ADEQ

ARKANSAS
Department of Environmental Quality

April 8, 2013

Brad Giddens
Regional Environmental Leader
Momentive Specialty Chemicals Inc.
185 North Industrial Drive
Hope, AR 71801

Dear Mr. Giddens:

The enclosed Permit No. 1590-AR-8 is your authority to construct, operate, and maintain the equipment and/or control apparatus as set forth in your application initially received on 12/20/2012.

After considering the facts and requirements of A.C.A. §8-4-101 et seq., and implementing regulations, I have determined that Permit No. 1590-AR-8 for the construction, operation and maintenance of an air pollution control system for Momentive Specialty Chemicals Inc. to be issued and effective on the date specified in the permit, unless a Commission review has been properly requested under Arkansas Department of Pollution Control & Ecology Commission's Administrative Procedures, Regulation 8, within thirty (30) days after service of this decision.

The applicant or permittee and any other person submitting public comments on the record may request an adjudicatory hearing and Commission review of the final permitting decisions as provided under Chapter Six of Regulation No. 8, Administrative Procedures, Arkansas Pollution Control and Ecology Commission. Such a request shall be in the form and manner required by Regulation 8.603, including filing a written Request for Hearing with the APC&E Commission Secretary at 101 E. Capitol Ave., Suite 205, Little Rock, Arkansas 72201. If you have any questions about filing the request, please call the Commission at 501-682-7890.

Sincerely,

Mike Bates
Chief, Air Division

Enclosure

ADEQ
MINOR SOURCE
AIR PERMIT

Permit No. : 1590-AR-9

IS ISSUED TO:

Momentive Specialty Chemicals Inc.
185 North Industrial Drive
Hope, AR 71801
Hempstead County
AFIN: 29-00125

THIS PERMIT IS THE ABOVE REFERENCED PERMITTEE'S AUTHORITY TO CONSTRUCT, MODIFY, OPERATE, AND/OR MAINTAIN THE EQUIPMENT AND/OR FACILITY IN THE MANNER AS SET FORTH IN THE DEPARTMENT'S MINOR SOURCE AIR PERMIT AND THE APPLICATION. THIS PERMIT IS ISSUED PURSUANT TO THE PROVISIONS OF THE ARKANSAS WATER AND AIR POLLUTION CONTROL ACT (ARK. CODE ANN. SEC. 8-4-101 *ET SEQ.*) AND THE REGULATIONS PROMULGATED THEREUNDER, AND IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Mike Bates
Chief, Air Division

April 8, 2013
Date

Momentive Specialty Chemicals Inc.
Permit #: 1590-AR-9
AFIN: 29-00125

Table of Contents

Momentive Specialty Chemicals Inc.
Permit #: 1590-AR-9
AFIN: 29-00125

List of Acronyms and Abbreviations

A.C.A.	Arkansas Code Annotated
AFIN	ADEQ Facility Identification Number
CFR	Code of Federal Regulations
CO	Carbon Monoxide
HAP	Hazardous Air Pollutant
lb/hr	Pound Per Hour
No.	Number
NO_x	Nitrogen Oxide
PM	Particulate Matter
PM_{10}	Particulate Matter Smaller Than Ten Microns
SO_2	Sulfur Dioxide
Tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

Section I: FACILITY INFORMATION

PERMITTEE:	Momentive Specialty Chemicals Inc.
AFIN:	29-00125
PERMIT NUMBER:	1590-AR-9
FACILITY ADDRESS:	185 North Industrial Drive Hope, AR 71801
MAILING ADDRESS:	185 North Industrial Drive Hope, AR 71801
COUNTY:	Hempstead County
CONTACT NAME:	Brad Giddens
CONTACT POSITION:	Regional Environmental Leader
TELEPHONE NUMBER:	870-722-5100
REVIEWING ENGINEER:	Alexander Sudibjo
UTM North South (Y):	Zone 15: 3732486.00 m
UTM East West (X):	Zone 15: 441417.40 m

Section II: INTRODUCTION

Momentive Specialty Chemicals, Inc. owns and operates a resin and formaldehyde production facility located at 185 North Industrial Drive, Hope, Hempstead County, Arkansas.

Summary of Permit Activity

With this de minimis modification, the facility is adding an additional methanol unloading spot for tank trucks. There will be no increase in the annual methanol volume. With this addition, the number of components for fugitive emissions is increasing by one (1) pump with double mechanical seal, one (1) flange, and six (6) valves. The facility's permitted annual methanol emission is increasing by 0.01 tpy.

Process Description

Raw Material Receiving and Storage

Upon arrival at the facility via tank truck, solutions of 50% sodium hydroxide and a solution of 50% potassium hydroxide are transferred into individual storage tanks to be stored until needed for processing.

Rail hopper cars are used to haul urea granules to the facility. The granules are unloaded from the cars and sent to a silo (SN-04) via a below-grade hopper, inclined screw conveyor, and a bucket elevator. A Goretex or equivalent sock is used to control emissions from the silo.

