

# Fact Sheet



## For Final Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-03900001-2011**  
Application Received: **August 12, 2010**  
Plant Identification Number: **03900001**  
Permittee: **E.I. DuPont de Nemours & Co., Inc.**  
**(Group 2 of 5)**  
Facility Name: **Belle Plant**  
Mailing Address: **901 W. DuPont Ave.**  
**Belle, WV 25015**

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Physical Location: Belle, Kanawha County, West Virginia  
UTM Coordinates: 451.90 km Easting • 4232.60 km Northing • Zone 17  
Directions: US Route 60 exit, then right onto Dupont Avenue, then left at plant gate

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### Facility Description

Manufacture of various organic and agricultural chemicals

### Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2009 Actual Emissions
	Group 2 Only	Facility Wide
Carbon Monoxide (CO)	2.98	972.6
Nitrogen Oxides (NO <sub>x</sub> )	19.4	436.5
Particulate Matter (PM <sub>10</sub> )	1.18 (HCL acid mist)	13.86
Total Particulate Matter (TSP)	1.18	13.86

Sulfur Dioxide (SO <sub>2</sub> )	< 0.1	718.9
Volatile Organic Compounds (VOC)	17.87	587.6
<i>PM<sub>10</sub> is a component of TSP.</i>		
<b>Hazardous Air Pollutants</b>	<b>Potential Emissions Group 2 Only</b>	<b>2009 Actual Emissions Facility Wide</b>
Total HAPs	15.36*	60.35

\* There is no single HAP with a PTE greater than 10.0 TPY in this Group 2 Permit

Some of the above HAPs may be counted as PM or VOCs.

### Title V Program Applicability Basis

This facility has the potential to emit more than 500 TPY of CO, 400 TPY of SO<sub>2</sub>, 1,200 TPY of NO<sub>x</sub>, and 500 TPY of VOC's. Due to this facility's potential to emit over 100 tons per year of CO, SO<sub>2</sub>, NO<sub>x</sub>, and VOC's, DuPont Belle is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

### Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR6	Open burning prohibited.
	45CSR7	Particulate Matter emissions
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Permits for construction, modification, relocation, etc.
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR16	New Stationary Sources
	45CSR21	VOC Emissions
	45CSR30	Operating permit requirement.
	45CSR40	Control of Ozone Season NO <sub>x</sub> *
	40 C.F.R. Part 60 Kb	Tanks*
	40 C.F.R. Part 60 NNN	Synthetic Organic Chemical Manufacturing Industry Distillation Operations*
	40 C.F.R. Part 63 F, G, H	Hazardous Organic NESHAP*
	40 C.F.R. Part 63 MMM	Pesticide Active Ingredient*
	40 C.F.R. Part 63 FFFF	MON MACT
	40 C.F.R. Part 61	Asbestos inspection and removal
40 C.F.R. Part 82, Subpart F	Ozone depleting substances	
State Only:	45CSR4	No objectionable odors.
	45CSR27	Toxic Air Pollutants*

45CSR42

Greenhouse Gas Emissions Inventory  
Program

\*These requirements apply to this facility, but not to this specific Group.

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

### Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit ( <i>if any</i> )
R13-0882H	7/23/2008	
R13-2093D	8/8/2007	
CO-R21-97-31	9/10/1997	
CO-R21-2002-10A(97)	4/17/2001	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

### Determinations and Justifications

Changes made to the Title V Permit since the last revision is summarized below:

1. Greenhouse Gas Emissions Inventory Program Rule  
Condition 3.1.9 and 3.5.10 have been added to the Permit to address greenhouse gas reporting per 45CSR42. All greenhouse gases emitted above the de minimis amounts must be reported.

### Small Lots Front End, Small Lots Back End

1. 40CFR63 – Subpart FFFF - *Miscellaneous Organics NESHAP (MON)*  
EPA published the final rule for the Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing (MON MACT) as a final rule on March 1, 2006, extending the compliance deadline from November 10, 2006 to May 10, 2008. The company was given 150 days by DAQ after the May 10, 2008 date to submit the Notification of Compliance Status. The company submitted a test plan on June 23, 2008 and a Notification of Compliance Status on October 7, 2008.

