial assurance legally binding to the U.S. EPA Regional Comptroller within thirty (30) days of receiving a written decision approving the proposed revised or alternative financial assurance, with a copy to the U.S. EPA Project Officer and Associate Regional Counsel. U.S. EPA shall release, cancel or terminate the prior existing financial assurance instruments only after EMD has submitted all executed and/or otherwise finalized new financial assurance instruments or other required documents to U.S. EPA.

- c. Release of Financial Assurance. EMD may submit a written request to the Director, Land and Chemicals Division, that U.S. EPA release EMD from the requirement to maintain financial assurance under this Section once U.S. EPA and EMD have both executed an "Acknowledgment of Termination and Agreement on Institutional Controls, Record Preservation and Reservation of Rights" pursuant to Section XX (Termination and Satisfaction) of the Consent Order. The Director, Land and Chemicals Division, will notify both EMD and the provider(s) of the financial assurance that EMD is released from all financial assurance obligations under this Consent Order. EMD shall not release, cancel or terminate any financial assurance provided pursuant to this Section except as provided in this subparagraph or subparagraph 28.b.ii. In the event of a dispute, EMD may release, cancel, or terminate the financial assurance required hereunder only in accordance with a final administrative or judicial decision resolving such dispute, or upon a release issued by U.S. EPA pursuant to this sub-paragraph.

## 29. Performance Failure

- a. If U.S. EPA determines that EMD (i) has ceased implementing any material portion of the Work, (ii) is significantly or repeatedly deficient or late in its performance of the Work, or (iii) is implementing the Work in a manner that may cause an endangerment to human health or the environment, U.S. EPA may issue a written notice ("Performance Failure Notice") to both EMD and the financial assurance provider of EMD's failure to perform. The notice issued by U.S. EPA will specify in detail the grounds upon which such a notice was issued and will



provide EMD with a period of sixty (60) days within which to remedy the circumstances giving rise to the issuance of such notice.

- b. Failure by EMD to materially remedy the relevant Performance Failure to U.S. EPA's satisfaction before the expiration of the sixty (60) day notice period specified in Paragraph 29.a. shall trigger U.S. EPA's right to have immediate access to and benefit of the financial assurance provided pursuant to Paragraphs 25 and 26. U.S. EPA may at any time thereafter direct the financial assurance provider to immediately (i) deposit into the standby trust fund, or a newly created trust fund approved by U.S. EPA, the remaining funds obligated under the financial assurance instrument, or (ii) arrange for performance of the Work in accordance with this Consent Order. If U.S. EPA is unable after reasonable efforts to secure payment of funds or performance of work from the financial assurance provider, then upon written notice from U.S. EPA, EMD shall, within twenty (20) days, deposit into a trust fund approved by U.S. EPA, to be used solely for completion of the Work, a cash amount equal to the Cost Estimate, without setoff, counterclaim or condition, other than conditions of the trust fund approved by U.S. EPA.
  
- c. EMD may invoke the procedures set forth in Section XI (Dispute Resolution), to dispute U.S. EPA's determination that any of the circumstances described in clauses (i), (ii), or (iii) of Paragraph 29.a. have occurred. Invoking the dispute resolution provisions shall not excuse, toll or suspend the obligation of the financial assurance provider, under Paragraph 29.b. of this Section, to fund the trust fund or perform the Work. Furthermore, notwithstanding EMD's invocation of such dispute resolution procedures, and during the pendency of any such dispute, U.S. EPA may in its sole discretion direct the trustee of such trust fund to make payments from the trust fund to any person that has performed the Work in accordance with this Consent Order until the earlier of (i) the date that EMD remedies, to U.S. EPA's satisfaction, the circumstances giving rise to U.S. EPA's issuance of the relevant Performance Failure Notice or (ii) the date that the U.S. EPA Dispute Decision is rendered in accordance with Section XI. (Dispute Resolution), that EMD has not failed to perform the Work in accordance with this Consent Order.