Phenol/liquid phenol extender (LPE) is transported to the facility via railcar and stored in individual storage tanks. The fume collection header and fume scrubber system (SN-01) are used to vent the emissions from the railcar and the storage tanks.

The tanks, both formaldehyde and phenol/LPE storage, are designed to operate in a pressure range of atmospheric to slight vacuum pressure (less 2 inches of water). The tanks are also insulated. Steam coils maintain the formaldehyde tanks temperature at approximately 131°F (Fahrenheit).

As an alternative to having formaldehyde shipped to the facility, formaldehyde is manufactured on site. Formaldehyde storage tank emissions are directed to the inlet of the formaldehyde process. Loading emissions are controlled by either vapor balance or the fume scrubber (SN-01).

Formaldehyde Manufacture:

Upon arrival at the facility, methanol is received in rail tank cars or tank trucks and stored in a tank.

Aqueous formaldehyde solutions are manufactured through the air oxidation of methanol on a molybdenum-iron oxide fixed bed catalyst inside a vertical shell and tube heat exchanger. The catalyst rings are loaded in the tube side of this reactor and an eutectic mixture of diphenyl and diphenyl oxide (DDO) are located on the shell side.

The heat from this reaction is removed through vaporization of the DDO. The vaporized DDO is condensed in a kettle reboiler producing steam. The DDO vaporization and condensation cycle is a closed loop system.

The hot reaction gas is cooled as it exits the vertical exchanger by passing through the tube side of a different shell and tube heat exchanger for cooling. From there, the reaction gas enters the absorber column where a scrubbing liquid consisting of formaldehyde water solution absorbs the formaldehyde from the gas phase and condenses the water formed in the reaction.

The oxygen source for the reaction is ambient air. Non-reacting materials of nitrogen, argon, water vapor, and carbon dioxide are introduced to the process with the air flow. Following reaction, the oxygen depleted air stream, methyl dimethyl ether (DME), and carbon monoxide are vented from the system to the catalytic oxidizer (SN-03). Product storage tank vents are directed to the inlet of the formaldehyde process.

Resin Manufacture

UF Resin Manufacturing:

Formaldehyde from the storage tanks is pumped to the top of a reactor and combined with urea granules conveyed from the silo in order to produce a resin. An acid catalyst is added to this mixture in order to speed up the reaction. Steam inside the internal coils is used to heat the resin from 40°F to 100°C (Celsius). The reactor is maintained at a constant temperature of 100°F until the resin reaches its desired viscosity.

Depending upon the particular formulation being made, the steam generated while the resin is boiling is condensed in the overhead condenser and returned to the reactor, or drawn off to a storage tank. A condenser located in the top of the reactor is used to cool air displaced by the formaldehyde to below 40°C. This cooled air, along with the air displaced by the urea granules and the air displaced during the chemical reaction of the urea and formaldehyde is vented through the fume scrubber (SN-01).

After the desired viscosity has been reached, a small amount of base is added to neutralize the reaction. At this point, the steam is turned off, the vacuum pump is turned on, and the pressure in the reactor is reduced. As a result of the change pressure, the resin begins to boil. The steam is condensed in the overhead condenser. The small amount of non-condensible gases flow through the vacuum pump and then to the fume scrubber (SN-01). The condensate from the condenser is either returned to the reactor or drawn off as distillate.

The resin temperature is decreased after the heat is removed and the pressure is decreased. When the temperature has reached 50°C, the vacuum pump is turned off, the cooling water to the internal coils is turned on, and the vent valve is opened on the reactor, thus allowing air into the reactor again. Once the reactor has reached atmospheric pressure, additional urea is added to the resin. The addition of urea, along with the cooling effect of the cooling oils, causes the resin temperature to decrease to ~30°C.

The cooled resin is pumped to a storage tank where it is further cooled by water chilled internal coils to 25°C. The storage tank is vented directly to the atmosphere.

PF Resin Manufacturing:

Water, washwater, and sodium hydroxide are pumped into the top of a reactor. The water is used to dilute the phenol/LPE which is then partially reacted with the sodium hydroxide to form sodium phenate. A vacuum pump is then used to lower the pressure in the reactor to 5 psia. The mixture temperature is ~60°C. At this temperature and pressure, the mixture is near its boiling point.

The air removed by the vacuum pump is sent to the fume scrubber (SN-01). The air displaced by the phenol/LPE is cooled by the overhead condenser to below 40°C and then routed to the fume scrubber.

Formaldehyde is reacted with the phenol/LPE mixture as it is added into the reactor. The steam generated by this reaction is condensed in the overhead condenser and returned to the reactor. The pressure in the reactor is slowly increased to atmospheric pressure as the formaldehyde is added. The resultant temperature is ~96°C. During this period, the air in the reactor is displaced by resin; therefore, the air flow to the scrubber is negligible.

Once the desired viscosity has been reached, the temperature of the batch is decreased by increasing the vacuum. Additional sodium or potassium hydroxide is added, and the resin is further cooled.

