

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 3  
1650 ARCH STREET  
PHILADELPHIA, PA 19103-2029**

**IN THE MATTER OF:** )

**E. I. DuPont De Nemours )  
and Company )  
1007 Market Street )  
Wilmington, Delaware 19898, )**

**Respondent. )**

**901 West Dupont Avenue )  
Belle, West Virginia )**

**Facility. )**

**Proceeding Pursuant to Section )  
113(a)(3)(B) of the Clean Air Act, )  
as amended, 42 U.S.C. )  
§ 7413(a)(3)(B) )**

**ADMINISTRATIVE ORDER**

**Docket No. CAA-03-2010-0231DA**

**ADMINISTRATIVE ORDER**

This Administrative Order ("Order") is issued to E. I. DuPont De Nemours and Company ("DuPont" or "Respondent") pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency ("EPA") by Section 113(a)(3)(B) of the Clean Air Act, as amended ("CAA"), 42 U.S.C. § 7413(a)(3)(B), delegated to the Regional Administrators of EPA by Delegation Number 7-6-A, and re-delegated to the Director of the Hazardous Site Cleanup Division for EPA Region III by EPA Region III Delegation Number 7-6-A. This Order requires Respondent to comply with the requirements of Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1) at its facility located at 901 West Dupont Avenue, Belle, West Virginia (the "Facility"). Specifically, EPA orders DuPont to identify hazards which may result from accidental releases of regulated substances and other extremely hazardous substances from the Facility, design and maintain a safe Facility, and minimize the consequences of accidental releases which may occur.

## **I. STATUTORY AND REGULATORY BACKGROUND**

1. On November 15, 1990, the President signed into law the Clean Air Act Amendments of 1990. The Amendments added Section 112(r) to the CAA, 42 U.S.C. § 7412(r), which requires the Administrator of EPA to, among other things, promulgate regulations for the prevention of accidental releases of certain regulated substances.
2. Pursuant to Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1), the owners and operators of stationary sources producing, processing, handling or storing substances listed pursuant to Section 112(r)(3) of the CAA, 42 U.S.C. § 7412(r)(3), or any other extremely hazardous substance have a general duty, in the same manner and to the same extent as 29 U.S.C. § 654, to identify hazards which may result from accidental releases of such substances using appropriate hazard assessment techniques, to design and maintain a safe facility taking such steps as are necessary to prevent releases, and to minimize the consequences of accidental releases which do occur.

## **II. DEFINITIONS**

3. Section 112(r)(2)(C) of the CAA, 42 U.S.C. § 7412(r)(2)(C), and the regulations at 40 C.F.R. § 68.3 define “stationary source” as, *inter alia*, any buildings, structures, equipment, installations or substance emitting stationary activities which belong to the same industrial group, which are located on one or more contiguous properties, which are under the control of the same person (or persons under common control) and from which an accidental release may occur.
4. Section 112(r)(2)(A) of the CAA, 42 U.S.C. § 7412(r)(2)(A), defines “accidental release” as an unanticipated emission of a regulated substance or other extremely hazardous substance into the ambient air from a stationary source.
5. Section 112(r)(2)(B) of the CAA, 42 U.S.C. § 7412(r)(2)(B), defines “regulated substance” as a substance listed pursuant to Section 112(r)(3) of the CAA. The list of substances regulated under Section 112(r) of the CAA is set forth at 40 C.F.R. § 68.130.
6. As used herein, the term “day” shall mean calendar day.
7. The term “process” is defined at 40 C.F.R. Part 68.3 to mean, in relevant part, “any activity involving a regulated substance including any use, storage, manufacturing, handling, or on-site movement of such substances, or combination of these activities.”

## **III. FINDINGS OF FACT**

8. Respondent is the owner and/or operator of a facility located at 901 West Dupont

Avenue, Belle, West Virginia (the "Facility"). The DuPont Belle Plant manufactures a variety of organic chemicals, agricultural intermediates and agricultural chemical products. These include Amines, Acrylic acids/Acrylic Monomers, Azo Catalysts, Ureas, Organic Acids, Sulfur compounds, Formamides, Dimethylacetamide, Sulfonylurea Isocyanates, Herbicide Intermediates, Dimethylether. The Facility is located adjacent to a residential area. Approximately 50 people live within a 0.2 mile radius of the Facility.