The applicable requirements of the Miscellaneous Organics NESHAP have been incorporated into this permit. The Permittee, through Condition 4.1.17, has chosen to comply with Table 2 - 1.a. which requires

98% by weight HAP removal limits for Group 1 Batch Process Vents and has chosen to comply with Table 2 – 2.a.ii. which is to reduce overall emissions of hydrogen halide and halogen HAP to <0.45kg/hr. The Permittee has already determined the Group Status as required by 40CFR§63.2460(b), and has already shown initial compliance and will not be using the alternatives as given in 40CFR§63.2460(c). Condition 4.1.18 requires a fixed roof for Group 1 Wastewater Tanks. Condition 4.1.19 requires a vapor balancing system design and operation for MON Transfer Racks. Condition 4.1.20 lists various MON Equipment Leak provisions. Condition 4.4.5 lists the MON MACT recordkeeping requirements. Condition 4.5.1 lists the MON MACT reporting requirements.

The below list identifies the applicable MON units, specifies the Group and Equipment type, and explains why they are subject to the MON.

Equipment ID	Equipment Name	MON Equipment Type	MON Citations	Comments
010	Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP; vapor pressure at 74F is 0.15psia therefore Group 2
226	Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP; vapor pressure at 50C is 0.49psia, therefore Group 2
SPT	Spill Protection Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP; capacity < 10000 gallons, therefore Group 2
206	Reactor	Group 1 Batch Vent	63.2550 63.2460	Designated as Group 1 – HAPS controlled by thermal oxidizer and scrubber
203c	Reactor	Group 1 Batch Vent	63.2550 63.2460	Designated as Group 1 – HAPS controlled by thermal oxidizer and scrubber
219	Reactor	Group 1 Batch Vent	63.2550 63.2460	Designated as Group 1 – HAPS controlled by thermal oxidizer and scrubber
901	Loading	Group 2 Transfer Rack	63.2550 63.2475	Contains HAP; vapor pressure at 50C is 0.49psia, therefore Group 2
SPTD	Spill Protection Tank Discharge	Group 2 Wastewater	63.2550 63.2485	HAP concentration < 500ppm, therefore Group 2

Equipment ID	Equipment Name	MON Equipment Type	MON Citations	Comments
226	Storage (iso container)	Group 2 Storage Vessel	63.2550 63.2470	Contains HAP (Toluene); isotaner capacity is <19813 gallons therefore Group 2
101	Storage	Group 2 Storage Vessel	63.2550 63.2470	Contains HAP (Toluene); tank capacity is <10000 gallons therefore Group 2
108	Waste Tank	Group 2 Storage Vessel	63.2550 63.2470	Contains HAP (Methanol); tank capacity is <10000 gallons therefore Group 2
112	Tank	Group 2 Storage Vessel	63.2550 63.2470	Contains HAP (Toluene); tank capacity is <10000 gallons therefore Group 2
109	Tank	Group 2 Storage Vessel	63.2550 63.2470	Contains HAP; tank capacity is <10000 gallons therefore Group 2
205	Reactor	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1. HAPs controlled to 98% efficiency by thermal oxidizer.
206	Reactor	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1. HAPs controlled to 98% efficiency by thermal oxidizer.
219	Reactor	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1. HAPs controlled to 98% efficiency by thermal oxidizer.
208	Reactor	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1. HAPs controlled to 98% efficiency by thermal oxidizer.
209	Reactor	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1. HAPs controlled to 98% efficiency by thermal oxidizer.
201	Centrifuge	Group 1 Batch	63.2550	Designated as Group 1. HAPs controlled to 98% efficiency by thermal oxidizer.
002	Dryer	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1. HAPs controlled to 98% efficiency by thermal oxidizer.
003WW	Main Scrubber Discharge	Group 2 Wastewater	63.2550 63.2485	HAP (toluene) concentration < 1000ppm

