

<b>NORTH CAROLINA DIVISION OF AIR QUALITY</b>		<b>Region:</b> Wilmington Regional Office	
<b>Air Permit Review - (1<sup>st</sup> Time Title V)</b>		<b>County:</b> New Hanover	
<b>Permit Issue Date:</b> XXXX, 2008		<b>NC Facility ID:</b> 6500303	
		<b>Inspector's Name:</b> Brad Newland	
		<b>Date of Last Inspection:</b> 09/07/2007	
		<b>Compliance Code:</b> C/In Compliance With Procedural Reqr	
<b>Facility Data</b>		<b>Permit Applicability (this application only)</b>	
<b>Applicant (Facility's Name):</b> Fortron Industries, LLC		<b>SIP:</b> 15A NCAC 2Q .0501(c)(1)	
<b>Facility Address:</b> Fortron Industries 4600 Highway 421 North Wilmington, NC 28402		<b>NSPS:</b> N/A	
<b>SIC:</b> 2821 / Plastics Materials And Resins		<b>NESHAP:</b> N/A	
<b>NAICS:</b> 325211 / Plastics Material and Resin Manufacturing		<b>PSD:</b> N/A	
<b>Facility Classification: Before:</b> Title V <b>After:</b> Title V		<b>PSD Avoidance:</b> N/A	
<b>Fee Classification: Before:</b> Title V <b>After:</b> Title V		<b>NC Toxics:</b> N/A	
		<b>112(r):</b> N/A	
		<b>Other:</b> N/A	
<b>Contact Data</b>		<b>Application Data</b>	
<b>Facility Contact</b>	<b>Authorized Contact</b>	<b>Technical Contact</b>	<b>Application Number:</b> 6500303.06C
Lisa White Environmental Engineer (910) 341-3152 P O Box 327 Wilmington NC, 28401  lisa.white@celanese.com	Steve Ridge Vice President of Operations (910) 343-5000 P O Box 327 Wilmington NC, 28402	Lisa White Environmental Engineer (910) 341-3152 P O Box 327 Wilmington NC, 28401  lisa.white@celanese.com	<b>Date Received:</b> 10/02/2006
			<b>Application Type:</b> Modification
			<b>Application Schedule:</b> TV – 1 <sup>st</sup> Time
			<b>Existing Permit Data</b>
			<b>Existing Permit Number:</b> 07323R15
			<b>Existing Permit Issue Date:</b> 03/07/2008
			<b>Existing Permit Expiration Date:</b> 06/30/2012
<b>Consultant:</b> Weston Solutions, Inc.			
<b>Review Engineer:</b> Booker Pullen		<b>Comments / Recommendations:</b>	
<b>Regional Engineer:</b> Dean Carroll		<b>Issue:</b> 07323T16	
<b>Review Engineer's Signature:</b>		<b>Permit Issue Date:</b> XXXXX, 2008	
<b>Begin Date:</b> April 25, 2008		<b>Permit Expiration Date:</b> June 30, 2012	

**I. Introduction/Description:**

Fortron Industries, LLC is a limited liability company owned by Ticona Fortron, Inc. (a subsidiary of Celanese Corporation) and Kureha America, Inc. (a subsidiary of Kureha Corporation). Fortron operates a polyphenylene sulfide (PPS) production facility in New Hanover County near Wilmington, North Carolina.

**II. Purpose of this application (6500303.06C, to be issued as Air Permit No. 07323T16):**

This facility is requesting a 1<sup>st</sup> Time Title V Permit to replace the existing "300" State Permit. This application will be processed as a "1<sup>st</sup> Time Title V and go through the 30-day public notice and the 45-day EPA review in accordance with 15A NCAC 2Q .0501(c)(1).

**III. Existing Permitted Sources**

- A. One No. 2 oil-fired hot oil furnace (44.0 mmBtu/hr maximum heat input, ID No. FU-081R1, NSPS),
- B. One No. 2 oil-fired thermal oxidizer (11.0 mmBtu/hr maximum heat input, ID No. FU-751R1) installed on:
  - 1. one sulfur scrubber (ID No. TW-728) installed on three chilled condensers (ID Nos. HE-721, HE-722, and HE-2721) installed on two continuous vent systems (ID Nos. VS-721 and VS-2721) and one cyclic vent system (ID No. VS-722) installed on:

- a. #1 salt decanter A, B, and C (ID Nos. MA-411-A, MA-411-B, and MA-411-C),
- b. #2 salt decanter (ID No. MA-421),
- c. product sifter (ID No. MA-311-1),
- d. #2 product sifter (ID No. MA-321-1),
- e. salt dryer (ID No. DR-431),
- f. recovered solvent service tank (ID No. TA-502),
- g. maintenance/shutdown equipment drain collection (ID No. VE-503),
- h. #1 acetone reslurry tank (ID No. VE-311),
- i. #2 acetone reslurry tank (ID No. VE-321),
- j. #1 acetone reflux drum (ID No. VE-511) installed on #1 acetone tower (ID No. TW-511),
- k. one reflux drum (ID No. VE-521) installed on #2 acetone tower (ID No. TW-521),
- l. one reflux drum (ID No. VE-561) installed on #3 acetone tower (ID TW-561),
- m. #1 salt decanter feed tank (ID No. VE-401)
- n. #2 salt decanter feed tank (ID No. VE-411),
- o. crude acetone receiver (ID No. VE-421),
- p. release chamber from MA-411A (ID No. VE-413),  
release chamber from MA-411B (ID No. VE-414),  
release chamber from MA-411C (ID No. VE-415),
- q. release chamber from MA-421 (ID No. VE-423),
- r. salt dissolving tank (ID No. VE-431),  
salt dissolving tank (ID No. VE-2431),
- s. #1 product sifter (ID No. MA-311R1-2),
- t. #2 product sifter (ID No. MA-321R1-2),
- u. one tower feed tank (ID No. VE-571) installed on one para dichlorobenzene recycle tank (1,190 gallons capacity, ID No. MS-571) and one packed tower (ID No. TW-571) with integral kettle (ID No. HE-571),
- v. one reflux drum (ID No. VE-572)
- w. wet polymer storage tank A (ID No. VE-231),
- x. wet polymer storage tank B (ID No. VE-241),
- y. polymer wash tank A (ID No. VE-331),
- z. polymer wash tank B (ID No. VE-341),
- aa. wet polymer hopper (ID No. VE-301),
- bb. #1 recovered acetone tank (ID No. TA-302),
- cc. #2 recovered acetone tank (ID No. TA-303),
- dd. #1 recovered water tank (ID No. TA-304),
- ee. #2 recovered water tank (ID No. TA-305),
- ff. #3 recovered water tank (ID No. TA-306),
- gg. #4 recovered water tank (ID No. TA-307),
- hh. recovered water service tank (ID No. TA-501),
- ii. acetone wastewater tank (ID No. TA-711),
- jj. acetone storage tank (51,822 gallons capacity, ID No. TA-141),
- kk. acetone decanter (ID No. MA-301),
- ll. release chamber from MA-301 (ID No. VE-303),
- mm. acetone flush surge drum (ID No. VE-581),
- nn. one liquid ring separator (ID No. TA-263) installed on polymerization cooling vessel (ID No. VE-261) with one condenser (ID No. HE-261),
- oo. flux drum (ID No. VE-2521) installed on #4 acetone tower (ID No. TW-2521),
- pp. one reflux drum (ID No. VE-2511) installed on #5 acetone tower (ID No. TW-2511),
- qq. recovered solvent service tank (ID No. VE-2502),
- uu. one product sifter (ID No. MA-2311-1),
- vv. one product sifter (ID No. MA-2311-2),
- ww. one product sifter (ID No. MA-2321-1),
- xx. one product sifter (ID No. MA-2321-2),
- yy. one salt drier (ID No. DR-2431),