The vacuum is used to lower the resin temperature to ~40°C. Once the temperature has been reached, the vacuum pump is turned off and cooling water is circulated through the internal coils. The vent valve is opened on the reactor, thereby, allowing air to enter. When the reactor has reached atmospheric pressure, urea is conveyed to the top of the reactor from the overhead silo. (Depending upon the formulation of the product, urea may not need to be added.) The air displaced by the urea is vented to the fume scrubber (SN-01) through the overhead condenser.

From the reactor, the resin is pumped to a storage tank where water chilled internal coils are used to cool the resin product to ~25°C. An automated pumping system is used to load the tank trucks in order to ship the finished resin to customers.

Wax Emulsion Manufacture

Raw materials of slack wax, stearic acid, and triethanolamine are received in their molten forms from tank trucks and are combined with recycled washwater and/or fresh water in the closed system homogenizer. The emulsion is then cooled in a water heat exchanger.

Vapor Recovery Systems

The facility employs two vapor recovery systems. The first system vents formaldehyde tanks and formaldehyde loading to formaldehyde production. The second vents resin reactors, phenol/LPE tanks and phenol/LPE loading to the fume scrubber (SN-01). Formaldehyde tanks and formaldehyde loading are vented to the fume scrubber when the formaldehyde production operation is not in operation.

Regulations

The following table contains the regulations applicable to this permit.

Regulations
Arkansas Air Pollution Control Code, Regulation 18, effective June 18, 2010
Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective November 18, 2012
40 CFR Part 60 Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*
40 CFR Part 60 Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels*
40 CFR Part 60 Subpart III, *Standards of Performance for Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Process*
40 CFR Part 60 Subpart VV, *Standards of Performance for equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry*

Momentive Specialty Chemicals Inc.
Permit #: 1590-AR-9
AFIN: 29-00125

Total Allowable Emissions

The following table is a summary of emissions from the facility. This table, in itself, is not an enforceable condition of the permit.

TOTAL ALLOWABLE EMISSIONS		
Pollutant	Emission Rates	
	lb/hr	tpy
PM	1.9	1.3
PM_{10}	1.9	1.3
SO_2	0.1	0.5
VOC	12.1	29.5
CO	9.0	39.4
NO_x	2.7	11.8
*Formaldehyde	2.49	3.36
*Phenol	0.94	0.33
*Methanol	3.08	3.13
*Triethylamine	1.00	4.38
Total HAPs	7.51	11.19
Ammonia (Air contaminant)	0.10	0.30

* HAPs included in VOC total.

Section III: PERMIT HISTORY

Permit #1590-A, the initial air permit for this facility, was issued on January 17, 1995. The purpose of this permit was to construct a urea-formaldehyde (UF) and phenol-formaldehyde (PF) resin plant. Emission limits were permitted at 1.3 tpy PM/PM_{10}, 0.4 tpy SO_2, 0.4 tpy VOC, 3.1 tpy CO, 11.8 tpy NO_X, 5.7 tpy formaldehyde, 0.4 tpy phenol, and 3.5 tpy methanol.

Permit #1590-AR-1 was issued to the facility on February 21, 1996. This permit was issued to document the addition of the formaldehyde and wax emulsion manufacturing facilities and to allow an increase in the production of UF and PF resins. Under this permit, emission limits were permitted at 1.3 tpy of PM/PM_{10}, 0.5 tpy of SO_2, 0.4 tpy of VOC, 31.8 tpy of CO, 11.8 tpy of NO_X, 5.9 tpy of formaldehyde, 1.5 tpy of phenol, 4.1 tpy of methanol, and 10.0 tpy of dimethyl ether.

Permit #1590-AR-2 was issued to the facility on July 25, 1997. This permitting action included the addition of a spray dried phenolic resin plant. Permitted emissions under this action were 33.5 tpy of PM/PM_{10}, 1.0 tpy of SO_2, 93.2 tpy of VOC, 38.2 tpy of CO, 26.6 tpy of NO_X, 10.0 tpy of dimethyl ether, and 0.1 tpy of Dowtherm.

Permit #1590-AR-3 was issued to the facility on October 18, 1999. This permitting action included an increase in production, emission rates based on testing, and the removal of a spray dry resin plant.

Permit #1590-AR-4 was issued to the facility on August 30, 2005. Hexion Specialty Chemicals increased the production rate of formaldehyde solutions from 225 million pounds per year to 265 million pounds per year. In order to increase production the following changes to the plant were made: An additional layer of catalyst was added to the incinerator to increase retention time, the maximum methanol feed rate was increased from 255 lb/min to 302 lb/min, an additional safety relief in the reactor heads was be added, increased cooling and recirculation on the absorber beds, heat transfer unit/steam generator was replaced with a more efficient unit, and the existing fresh air blower was replaced with an increased capacity blower system.

The changes in this permit resulted in a 7 ton per year increase in VOC emissions and a 4.9 ton per year increase in CO emissions.

This permit also incorporated a name change from Borden Chemical, Inc to Hexion Specialty Chemicals, Inc.