## **IX. RECORD PRESERVATION**

30. EMD must retain, during the pendency of this Consent Order and for at least six years after the Consent Order terminates, all data and all final documents now in its possession or control or which come into its possession or control which relate to

this Consent Order. EMD must notify U.S. EPA in writing ninety (90) days before destroying any such records, and give U.S. EPA the opportunity to take possession of any non-privileged documents. EMD may transfer documents for off-site storage and may transfer documents to electronic media for storage. EMD's notice shall refer to the effective date, caption, and docket number of this Consent Order and shall be addressed to:

Director  
Land and Chemicals Division  
U.S. EPA, Region 5  
77 W. Jackson Blvd.  
Chicago, IL 60604-3590

EMD shall also promptly give U.S. EPA's Project Manager a copy of the notice.

31. Within thirty (30) days of retaining or employing any agent, consultant, or contractor ("agents") to carry out the terms of this Consent Order, EMD shall enter into an agreement with the agents requiring the agents to give EMD a copy of all data and final non-privileged documents produced under this Consent Order.

32. EMD shall not assert any privilege claim concerning any data gathered during any investigations or other actions required by this Consent Order.

## **X. STIPULATED PENALTIES**

33. EMD must pay the following stipulated penalties to the United States for violations of this Consent Order:
- a. For failure to submit: (a) quarterly progress reports beginning 120 days after the start of construction and continuing quarterly through construction completion; and (b) monitoring reports, as defined in the Performance Monitoring Plan: \$500 per day for the first fourteen (14) days, and \$1,000 per day thereafter.
  - b. For failure to meet any of the performance milestones identified in the schedule approved pursuant to Paragraph 14: \$2,000 per day for the first fourteen (14) days and \$3,000 per day thereafter.
  - c. For failure to deposit an amount equal to the Cost Estimate in the trust fund within 45 days of the effective date of the Consent Order: \$1,000 per day for the first fourteen (14) days and \$2,000 per day thereafter.
  - d. For failure to establish an alternate form of financial assurance, as approved by U.S. EPA and pursuant to Section VIII, by the deadline for same established pursuant to Paragraph 26.g: \$1,000 per day for the first fourteen (14) days and \$2,000 per day thereafter.
  - e. If EMD is using a form of financial assurance other than the trust fund under Paragraphs 26-28 and, pursuant to Paragraph 29.b., U.S. EPA requires EMD's deposit of cash in an amount equal to the Cost Estimate into a trust fund, then for failure to deposit the monies within 20 days of U.S. EPA's demand under Paragraph 29.b: \$2,000 per day for the first fourteen (14) days and \$3,000 per day thereafter.
  - f. For failure to submit the Final Remedy Construction Completion Report as required by Paragraph 17, including the Operation and Maintenance Plan and the Groundwater Monitoring Plan as required by Paragraph 18, according to the approved schedule: \$2,000 per day for the first fourteen (14) days and \$3,000 per day thereafter.
34. Whether or not EMD has received notice of a violation, stipulated penalties shall begin to accrue on the day a violation occurs, and shall continue to accrue until EMD complies. Separate stipulated penalties for separate violations of this Consent Order will accrue simultaneously. Stipulated penalties shall not run if U.S. EPA has notified EMD, in writing, that it will review an EMD request for a proposed change to the schedule for construction, based on EMD's observations made during actual

construction of the remedy that the design of the remedy or schedule for its construction should be modified.

35. EMD must pay any stipulated penalties owed to the United States under this Section within thirty (30) days of receiving U.S. EPA's written demand to pay the penalties, unless EMD invokes the dispute resolution procedures under Section XI. Dispute Resolution. A written demand for stipulated penalties will describe the violation and will indicate the amount of penalties due.