9. According to the latest Risk Management Plan submitted to EPA, Respondent handles, stores, and uses, and has handled, stored, and used, the following regulated substances in a process at the Facility in an amount that exceeds the threshold quantity pursuant to Section 112(r)(2) and (3) of the CAA, which are listed at 40 C.F.R. § 68.130: Anhydrous Ammonia, Methylamine, Dimethylamine, Trimethylamine, Phosgene, Methyl Ether, Sulfur Trioxide, Formaldehyde, Oleum, Methyl Chloroformate and Ethylamine. Methyl Chloride is listed at 40 C.F.R. § 68.130 but is not found in a process at the Facility in an amount that exceeds the threshold quantity.
10. On or about January 22, 2010, a release of Methyl Chloride was discovered from the Hexazinone unit at the Facility from the vent line above a rupture disk and is further described in paragraph 14.a. below.
11. On or about 0745 hours on January 23, 2010, a release of Oleum (fuming Sulfuric Acid) and/or Sulfuric Acid was discovered from a sampling line in the Sulfuric Acid Regeneration ("SAR") Unit at the Facility. EPA was notified on February 24, 2010, that the SAR Unit where the Sulfuric Acid (Oleum) release occurred would be shut down permanently in accordance with a consent decree [Civil Action 2:09-0385, United States District Court for the Southern District of West Virginia] which resolved allegations of Clean Air Act violations.
12. According to Facility personnel, due to the releases listed in paragraphs 10 and 11 above, a safety pause was directed by the company between 1100 and 1200 hours on January 23, 2010, for several processes at the Facility, including the Small Lots Manufacturing ("SLM") Unit. As is further described in paragraph 14 below, the Facility did not comply with procedures in place to safely close down the operations, including but not limited to the evacuation of process lines.
13. On or about 1358 hours on January 23, 2010, a Phosgene release occurred from a failed transfer hose in the SLM Unit at the Facility. A worker was exposed to the Phosgene and later died on January 24, 2010. The worker was not wearing any Personal Protective Equipment ("PPE") at the time of the incident.
14. As a result of the release events on or about January 22 and 23, 2010, described above and specifically the release that resulted in the death of an employee, EPA conducted an

inspection of the Facility from February 2 through 4, 2010, to assess compliance with Section 112(r) of the CAA, 42 U.S.C. § 7412(r). During the inspection, EPA personnel requested several documents for review which are related to the three releases. EPA personnel noted the following issues during the inspection and in their review of documents:

- a. On or about December 18, 2009, pressure transmitter records indicated a rise in pressure in a Hexazinone process line to approximately 18 psig followed by a sudden drop on or about December 20, 2009, most likely caused by the failure of a rupture disk. A burst sensor above the rupture disk should have alarmed and alerted personnel to the failure of the disk. According to Facility personnel, there was no investigation of the pressure drop prior to the processing of a batch in the Hexazinone unit that began on or about January 17, 2010. On or about January 22, 2010, a release of Methyl Chloride was discovered from the Hexazinone unit at the Facility from a drain pipe in a vent line above a rupture disk that allows any precipitation or condensation to drain from above the rupture disk. According to facility representatives, the drain pipe in the vent line was the source of the Methyl Chloride that was released into an area accessed by workers operating the unit. Fortuitously, the Methyl Chloride was detected by a sensor alarm, located approximately ten feet from the vent line, that is intended to alert workers of the release of Ethyl Chloroformate in a nearby process line so that PPE may be donned or so that the area could be evacuated.
- b. The Phosgene Hose Assembly Standard Operating Procedure ("SOP") [SULFMECH002] dated September 2, 1998 states "Ensure hose fabrication date is within 6 months of installation date." The Phosgene transfer hose that failed was installed in June 2009; the date of fabrication by Branham Corporation was May 27, 2008. The SOP also states that "Due to the extremely hazardous nature of phosgene the hose assemblies are replaced every 2 months." Facility records indicate that the same hose assemblies may have been in use since June 2009.
- c. The normal operating pressure of the Phosgene transfer hose is between 50-65 psig. Test pressures of flexible hoses and their assemblies are usually above the normal operating pressures. The American Society of Mechanical Engineers (ASME) Code for Process Piping B31.3-2008 states in section 345.5.4 that the pneumatic leak "test pressure shall be 110% of design pressure".  
  