Permit #1590-AR-5 was issued to the facility on March 11, 2008. Hexion Specialty Chemicals increased the combined total maximum production rate of urea-formaldehyde (UF) resin and phenol-formaldehyde (PF) resin from 475 million pounds per consecutive twelve month period to 500 million pounds. The maximum rate of PF resin production was increased from 225 million pounds per consecutive twelve month period to a maximum of 250 million pounds. However, production of PF depends upon production of UF which would not exceed 500 million

pounds in total per twelve month period. Therefore, if the maximum UF production was achieved then PF production would be zero.

The changes in this permit resulted in no significant change in yearly emission rate. However, the permitted hourly PM/PM_{10} emissions from Bulk Solids Loading (SN-04) was increased by 1.5 lb/hr and permitted hourly HAPs emissions was increased by 3.13 lb/hr as a product of Resin Plant Fugitive Emissions (SN-09).

Permit #1590-AR-6 was issued to the facility on July 11, 2011. With this permit modification Momentive Specialty Chemicals requested the use of a new material, liquid phenol extender (LPE), as a substitute material for phenol in the resin manufacturing process. The facility is permitted to use phenol or LPE interchangeably. This did not result in an increase in emission rate.

In addition, this modification updated the language in the process description for clarity. This permit also incorporated a name change from Hexion Specialty Chemicals, Inc. to Momentive Specialty Chemicals.

Permit #1590-AR-7 was issued on January 27, 2012. With this Administrative Amendment, the following changes were implemented to the insignificant activities list:

- Removal of Frac-1 through Frac-4 tanks.
- Addition of two additional Resin Storage tanks, 2012-A and 2012-B.
- Change the description of PF, UF, and UF SCAV Resin Storage tanks to be listed as "Resin Storage".

Permit #1590-AR-8 was issued on October 31, 2012. With this modification, the facility separated SN-05 into two sources: Resin Loading, SN-05, and LDAR Fugitives, SN-10. The Resin Plant Fugitive, SN-09, was combined with the emissions from SN-05. This modification also contained updated calculations for the new SN-05 and SN-10. The facility's permitted emissions increased by 1.35 tpy for formaldehyde and decrease for VOC, phenol, and methanol.

Section IV: EMISSION UNIT INFORMATION

Specific Conditions

1. The permittee shall not exceed the emission rates set forth in the following table. [Regulation 19 §19.501 et seq. and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
01	Fume Scrubber	VOC	6.3	13.9
02	Steam Boiler (Natural Gas)	PM_{10} SO_2 VOC CO NO_X	0.3 0.1 0.1 0.7 2.7	1.2 0.5 0.3 3.0 11.8
03	Catalytic Oxidizer	VOC CO	3.0 8.3	13.1 36.4
04	Bulk Solids Loading (Urea Weigh Hopper, H1)	PM_{10}	1.6	0.1
05	Resin Loading	VOC	1.0	0.1
08	Methanol Tank T-101	VOC	0.9	0.3
10	LDAR Fugitives	VOC	0.8	1.8

2. The permittee shall not exceed the emission rates set forth in the following table. [Regulation 18 §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
01	Fume Scrubber	Formaldehyde Phenol Methanol Triethylamine	1.38 0.54 1.82 1.00	1.39 0.07 1.47 4.38
02	Steam Boiler (Natural Gas)	PM	0.3	1.2
03	Catalytic Oxidizer	Formaldehyde Methanol	0.20 0.26	0.85 1.13
04	Bulk Solids Loading (Urea Weigh Hopper, H1)	PM	1.6	0.1
05	Resin Loading	Formaldehyde Phenol Methanol	0.65 0.34 0.01	0.02 0.01 0.01
08	Methanol Tank T-101	Methanol	0.90	0.30

SN	Description	Pollutant	lb/hr	tpy
10	LDAR Fugitives	Formaldehyde	0.26	1.10
		Phenol	0.06	0.25
		Methanol	0.09	0.22
		Ammonia	0.10	0.30

3. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Limit	Regulatory Citation
02	5%	§18.501
04	20%	§18.501

4. The permittee shall not cause or permit the emission of air contaminants, including odors or water vapor and including an air contaminant whose emission is not otherwise prohibited by Regulation #18, if the emission of the air contaminant constitutes air pollution within the meaning of A.C.A. §8-4-303. [Regulation 18 §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

5. The permittee shall not conduct operations in such a manner as to unnecessarily cause air contaminants and other pollutants to become airborne. [Regulation 18 §18.901 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

6. Production shall not exceed the amounts of products per consecutive twelve month period as listed in the table below. [Regulation 18, §18.1004,Regulation 19, §19.705 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Product	***Production limit per consecutive 12 months**
Urea Formaldehyde Resin (UF)	500,000,000 lbs
Phenol-Formaldehyde Resin (PF)	250,000,000 lbs
Total combined UF and PF Resin Production	500,000,000 lbs
50% Formaldehyde Solution	265,000,000 lbs

*i.e., If production of UF is 400 million (MM) pounds per consecutive twelve month period, then PF production shall not exceed 100 million (MM)pounds per consecutive twelve months period. Similarly if the production of UF is 500 million pounds per consecutive twelve months period, then PF production shall be zero. Total resin production is limited to a maximum of 500 MM lb/yr of any combination of UF and PF resins and limited to a maximum for PF resin of 250 MM lb/yr.

7. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition 6. Records shall be updated by the fifteenth day of the month following the month to which the records pertain. These records shall be kept on site,

and shall be made available to Department personnel upon request. A twelve month rolling average and each individual month's data shall be kept on site and made available to Department personnel upon request. [Regulation 18, §18.1004, Regulation 19, §19.705 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

8. The amount of formaldehyde solution loaded at the facility shall not exceed 140,000,000 pounds per consecutive twelve month period. [Regulation 18, §18.1004, Regulation 19, §19.705 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

9. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition 8. Records shall be updated by the fifteenth day of the month following the month to which the records pertain. These records shall be kept on site, and shall be made available to Department personnel upon request. A twelve month rolling average and each individual month's data shall be kept on site and made available to Department personnel upon request. [Regulation 18, §18.1004, Regulation 19, §19.705 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

10. The permittee shall maintain and operate each vapor recovery system in serviceable condition as prescribed by the manufacturer. The vapor recovery system for formaldehyde tanks and formaldehyde loading shall be vented to formaldehyde production. The vapor recovery system for the resin reactor, phenol/LPE tanks and phenol/LPE loading shall be vented to the fume scrubber (SN-01). When formaldehyde production is not in operation the formaldehyde tanks and formaldehyde loading shall be vented to the scrubber also. Failure to control vapor emissions by both systems or wet scrubbing singularly when formaldehyde production is not in operation shall be a violation of this permit. [§18.901 of Regulation 18, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

11. The permittee shall maintain the catalytic oxidizer (SN-03) in good operating condition and operate the catalytic oxidizer according to manufacturer's specifications. It shall be used whenever the formaldehyde process is operating. Formaldehyde shall not be manufactured during any period of equipment failure or maintenance shut-down on the catalytic oxidizer. [§19.303 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

12. The permittee shall maintain the catalyst in good operating condition. The catalyst shall be tested once every year and replaced when necessary [§19.303 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

13. The facility is subject to applicable provisions of 40 CFR Part 60, Subpart III. These provisions are outlined in Specific Conditions 14 through 20. [§19.304 and 40 CFR Part 60.610]

14. The permittee shall on or after the date of the initial performance test, but no later than 60 days after achieving the maximum production rate at which the affected facility will be

operated, or 180 days after the initial startup date, whichever comes first, reduce emissions of TOC (minus methane and ethane) by 98 weight-percent, or to a TOC (minus methane and ethane) concentration of 20 ppmv on a dry basis corrected to 3 percent oxygen, whichever is less stringent. [§19.304 and 40 CFR Part 60.612(a)]

15. The permittee shall test the catalytic oxidizer (SN-03) within 60 days of achieving the maximum after the modification or 180 days after startup after the modifications. This test shall be conducted in accordance with 40 CFR 60.614. The permittee shall test every 5 years thereafter according to the provisions in 40 CFR Part 60.614. These tests shall be conducted in accordance with General Provision 7. [§19.702, §19.304, 40 CFR Part 60.614, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

16. The permittee, to show compliance with the TOC emission limit in Specific Condition 14, shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment:

    (a) A temperature monitoring device equipped with a continuous recorder and having an accuracy of 1 percent of the temperature being monitored expressed in degrees Celsius or 0.5 degrees Celsius, whichever is greater. Temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed. [§19.304 and 40 CFR Part 60.613(a)(1)]

17. The permittee shall keep up-to-date, readily accessible records of the following data measured during the performance testing required in §60.614:

    (a) The average temperature upstream and downstream of the catalyst bed for a catalytic incinerator, measured at least every 15 minutes and averaged over the same time period of the performance testing, and

    (b) The percent reduction of TOC determined in §60.614(b) achieved by the incinerator, or the concentration of TOC (ppmv, by compound) determined as specified in §60.614(b) at the outlet of the control device on a dry basis corrected to 3 percent oxygen. [§19.304 and 40 CFR Part 60.615(b)(1)(i)]

18. The permittee shall keep up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored under §60.613(a) as well as up-to-date, readily accessible records of periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. Periods of operation during which the parameter boundaries established during the most recent performance tests are exceeded are, for catalytic incinerators, all 3-hour periods of operation during which the average temperature of the vent stream immediately before the catalyst bed is more than 28 degrees Celsius (50 degrees Fahrenheit) below the average temperature of the vent stream during the most recent performance test at which compliance with §60.612(a) was determined. The owner or operator also shall record all 3-hour periods of operation during which the average temperature difference of the

device during the most recent performance test at which compliance with §60.612(a) was determined. [§19.304 and 40 CFR Part 60.615(c)]

19. The permittee shall maintain a record of test results from the testing requirements of §60.614 to show compliance with Specific Condition 14. These records shall be maintained on site and shall be made available to Department personnel upon request. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

20. The permittee shall submit to the Department semiannual reports of exceedances of monitored parameters recorded under §60.615(c). [§19.304 and 40 CFR Part 60.615(j)]