36. Interest will begin to accrue on any unpaid stipulated penalty balance beginning thirty-one (31) days after EMD receives U.S. EPA's demand letter. Interest will accrue at the current value of funds rate established by the Secretary of the Treasury. Under 31 U.S.C. § 3717, EMD must pay an additional penalty of six percent per year on any unpaid stipulated penalty balance more than ninety (90) days overdue. EMD may tender payment of the disputed penalty assessment into an interest bearing escrow account from which any principal and interest found to be due and owed to the U.S. EPA shall be paid at the conclusion of the dispute resolution, with all principal and interest not found due and owed to the U.S. EPA returned to EMD from the account.

37. EMD must pay all penalties by certified or cashier's check payable to the United States of America, or by wire transfer, and shall send the check to:

US Environmental Protection Agency  
Fines and Penalties  
Cincinnati Finance Center  
PO Box 979077  
St. Louis, MO 63197-9000

A transmittal letter stating the name of the facility, EMD's name and address, and the U.S. EPA docket number of this action must accompany the payment. EMD shall simultaneously send a copy of the check and transmittal letters to the U.S. EPA Project Manager and Associate Regional Counsel.

38. EMD may dispute U.S. EPA's assessment of stipulated penalties by invoking the dispute resolution procedures under Section XI. Dispute Resolution. The stipulated penalties in dispute will continue to accrue, but need not be paid, during the dispute resolution period. EMD must pay stipulated penalties and interest, if any, according to the dispute resolution decision or agreement. EMD must submit such payment to U.S. EPA within thirty (30) days after receiving the dispute resolution decision or agreement according to the payment instructions of this Section.

39. Neither invoking dispute resolution nor paying penalties will affect EMD's obligation to comply with the terms of this Consent Order not directly in dispute.

40. The stipulated penalties set forth in this Section do not preclude U.S. EPA from pursuing any other remedies or sanctions which may be available to U.S. EPA for EMD's violation of any terms of this Consent Order. However, U.S. EPA will not seek both a stipulated penalty under this Section and a statutory penalty for the same violation.

## **XI. DISPUTE RESOLUTION**

41. The parties will use their best efforts to informally and in good faith resolve all disputes or differences of opinion.

42. If either party disagrees, in whole or in part, with any decision made or action taken under this Consent Order, that party will notify the other party's Project Manager of the dispute. The Project Managers will attempt to resolve the dispute informally. Any informal resolution of the dispute shall be documented in writing.

43. If the Project Managers cannot resolve the dispute informally within (twenty-one) 21 days, either party may pursue the matter formally by placing its objections in writing. A written objection must state the specific points in dispute, the basis for that party's position, and any matters which it considers necessary for determination.

44. U.S. EPA and EMD will in good faith attempt to resolve the dispute through formal negotiations within twenty-one (21) days, or a longer period if agreed in writing by the parties. During formal negotiations, either party may request a conference with appropriate senior management to discuss the dispute. If the parties are unable to reach an agreement through formal negotiations, within fourteen (14) business days after any formal negotiations end, EMD's and U.S. EPA's Project Manager may each submit additional written information to the Director of the Land and Chemicals Division, U.S. EPA Region 5. Formal negotiations shall be deemed to have terminated upon receipt of written notice from one party to another that formal negotiations have ended. U.S. EPA will maintain an administrative record of the dispute, which will contain all statements of position and any other documentation submitted pursuant to this Section. U.S. EPA and EMD may both timely submit relevant supplemental statements of position. Based on the record, U.S. EPA will respond to EMD's arguments and evidence and provide a detailed written decision on the dispute signed by the Director of the Land and Chemicals Division, U.S. EPA Region 5 ("U.S. EPA Dispute Decision").

## **XII. FORCE MAJEURE AND EXCUSABLE DELAY**

45. Force majeure, for purposes of this Consent Order, is any event arising from causes not foreseen and beyond EMD's control that delays or prevents the timely performance of any obligation under this Consent Order despite EMD's best efforts.

46. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Order, whether or not caused by a force majeure event, EMD must notify U.S. EPA within five (5) business days after learning that the event may cause a delay. If EMD wishes to claim a force majeure event, within fifteen (15) business days thereafter EMD must provide to U.S. EPA in writing all relevant information relating to the claim, including a proposed revised schedule.

47. If U.S. EPA determines that a delay or anticipated delay is attributable to a force majeure event, U.S. EPA will extend in writing the time to perform the obligation affected by the force majeure event for such time as U.S. EPA determines is necessary to complete the obligation or obligations.

## **XIII. MODIFICATION**

48. This Consent Order may be modified only by mutual agreement of U.S. EPA and EMD, except as provided in Section VI - Work to be Performed. Any agreed modifications shall be in writing, shall be signed by both parties, shall be effective on the date of signature by U.S. EPA, and shall be incorporated into this Consent Order.

## **XIV. RESERVATION OF RIGHTS**

49. Nothing in this Order restricts U.S. EPA's authority to seek EMD's compliance with this Consent Order and applicable laws and regulations. Subject to the terms of this Consent Order, for violations of this Consent Order, U.S. EPA reserves its rights to bring an action to enforce the Consent Order, to assess penalties under Section 3008(h)(2) of RCRA, 42 U.S.C. § 6928(h)(2), and to issue an administrative order to perform corrective actions or other response measures. In any later proceeding, EMD shall not assert or maintain any defense or claim of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon a contention that the claims raised by U.S. EPA or the United States in the later proceeding were or should have been raised here. This Consent

Order is not a covenant not to sue, release, waiver, or limitation of any rights, remedies, powers, or authorities of U.S. EPA.

50. U.S. EPA reserves all of its rights to perform any portion of the Work consented to here or any additional site characterization, feasibility study, and remedial response as it deems necessary to protect human health or the environment. If U.S. EPA determines that EMD's actions related to this Consent Order have caused or may cause a release of hazardous waste or hazardous constituent(s), or a threat to human health or the environment, or that EMD cannot perform any of the Work ordered, U.S. EPA may order EMD to stop implementing this Consent Order for the time U.S. EPA determines may be needed to abate the release or threat and to take any action that U.S. EPA determines is necessary to abate the release or threat.

51. EMD does not admit any of U.S. EPA's factual or legal determinations. Except for the specific waivers in this Consent Order, EMD reserves all of its rights, remedies and defenses, including all rights and defenses it may have: (a) to challenge U.S. EPA's performance of Work; (b) to challenge U.S. EPA's stop work orders; and (c) regarding liability or responsibility for conditions at the facility, except for its right to contest U.S. EPA's jurisdiction to issue or enforce this Consent Order. EMD has entered into this Consent Order in good faith without trial or adjudication of any issue of fact or law. EMD reserves its right to seek judicial review of U.S. EPA actions taken under this Consent Order, including a proceeding brought by the United States to enforce the Consent Order or to collect penalties for violations of the Consent Order.

## **XV. OTHER CLAIMS**

52. EMD waives any claims or demands for compensation or payment under Section 106(b), 111, and 112 of CERCLA against the United States or the Hazardous Substance Superfund established by 26 U.S.C. § 9507 for, or arising out of, any activity performed or expense incurred under this Consent Order. Additionally, this Consent Order is not a decision on preauthorization of funds under Section 111(a)(2) of CERCLA.

## **XVI. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT**

53. EMD indemnifies, saves and holds harmless the United States, its agencies, departments, agents, and employees, from all claims or causes of action arising from or on account of acts or omissions of EMD or its officers, employees, agents, independent contractors, receivers, trustees, and assigns in carrying out activities required by this Consent Order. This indemnification will not affect or limit the rights or obligations of EMD or the United States under their various contracts.

This indemnification will not create any obligation on the part of EMD to indemnify the United States from claims arising from the acts or omissions of the United States.