DuPont's Phosgene Hose assembly SOP requires that the assembly be tested to at "least 50 psig", which is less than the maximum operating pressure.
- d. The Phosgene Hose Assembly SOP and the Phosgene Cylinder SOPs do not have specific and complete instructions for the hookup and removal of the transfer

hoses to the Phosgene cylinders and the associated hard piping, specifically the attachment/detachment of the hoses to the hard piping or cylinder.

- e. In DuPont's Flexible Chemical Hose for Process Safety Management Applications (SW45S) footnote "a" to Table 3 (Hose application severity index), it states in part, that "The use of flexible hose should be avoided in these services" relating to any process that would require repeated adjustment of the connection. The Applications Manual further states that only the Light Class of Service allows the use of flexible hoses under the Major Product Hazard Classification. Light service is defined as: "Hose subject to small, infrequent movements. Adequate stops or guides to prevent over flexing. Operating pressure well below allowable limit with no shock and only slow pressure swings. Little or no potential abuse."

Inspectors observed no stops or guides present to prevent damage to the transfer hoses. Accordingly, the facility is not in compliance with SW45S.

- f. DuPont's Isolating of Partial Cylinder SOP [SULF000707], which was provided during the inspection, states that PPE must be worn for the procedure and valves upstream and downstream of the Phosgene transfer hoses be closed and then evacuated but venting to the vacuum system was not accomplished as required by the SOP.
- g. The operator entered the area without the required PPE per the SOP and was exposed to Phosgene likely remaining in the process lines.
15. As recently as September 17, 2009, EPA entered into a Consent Agreement and Final Order [Docket No. RCRA-03-2009-0252] with DuPont in response to allegations of violations of the Resource Conservation and Recovery Act.
16. The absence of and/or the inadequate implementation of SOPs and/or industry standards as described above, of the facility processes indicate a failure of the Facility to identify hazards, to take steps to prevent releases and to properly train and/or require adherence to existing SOPs by employees.

#### **IV. FINDING OF VIOLATION**

17. Respondent is, and at all times referred to herein was, a "person" as defined by Section 302(e) of the CAA, 42 U.S.C. § 7602(e), and the owner and/or operator of the Facility.
18. The Facility is a "stationary source" pursuant to Section 112(r)(2)(C) of the CAA, 42 U.S.C. § 7412(r)(2)(C), and 40 C.F.R. § 68.3.

19. Pursuant to Section 112(r)(1) of the CAA 42 U.S.C. § 7412(r)(1), Respondent has a general duty, in the same manner and to the same extent as 29 U.S.C. § 654, to: (a) identify hazards which may result from accidental releases of a regulated substance or other extremely hazardous substance, using appropriate hazard assessment techniques, (b) design and maintain a safe facility taking such steps as are necessary to prevent releases, and (c) minimize the consequences of accidental releases which do occur.
20. Based on information available to EPA, including information gathered during the inspection performed by EPA at the Facility and the Findings of Fact set forth above, EPA has determined that Respondent failed to satisfy the general duty provisions referred to in Paragraph 19 above. Therefore, Respondent violated the provisions of Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1).

#### **V. ORDER**

21. Based upon the foregoing Findings of Fact, Finding of Violation, and other information available to EPA, it is hereby ordered that Respondent comply with Section 112(r)(1) of the CAA and 40 C.F.R. Part 68 and the requirements set forth below:

#### **Work to be Performed**

22. Respondent shall take steps to (1) identify hazards which may result from accidental releases of regulated substances and other extremely hazardous substances from the Facility, (2) design and maintain a safe Facility taking such steps as are necessary to prevent releases, and (3) minimize the consequences of accidental releases which do occur. Such steps shall include, but shall not be limited to:
  - a. Immediately and fully implement existing SOPs at the Facility with particular regard to the Phosgene operation and document their implementation;
  - b. Immediately initiate a review of the Process Hazard Analyses (PHAs) on the Phosgene and Hexazinone processes, document the results of the reviews, propose and implement Management of Change ("MOC") procedures that may require modification of applicable SOPs with particular regard to the evaluation of PPE requirements;
  - c. Within ninety (90) days or pursuant to a schedule approved by EPA, review PHAs for all covered processes, document the results of the reviews, and propose and implement MOC procedures that may require modification of applicable SOPs as a result of the Respondent's completed incident investigation reports for incidents that occurred or were discovered on January 22 or 23, 2010;