Equipment ID	Equipment Name	MON Equipment Type	MON Citations	Comments
227	Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP; tank capacity is <10000 gallons therefore Group 2
108	Waste Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP (Methanol); isotoner capacity is <19813 gallons therefore Group 2
112	Tank	Group 2 Storage Tank	63.2550 63.2470	Designated as Group 1 Contains HAP; tank capacity is <10000 gallons therefore Group 2
101	Storage	Group 2 Storage Tank	63.2550 63.2470	Contains HAP; tank capacity is <10000 gallons therefore Group 2
205	Reactor	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled with thermal oxidizer
206	Reactor	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled with thermal oxidizer
203c	Reactor Condenser	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled with thermal oxidizer
103	Storage Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP; tank capacity is <10000 gallons therefore Group 2
219	Reactor	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled with thermal oxidizer
208p	Reactor Vacuum Pump	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled with thermal oxidizer
208c	Reactor Condenser	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled with thermal oxidizer

Equipment ID	Equipment Name	MON Equipment Type	MON Citations	Comments
208WW1	Reactor Wastewater (cut 1)	Group 1 Wastewater	63.2550 63.2485	Designated as group 1, sent offsite for disposal
208WW2	Reactor Wastewater (cut 2 and 3)	Group 2 Wastewater	63.2550 63.2485	Toluene range 500-600ppm therefore Group 2
109	Tank	Wastewater management unit	63.2550 63.2485	Fixed roof
WWL	Wastewater Loading	Wastewater management unit	63.2550 63.2485	Fixed roof

Equipment ID	Equipment Name	MON Equipment Type	MON Citations	Comments
202	ML Disengaging Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP; tank capacity is <10000 gallons therefore Group 2
108	Waste Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP (Methanol); isotoner capacity is <19813 gallons therefore Group 2
112	Tank	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled by thermal oxidizer
109	Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP; tank capacity is <10000 gallons therefore Group 2
205	Reactor	Group 1 Continuous Process Vent	63.2550 63.2455	Designated as Group 1; HAPs controlled by thermal oxidizer
206	Reactor	Group 1 Continuous Process Vent	63.2550 63.2455	Designated as Group 1; HAPs controlled by thermal oxidizer
219	Reactor	Group 1 Continuous Process Vent	63.2550 63.2455	Designated as Group 1; HAPs controlled by thermal oxidizer
208	Reactor	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled by thermal oxidizer
209	Reactor	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled by thermal oxidizer
201	Centrifuge	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled by thermal oxidizer

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002	Vacuum Dryer	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled by thermal oxidizer
003WW	Main Scrubber Discharge	Group 2 Wastewater	63.2550 63.2845	HAP (toluene) concentration < 1000ppm
201A	Wet Cake Bin	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled by thermal oxidizer
108L	Waste Tank Loading	Group 1 Transfer Rack	63.2550 63.2475	Uses vapor balancing
109WW	Tank Waste Loading	Group 2 Transfer Rack	63.2550 63.2475	Vapor pressure of phenol <0.02psia therefore group 2

## Building 114

### 1. 45CSR13 *Permits For Construction, Modification, Relocation and Operation of Stationary Sources*

Condition 5.1.25 of the previous permit required the permittee to modify their R13-2093C permit to address the changes resulting of the removal of the TBU/TBA process from the Thermal Oxidizer. R13-2093D was issued and addressed these changes. Therefore previous Condition 5.1.25 has been removed from this permit.

### 2. 40CSR30 *Operating Permits*

Previous Condition 5.1.1.c limited the maximum annual production of MBC to 2,190 batches per year. The MBC process has been shut-down and dismantled, so this Condition has been removed from this Permit. Previous Condition 5.5.1.b required a report of the total annual hours of operation of the TBU/TBA process. This process has been shut-down and dismantled, so this Condition has been removed from the Permit.

### 3. 40CFR63 – Subpart FFFF - *Miscellaneous Organics NESHAP (MON)*

The applicable requirements of the Miscellaneous Organics NESHAP have been incorporated into this permit. Condition 5.1.25 requires HAP removal for Group 1 Storage Tanks. Condition 5.1.26 requires removal of HAPs and also for hydrogen halide and halogen HAPs for Group 1 Batch Process Vents. Condition 5.1.27 requires minimum temperature for the Thermal Oxidizer HKCD01 and ph and flow rate limits for the Thermal Oxidizer Scrubber HKCD02. Condition 5.1.28 has roof requirements for Group 1 Wastewater Tanks. Condition 5.1.29 has removal efficiency requirements for methanol from the wastewater process stream as well as monitoring, recordkeeping, and reporting. Condition 5.1.30 addresses the MON Equipment Leak Requirements. Condition 5.4.9 has general MON MACT recordkeeping requirements. Condition 5.5.4 has general MON MACT reporting requirements.