#### **XVII. SEVERABILITY**

53. If any judicial or administrative authority holds any provision of this Consent Order to be invalid, the remaining provisions shall remain in force and shall not be affected.

#### **XVIII. NOTICES**

54. Whenever, under the terms of this Consent Order, written notice is required to be given or a report or other document is required to be sent by one Party to another, it shall be directed to the individuals at the addresses specified below, unless those individuals or their successors give notice of a change to the other Parties in writing:

If to U.S. EPA:

Donald Heller  
Remediation and Reuse Branch (LU-9J)  
U.S. EPA, Region 5  
77 West Jackson Boulevard  
Chicago, IL 60604

Sherry L. Estes  
Associate Regional Counsel (C-14J)  
U.S. EPA, Region 5  
77 West Jackson Boulevard  
Chicago, IL 60604

If to EMD:

Remediation Project Manager  
EMD Chemicals, Inc.  
2909 Highland Avenue  
Cincinnati, Ohio 45212

Mark Norman  
Vorys, Sater, Seymour and Pease LLP  
221 East Fourth Street  
Cincinnati, Ohio 45202

#### **XIX. APPENDICES**

55. The following appendices are attached to and incorporated into this Consent Order:

"Appendix A" consists of the Statement of Basis, and the November 5, 2008 RCRA Final Decision Document.

"Appendix B" is the Environmental Covenant.



“Appendix C” is the Schedule of Work.

“Appendix D” is the Estimated Cost of the Work

“Appendix E” is the Trust Agreement approved by U.S. EPA for the Financial Assurance.

“Appendix F” is the Form of Acknowledgment of Termination and Agreement on Record Preservation and Reservation of Rights.

## **XX. TERMINATION AND SATISFACTION**

56. EMD may request that U.S. EPA issue a determination that EMD has met the requirements of the Consent Order for all or a portion of the facility. EMD may also request that U.S. EPA issue a "no further interest" or "no further action" determination for all or a portion of the facility.

57. The provisions of the Consent Order will be satisfied and the Consent Order terminated upon EMD's and U.S. EPA's execution of an "Acknowledgment of Termination and Agreement on Institutional Controls, Record Preservation and Reservation of Rights" in substantially similar form to the document in Appendix F. The requirements of this Consent Order shall be considered met when: 1) the U.S. EPA has approved the Final Remedy Construction Completion Report, 2) the U.S. EPA has approved the Final Remedy Performance Monitoring Report, and 3) the U.S. EPA determines that all remaining requirements for operation, maintenance, and monitoring of institutional or engineering controls related to the Final Remedy at the Facility are properly addressed in an enforceable environmental covenant recorded on the property.

58. EMD's execution of the Acknowledgment of Termination and Agreement on Institutional Controls, Record Preservation and Reservation of Rights shall affirm its continuing obligation to preserve all records as required by Section IX, to maintain any necessary institutional controls or other long-term control measures, and to recognize U.S. EPA's reservation of rights as required in Section XIV.


## **XXI. EFFECTIVE DATE**

59. This Consent Order is effective on the date that U.S. EPA signs the Consent Order.

IN THE MATTER OF: **RCRA-05-2010-0014**  
EMD Chemicals, Inc.  
EPA ID#: OHD 086 438 538

IT IS SO AGREED:

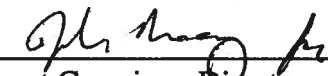
DATE: 25 FEB 10

BY:   
Stephen J. Kunst, Esq.  
Senior Vice President  
Legal and Regulatory Affairs  
EMD Chemicals Inc.

IN THE MATTER OF: **RCRA-05-2010-0014**  
EMD Chemicals, Inc.  
EPA ID#: OHD 086 438 538

**IT IS SO ORDERED:**

DATE: 3/30/10

BY:   
Margaret Guerriero, Director  
Land and Chemicals Division  
U.S. Environmental Protection Agency  
Region 5