- d. Within thirty (30) days of the completion of the evaluation described in subparagraph b, above, prepare and implement a comprehensive training program for handling and use of Phosgene or extremely hazardous chemicals involved in the Hexazinone processes for all employees involved in Phosgene transfer operations or the Hexazinone processes as a result of the evaluation described in subparagraph b, above and properly document the results of the training;
  - e. Within thirty (30) days of the completion of the evaluation described in subparagraph c, above, prepare and implement a comprehensive training program for applicable personnel on existing and acceptable SOPs, as well as on newly developed SOPs as a result of the evaluation described in subparagraph c, above and properly document the results of the training;
  - f. Within six months, review all other processes that may pose a threat of accidental release and provide a report to EPA detailing the review and any modifications to any newly developed PHA or Process Hazard Review ("PHR") as a result;
  - g. Submit the completed incident investigation report for the Methyl Chloride release discovered on January 22, 2010 to EPA within ninety (90) days of the effective date of this order or pursuant to a schedule approved by EPA;
  - h. Submit the completed incident investigation report for the Sulfuric Acid (Oleum) release that occurred on January 23, 2010 to EPA within ninety (90) days of the effective date of this order or pursuant to a schedule approved by EPA;
  - i. Submit the completed incident investigation report for the Phosgene release that occurred on January 23, 2010 to EPA within ninety (90) days of the effective date of this order or pursuant to a schedule approved by EPA;
  - j. Develop and follow an expeditious schedule for the implementation of the work described above.
  - k. Notification to EPA in writing at least five (5) days prior to its intended startup of the SLM or Hexazinone Units at the Facility.
23. EPA will review the reports and schedules submitted pursuant to Paragraph 22 and may direct Respondent to make changes or conduct further assessments, and resubmit the document(s).
  24. EPA will notify Respondent of its completion of the review of the reports and schedules submitted pursuant to Paragraph 22, above, including any modifications, if necessary.

Respondent shall proceed to conduct actions pursuant to such reports in accordance with the approved schedules.

25. Within sixty (60) days of completion of activities required pursuant to subparagraphs 22. a. through i. above, Respondent shall submit a report to EPA detailing the activities conducted at the Facility. The report shall include a verification, stating that Respondent has complied with each of the requirements of Paragraph 22, above. The verification shall include the following certification, signed by a responsible official of the Respondent:

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

26. Unless otherwise required by the terms of this Order, any notice, report, plan, certification, data presentation or other document submitted by the Respondent under or pursuant to this Order which discusses, describes, demonstrates or supports any finding or makes any representation concerning Respondent's compliance or non-compliance with any requirement(s) of this Order shall be certified by a responsible official of the Respondent. The term "responsible official" means: (i) the president, secretary or vice-president of the corporation in charge of principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$35 million (in 1987 dollars when the consumer price index was 345.3), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. The responsible official of a partnership or sole proprietorship means the general partners or the proprietor, respectively.

27. The submissions required by this Section shall be made to:

Michael Welsh, P.E., Risk Management Program Coordinator  
Oil and Prevention Branch (3HS61)  
U.S. Environmental Protection Agency, Region III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029  
Office: (215) 814-3285  
Fax: (215) 814-3254



28. Respondent shall provide EPA and its representatives, including contractors, with access to the Facility for the purpose of assessing Respondent's compliance with this Order and with the CAA. Respondent shall also provide EPA and its representatives, including contractors, with access to all records relating to Respondent's implementation of this Order. Nothing herein limits EPA's information-gathering or access authority under the CAA.
29. Respondent shall preserve all documents and information relating to the activities carried out pursuant to this Order, for ten years after completion of the work required by this Order. At the end of the ten-year period, Respondent shall notify EPA at least thirty (30) days before any such document or information is destroyed that such documents and information are available for inspection. Upon request, Respondent shall provide EPA with the originals or copies of such documents and information.

#### **VI. PARTIES BOUND**

30. The provisions of this Order shall apply to Respondent and its officers, agents, servants, employees, and successors and to all persons, firms and corporations acting under, through or for Respondent.