Equipment Leak – All Sources

21. The facility is subject to applicable provisions of 40 CFR Part 60, Subpart VV. These provisions are outlined in Specific Conditions 22 through 24. [§19.304 and 40 CFR Part 60.480]

22. The permittee shall demonstrate compliance with the requirements of §60.482-1 through §60.482-10 for any equipment defined as an affected facility. The permittee shall maintain a list of all affected facilities (i.e., pumps, compressors, valves, etc.) for sources subject to the provisions of §60.482-1 through §60.482-10. [§19.304 and 40 CFR Part 60.482-1(a)]

23. The permittee shall demonstrate compliance with §60.482-1 through §60.482-10 by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in §60.485. The permittee shall maintain records demonstrating compliance with applicable standards, monitoring requirements, test methods and procedures, and record keeping requirements for sources subject to Subpart VV. The records specified in this condition and in Specific Condition 24 shall be maintained on site and made available to Department personnel upon request. [§19.304 and 40 CFR Part 60.482-1(b)]

24. The permittee shall submit semi annual reports to the Department containing the following:

    (a) Process unit identification.

    (b) For each month during the semiannual period:

        (1) Number of valves subject to the requirements of §60.482-7.
        (2) Number of valves for which leaks were detected.
        (3) Number of valves for which leaks were not repaired.
        (4) Number of pumps subject to the requirements of §60.482-2.
        (5) Number of pumps for which leaks were detected.
        (6) Number of pumps for which leaks were not repaired.

(7) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.

(c) Dates of process unit shutdowns which occurred during the semiannual reporting period.

(d) Revisions of items reported in the semiannual report if changes have occurred since the initial report or subsequent revisions to the initial report. [§19.304 and 40 CFR Part 60.487(c)]

Storage Tanks

25. The facility is subject to applicable provisions of 40 CFR Part 60, Subpart Kb. These provisions are outlined in Specific Conditions 25 through 31. [§19.304 and 40 CFR Part 60.110b]

26. Formaldehyde tanks T-73, T-74, T-75, T-76, T-77, T-83, and T-84 and phenol/LPE tanks T-71 and T-72 are subject to applicable provisions of 40 CFR Part 60, Subpart Kb. In accordance with the Monitoring of Operation requirements of §60.116b (a) & (b), readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel shall be maintained onsite and kept for the life of the source, period of storage, and maximum true vapor pressure of the true vapor pressure shall be maintained. Records to prove exemption shall be maintained on-site and made available to Department personnel upon request. (The tanks are exempt from the other provisions due to the capacity of the tanks and a true vapor pressure of less than 3.5 kPa.) [§19.304 and 40 CFR Part 110(a) & (b)]

27. Methanol tank T-101 is subject to applicable provisions of 40 CFR Part 60, Subpart Kb. [§19.304 and 40 CFR Part 60.6110b(a)]

28. Methanol tank T-101 must be equipped with an internal floating roof with a double seal. [§19.304 and 40 CFR Part 60.112b]

29. The permittee shall perform all testing and procedures required for facilities with storage tanks equipped with an internal floating roof as required by 40 CFR §60.113b (a). [§19.304 and 40 CFR Part 60.113b]

30. The permittee shall maintain records and furnish reports for facilities with storage tanks equipped with an internal floating roof as required by paragraph (a) of 40 CFR Part §60.116b. The facility shall keep copies of all reports and records required by this section for at least 2 years. [§19.304 and 40 CFR Part60.115b]

31. The permittee shall keep copies of the following records:

(a) All records required by §60.116b shall be kept for two years.

(b) Readily accessible records shall be kept showing the dimension of the storage vessel and an analysis of the capacity.

(c) The facility shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of the VOL during the respective storage period.

(d) The Department shall be notified within 30 days if the maximum true vapor pressure of the liquid exceeds the maximum true vapor pressure value of the volume range.

A copy of the records shall be maintained on-site and made available to the Department upon request. [§19.304 and 40 CFR Part 60.116b]

Oxidizer Operation

32. The permittee shall not exceed 80 pounds per hour of additional methanol to the inlet of the incinerator as supplemental fuel to ensure proper operation. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

33. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition 32. Records shall be updated by the fifteenth day of the month following the month to which the records pertain. These records shall be kept on site, and shall be made available to Department personnel upon request. A twelve month rolling average and each individual month's data shall be kept on site and made available to Department personnel upon request.

Subpart Dc Boiler Conditions

34. The permittee shall maintain records of the amount of natural gas combusted in SN-02 each month. [§19.304 and 40 CFR Part 60, Subpart Dc]

Section V: INSIGNIFICANT ACTIVITIES

The Department deems the following types of activities or emissions as insignificant on the basis of size, emission rate, production rate, or activity in accordance with Group A of the Insignificant Activities list found in Regulation 18 and 19 Appendix A. Insignificant activity emission determinations rely upon the information submitted by the permittee in an application dated December 27, 2011.