The below list identifies the applicable MON units, specifies the Group and Equipment type, and explains why they are subject to the MON.

Equipment ID	Equipment Name	MON Equipment Type	MON Citations	Comments
HK104	Storage Tank	Group 1 Storage Tank	63.2550 63.2470	Contains HAP; maximum true vapor pressure 4 psia, therefore Group 1
HK014	Hold-up Tank	Group 2 Bottoms Receiver	63.2550 63.2450(r)	Capacity < 10,000 gallons and maximum true vapor pressure of total HAP < 1psia, therefore Group 2 with no work practice standards
HK101	Reactor	Group 1 batch process vent	63.2550 63.2460	Designated as Group 1; controlled via thermal oxidizer and scrubber.
HK103	Reactor Condenser	Group 1 batch process vent	63.2550 63.2460	Designated as Group 1; controlled via thermal oxidizer and scrubber.
HK103WW	Reactor Aqueous waste	Group 1 wastewater stream	63.2550 63.2485	Contains HAP > 1000ppm and flow rate > 1L/m, therefore Group 1
HK007 & HK008	Waste Brine Storage Railcars	Group 1 wastewater tanks	63.133(a)(1)	Contain Group 1 wastewater therefore require fixed roof.
HKCD07	Hydrolysis Tank	Wastewater treatment device with exothermic reaction	63.133(a)(2)	Vents to thermal oxidizer and scrubber
HKCD08	Stripping Column	Wastewater treatment device	63.138(e)	Vents to thermal oxidizer and scrubber.

Equipment ID	Equipment Name	MON Equipment Type	MON Citations	Comments
HK102	Reactor Condenser	Group 1 batch process vent	63.2550 63.2460	Designated as Group 1; controlled via thermal oxidizer and scrubber.
HK101	Reactor	Group 1 batch process vent	63.2550 63.2460	Designated as Group 1; controlled via thermal oxidizer and scrubber.
HKCD03WW	Reactor Scrubber Discharge	Group 1 wastewater stream	63.2550 63.2485	Controlled by stripper
HK007 & HK008	Waste Brine Storage Railcars	Group 1 wastewater tanks	63.133(a)(1)	Contain Group 1 wastewater therefore require fixed roof.
HKCD07	Hydrolysis Tank	Wastewater tank	63.133(a)(2)	Vents to thermal oxidizer and scrubber
HKCD08	Stripping Column	Wastewater treatment device	63.138(e)	Vents to thermal oxidizer and scrubber.

### Building 123

1. 45CSR30 – *Requirements for Operating Permits*

The process units associated with Building 123 have been shut down and the equipment removed. All conditions related to previous Permit Section 6.0 have been removed.

### Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

1. 40 C.F.R. Part 64 - Compliance Assurance Monitoring (CAM)

There is no pollutant specific emissions unit that has a pre-control device emissions of any regulated air pollutant that is greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source. Therefore, per 40CFR§64.2(a), CAM does not apply.

2. *Greenhouse Gas Tailoring Rule*

This is a renewal Title V Permit and there have been no modifications that would have triggered a PSD permit. As such, there are no applicable GHG permitting requirements.

3. 45CSR1 – NOx Budget Trading Program

This rule has been repealed since the last modification of the Title V Permit. As such, Condition 3.1.9 and Appendix A of the previous permit have been removed.

**Request for Variances or Alternatives**

None

**Insignificant Activities**

Insignificant emission unit(s) and activities are identified in the Title V application.

**Comment Period**

Beginning Date: March 25, 2011  
Ending Date: April 25, 2011

All written comments should be addressed to the following individual and office:

Mike Egnor  
Title V Permit Writer  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

**Procedure for Requesting Public Hearing**

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

**Point of Contact**

Mike Egnor  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone: 304/926-0499 ext. 1208 • Fax: 304/926-0478

**Response to Comments (Statement of Basis)**

Not applicable.