#### **VII. ENFORCEMENT**

31. Failure to comply with this Order may result in a judicial or administrative action for appropriate relief, including civil penalties, as provided in Section 113 of the CAA, 42 U.S.C. § 7413. EPA retains full authority to enforce the requirements of the CAA, and nothing in this Order shall be construed to limit that authority.
32. This Order shall not relieve Respondent of its obligation to comply with all applicable Federal, State, and local laws, regulations and other legal requirements, including but not limited to Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r), nor shall it be construed to be a ruling on, or determination of, any issue related to any Federal, State or local permit.
33. This Order shall not constitute or be construed as a release of any liability that the Respondent or any other person has under the CAA, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. Sections 9601-9675, or any other law.
34. Neither EPA nor the United States, by issuance of this Order, assumes any liability for any acts or omissions by DuPont, or DuPont employees, agents, contractors, or consultants engaged to carry out any action or activity pursuant to this Order, nor shall EPA or the United States be held as a party to any contract entered into by DuPont or by DuPont

employees, agents, contractors, or consultants engaged to carry out the requirements of this Order.

**VIII. NOTICE OF INTENT TO COMPLY**

35. Within fourteen (14) days of receipt of this Order, Respondent shall provide written notice to EPA stating whether Respondent will comply with the terms of this Order. If Respondent either fails to provide notice or does not unequivocally commit to perform the actions required by this Order, it shall be deemed to have violated this Order and to have failed and refused to comply with this Order.

**IX. OPPORTUNITY FOR A CONFERENCE**

36. Respondent may request a conference with EPA concerning the violations alleged in, and the requirements of, this Order. Respondent has the right to be represented by counsel at such a conference.
37. A request for a conference must be made in writing no later than ten (10) days after Respondent's receipt of this Order. The written request for a conference may be sent by fax or mail. The conference shall be held within seven (7) days of the request. The conference may be conducted in person or by telephone.
38. The request for a conference and other inquiries concerning this Order should be addressed to:

Jefferie Garcia, Esq.  
U.S. Environmental Protection Agency, Region III  
Office of Regional Counsel (3RC42)  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029  
Phone: (215) 814-2697  
Fax: (215) 814-2603

**X. EFFECTIVE DATE AND MODIFICATION**

39. This Order shall become effective upon Respondent's receipt of this Order signed by the Director, Hazardous Site Cleanup Division, EPA Region III.
40. If Respondent seeks permission to deviate from any compliance date or task listed in subparagraphs 22.a. through 22.i., or from any approved plan or schedule approved by EPA, Respondent shall submit a written request to EPA's Risk Management Program Coordinator, Michael Welsh, for approval, outlining and proposed modification and its

basis. Modifications to any plan or schedule must be approved in writing by the Risk Management Program Coordinator. The effective date of any such modification shall be the date on which the modification is signed by the Risk Management Program Coordinator.

- 41. This Order may be modified or amended by the Director, Hazardous Site Cleanup Division. Such modifications or amendments shall be effective on the date they are signed by the Director, Hazardous Site Cleanup Division.

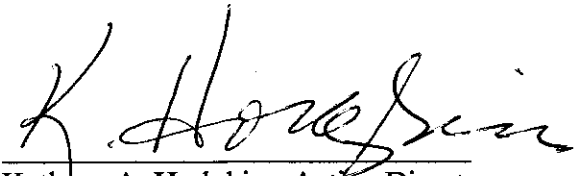
**XI. SEVERABILITY**

- 42. If any provision or authority of this Order, or the application of this Order to any party or circumstances, is held by any judicial or administrative authority to be invalid, the remainder of the Order shall remain in full force and not be affected thereby.

**XII. TERMINATION AND SATISFACTION**

- 43. The provisions of this Order shall be deemed satisfied upon Respondent's receipt of written notice from EPA that Respondent has demonstrated to the satisfaction of EPA that the terms of this Order, including any additional tasks determined by EPA to be required pursuant to this Order, have been satisfactorily completed.

FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY:



Date: 3/10/10

Kathryn A. Hodgkiss, Acting Director  
Hazardous Site Cleanup Division  
United States Environmental  
Protection Agency, Region III