Description	Category
Emergency Generator	A-1

The insignificant tanks are listed as follows:

Tank ID	Description	Volume gallons	TVP psia	Year Installed	Category
DT-1	Dowtherm A	8,000	<0.001	1996	A-3
T-10	Storage	1,000	<0.001	1996	A-13
T-11	PF Washwater Storage	28,000	<0.1	1996	A-13
T-12	PF Washwater Storage	28,000	<0.1	1996	A-13
T-13	UF Washwater Storage	28,000	<0.1	1996	A-13
T-14	Resin Storage	28,000	<0.1	1996	A-13
T-15	Resin Storage	28,000	<0.1	1996	A-13
T-16	Resin Storage	28,000	<0.1	1996	A-13
T-21	Resin Storage	28,000	<0.1	1996	A-13
T-22	Resin Storage	28,000	<0.1	1996	A-13
T-23	Resin Storage	28,000	<0.1	1996	A-13
T-24	Resin Storage	28,000	<0.1	1996	A-13
T-25	Resin Storage	28,000	<0.1	1996	A-13
T-26	Resin Storage	28,000	<0.1	1996	A-13
T-31	Resin Storage	28,000	<0.1	1996	A-13
T-32	Resin Storage	28,000	<0.1	1996	A-13

Tank ID	Description	Volume gallons	TVP psia	Year Installed	Category
T-33	Resin Storage	28,000	<0.1	1996	A-13
T-34	Resin Storage	28,000	<0.1	1996	A-13
T-35	Resin Storage	28,000	<0.1	1996	A-13
T-36	Resin Storage	28,000	<0.1	1996	A-13
T-41	Chilled Water	28,000	0.00	1996	A-13
T-42	Resin Storage	28,000	<0.1	1996	A-13
T-43	Resin Storage	28,000	<0.1	1996	A-13
T-44	Resin Storage	28,000	<0.1	1996	A-13
T-45	Resin Storage	28,000	<0.1	1996	A-13
T-46	Resin Storage	8,000	<0.1	1996	A-13
T-61	Wax Washwater	12,000	0.00	1996	A-3
T-62	TEA Storage	12,000	0.00	1996	A-13
T-63	Stearic Acid Storage	12,000	0.00	1996	A-3
T-64	Wax Emulsion Storage	20,000	0.00	1996	A-13
T-65	Wax Emulsion Storage	20,000	0.00	1996	A-13
T-66	Slack Wax Storage	20,000	0.00	1996	A-13
T-67	Slack Wax Storage	20,000	0.00	1996	A-13
V-12	Seal Water Storage	28,000	<0.1	1996	A-13
2012-A	Resin Storage	30,000	<0.1	2012	A-13
2012-B	Resin Storage	30,000	<0.1	2012	A-13

Section VI: GENERAL CONDITIONS

1. Any terms or conditions included in this permit that specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.). Any terms or conditions included in this permit that specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute.

2. This permit does not relieve the owner or operator of the equipment and/or the facility from compliance with all applicable provisions of the Arkansas Water and Air Pollution Control Act and the regulations promulgated under the Act. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

3. The permittee shall notify the Department in writing within thirty (30) days after commencement of construction, completion of construction, first operation of equipment and/or facility, and first attainment of the equipment and/or facility target production rate. [Regulation 19 §19.704 and/or A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

4. Construction or modification must commence within eighteen (18) months from the date of permit issuance. [Regulation 19 §19.410(B) and/or Regulation 18 §18.309(B) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

5. The permittee must keep records for five years to enable the Department to determine compliance with the terms of this permit such as hours of operation, throughput, upset conditions, and continuous monitoring data. The Department may use the records, at the discretion of the Department, to determine compliance with the conditions of the permit. [Regulation 19 §19.705 and/or Regulation 18 §18.1004 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

6. A responsible official must certify any reports required by any condition contained in this permit and submit any reports to the Department at the address below. [Regulation 19 §19.705 and/or Regulation 18 §18.1004 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

   Arkansas Department of Environmental Quality
   Air Division
   ATTN: Compliance Inspector Supervisor

5301 Northshore Drive
North Little Rock, AR 72118-5317

7. The permittee shall test any equipment scheduled for testing, unless stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) newly constructed or modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start up of the permitted source or (2) existing equipment already operating according to the time frames set forth by the Department. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) business days in advance of such test. The permittee must submit compliance test results to the Department within thirty (30) calendar days after the completion of testing. [Regulation 19 §19.702 and/or Regulation 18 §18.1002 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

8. The permittee shall provide: [Regulation 19 §19.702 and/or Regulation 18 §18.1002 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

   a. Sampling ports adequate for applicable test methods;
   b. Safe sampling platforms;
   c. Safe access to sampling platforms; and
   d. Utilities for sampling and testing equipment

9. The permittee shall operate equipment, control apparatus and emission monitoring equipment within their design limitations. The permittee shall maintain in good condition at all times equipment, control apparatus and emission monitoring equipment. [Regulation 19 §19.303 and/or Regulation 18 §18.1104 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

10. If the permittee exceeds an emission limit established by this permit, the permittee will be deemed in violation of said permit and will be subject to enforcement action. The Department may forego enforcement action for emissions exceeding any limits established by this permit provided the following requirements are met: [Regulation 19 §19.601 and/or Regulation 18 §18.1101 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

    a. The permittee demonstrates to the satisfaction of the Department that the emissions resulted from an equipment malfunction or upset and are not the result of negligence or improper maintenance, and the permittee took all reasonable measures to immediately minimize or eliminate the excess emissions.
    b. The permittee reports the occurrence or upset or breakdown of equipment (by telephone, facsimile, or overnight delivery) to the Department by the end of the next business day after the occurrence or the discovery of the occurrence.
    c. The permittee must submit to the Department, within five business days after the occurrence or the discovery of the occurrence, a full, written report of such occurrence, including a statement of all known causes and of the scheduling and

nature of the actions to be taken to minimize or eliminate future occurrences, including, but not limited to, action to reduce the frequency of occurrence of such conditions, to minimize the amount by which said limits are exceeded, and to reduce the length of time for which said limits are exceeded. If the information is included in the initial report, the information need not be submitted again.

11. The permittee shall allow representatives of the Department upon the presentation of credentials: [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

    a. To enter upon the permittee's premises, or other premises under the control of the permittee, where an air pollutant source is located or in which any records are required to be kept under the terms and conditions of this permit;
    b. To have access to and copy any records required to be kept under the terms and conditions of this permit, or the Act;
    c. To inspect any monitoring equipment or monitoring method required in this permit;
    d. To sample any emission of pollutants; and
    e. To perform an operation and maintenance inspection of the permitted source.

12. The Department issued this permit in reliance upon the statements and presentations made in the permit application. The Department has no responsibility for the adequacy or proper functioning of the equipment or control apparatus. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

13. The Department may revoke or modify this permit when, in the judgment of the Department, such revocation or modification is necessary to comply with the applicable provisions of the Arkansas Water and Air Pollution Control Act and the regulations promulgated the Arkansas Water and Air Pollution Control Act. [Regulation 19 §19.410(A) and/or Regulation 18 §18.309(A) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

14. This permit may be transferred. An applicant for a transfer must submit a written request for transfer of the permit on a form provided by the Department and submit the disclosure statement required by Arkansas Code Annotated §8-1-106 at least thirty (30) days in advance of the proposed transfer date. The permit will be automatically transferred to the new permittee unless the Department denies the request to transfer within thirty (30) days of the receipt of the disclosure statement. The Department may deny a transfer on the basis of the information revealed in the disclosure statement or other investigation or, deliberate falsification or omission of relevant information. [Regulation 19 §19.407(B) and/or Regulation 18 §18.307(B) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

15. This permit shall be available for inspection on the premises where the control apparatus is located. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

16. This permit authorizes only those pollutant emitting activities addressed herein. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

17. This permit supersedes and voids all previously issued air permits for this facility. [Regulation 18 and 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

18. The permittee must pay all permit fees in accordance with the procedures established in Regulation No. 9. [A.C.A §8-1-105(c)]

19. The permittee may request in writing and at least 15 days in advance of the deadline, an extension to any testing, compliance or other dates in this permit. No such extensions are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion in the following circumstances:

    a. Such an extension does not violate a federal requirement;
    b. The permittee demonstrates the need for the extension; and
    c. The permittee documents that all reasonable measures have been taken to meet the current deadline and documents reasons it cannot be met.

    [Regulation 18 §18.314(A), Regulation 19 §19.416(A), A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

20. The permittee may request in writing and at least 30 days in advance, temporary emissions and/or testing that would otherwise exceed an emission rate, throughput requirement, or other limit in this permit. No such activities are authorized until the permittee receives written Department approval. Any such emissions shall be included in the facilities total emissions and reported as such. The Department may grant such a request, at its discretion under the following conditions:

    a. Such a request does not violate a federal requirement;
    b. Such a request is temporary in nature;
    c. Such a request will not result in a condition of air pollution;
    d. The request contains such information necessary for the Department to evaluate the request, including but not limited to, quantification of such emissions and the date/time such emission will occur;
    e. Such a request will result in increased emissions less than five tons of any individual criteria pollutant, one ton of any single HAP and 2.5 tons of total HAPs; and
    f. The permittee maintains records of the dates and results of such temporary emissions/testing.

    [Regulation 18 §18.314(B), Regulation 19 §19.416(B), A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

21. The permittee may request in writing and at least 30 days in advance, an alternative to the specified monitoring in this permit. No such alternatives are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion under the following conditions:
    a. The request does not violate a federal requirement;
    b. The request provides an equivalent or greater degree of actual monitoring to the current requirements; and
    c. Any such request, if approved, is incorporated in the next permit modification application by the permittee.

    [Regulation 18 §18.314(C), Regulation 19 §19.416(C), A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

CERTIFICATE OF SERVICE

I, Pam Owen, hereby certify that a copy of this permit has been mailed by first class mail to Momentive Specialty Chemicals Inc., 185 North Industrial Drive, Hope, AR, 71801, on this 8th day of April 2013.

Pam Owen

Pam Owen, AAII, Air Division