### III. Existing Permitted Sources - continued

- zz. one acetone reslurry tank (ID No. VE-2311),
  - aaa. one acetone reslurry tank (ID No. VE-2321),
  - bbb. maintenance shutdown equipment drain collection (ID No. VE-2503),
  - ccc. one salt decanter feed tank (ID No. VE-2401),
  - ddd. one salt decanter feed tank (ID No. VE-2411),
  - eee. release chamber from MA-2411A (ID No. VE-2413),  
release chamber from MA-2411B (ID No. VE-2414),
  - fff. release chamber from MA-2421 (ID No. VE-2423),
  - ggg. tower feed tank (ID No. VE-2571) installed on one para dichlorobenzene recycle tank (1,190 gallons capacity, ID No. MS-571) and packed tower (TW-571) with integral kettle (ID No. HE-571),
  - hhh. CW conveyor slurry surge vessel (ID No. VE-2396),
  - iii. CW vapor release chamber (ID No. VE-2390),
  - jjj. CW column #1 recovered solvent vessel (ID No. VE-2395),
  - kkk. CW column #1 (ID No. MA-2390),
  - lll. CW column #2 (ID No. MA-2392),
  - mmm. CW column #3 (ID No. MA-2394),
  - nnn. CW screw conveyer (ID No. MA-2391),
  - ooo. CW column #2 recovered water vessel (ID No. VE-2397),
  - ppp. crude acetone receiver (ID No. VE-2421),
  - qqq. reactor condenser flash separator (ID No. VE-281) installed on one condenser (ID No. HE-271) installed: reactor (ID No. RE-211), reactor (ID No. RE-221), and reactor (ID No. RE-222),
  - rrr. reactor condenser flash separator (ID No. VE-2281) installed on one condenser (ID No. HE-2271), reactor (ID No. RE-2211),
  - sss. wet polymerization storage tank C (ID No. VE-2231),
  - ttt. liquid ring separator (ID No. TA-2263) installed on polymerization cooling vessel (ID No. VE-2261) with one condenser (ID No. HE-2261),
2. one contaminated air vent system (ID No. VS-713) installed on:
- a. One NaSH skid consisting of:
    - i. two NaSH recovery towers (ID Nos. TW-713-1 and 2) installed on:
      - (A) two H<sub>2</sub>S absorber/internal process recycle units (ID No. VE-203 and ID No. VE-2203) installed on two reactor reflux drums (ID No. VE-201R1 and VE-2201). (Reflux drum serves an enclosed reactor system),
      - (B) two salt neutralizing vessels (ID No. VE-731 and VE-2731),
      - (C) two NaSH recovery bottom tanks (1,250 gallon capacity, ID Nos. TA-713-1 and 2)
      - (D) one NaSH storage tank (ID NO. TA-121),  
one NaSH storage tank (ID NO. TA-122),
      - (E) one byproduct NaSH storage tank (ID NO. TA-718),
      - (F) one sour brine tank (ID NO. VE-733),
  - b. one reflux drum (ID No. VE-531) installed on one NMP dehydration tower (ID No. TW-531),
  - c. NMP storage tank (51,822 gallons capacity, ID No. TA-111)  
NMP storage tank (ID No. TA-2111),
  - d. #2 NMP recovery drum (ID No. VE-553),
  - e. NMP vapor-liquid separation drum (ID No. VE-542) venting from:
    - i. NMP recovery tower reflux drum (ID No. VE-541) installed on NMP dehydrator tower (ID No. TW-541),
    - ii. #1 NMP recovery drum (ID No. VE-552) installed on NMP evaporator (ID No. VE-551) and one condenser (ID No. HE-551),
    - iii. NMP condenser (ID No. HE-552),
    - iv. acetone stripper/tower (ID No. TW-711),
    - v. NMP recovery drum (ID No. VE-2553),

- vi. NMP vapor liquid separation drum (ID No. VE-2542) venting from:
  - (A) NMP dehydrator tower (ID No. VE-2541) installed on NMP dehydration tower (ID No. TW-2541),
  - (B) NMP recovery drum (ID No. VE-2552) installed on NMP evaporator (ID No. VE-2551) and one condenser (ID No. HE-2551),
- vii. NMP condenser (ID No. HE-2552),
- viii. one reflux drum (ID No. VE-2531) installed on one NMP dehydration tower (ID No. TW-2531),
  
- 3. waste pDCB loading area (ID No. FU-1),
- 4. one therminol expansion tank (ID No. VE-081),
- 5. one therminol expansion tank (ID No. VE-082),
- 6. one therminol expansion tank (ID No. VE-2081),
- 7. polymer dryer gas scrubber (TW-372) installed on one cyclone (MS-371R-1) installed on the #1 polymer dryer (ID No. DR-371),
- 8. polymer dryer gas scrubber (TW-2372) installed on one cyclone (MS-2371) installed on the #2 polymer dryer (ID No. DR-2371),
- 9. two bagfilters (ID Nos. MS-603-1 and MS-603-2) installed on:
  - a. one final PPS product silo (37,016 gallons capacity, ID No. TA-601), and
  - b. one final PPS product silo (8,680 gallons capacity, ID No. TA-602),
- 10. two bagfilters (ID Nos. MS-2603-1 and MS-2603-2) installed on:
  - a. one final PPS product silo (ID No. TA-2601), and
  - b. one final PPS product silo (ID No. TA-2602),
- 11. one bagfilter (ID No. MS-605) installed on,
  - a. one PPS product bagger (ID No. MA-601),
  - b. one PPS product bagger (ID No. MA-602),
  - c. one portable bag dumper (ID No. MS-631),
  - d. one supersack dumper (ID No. MS-632),
  - e. one product surge hopper (ID No. TA-603),
  
- C. one scrubber (water medium injection, ID No. TW-151) installed on one hydrochloric acid (HCl) storage tank (7,615 gallons capacity, ID No. TA-161),
- D. one para dichlorobenzene storage tank (34,000 gallons capacity, ID No. TA-131, **MACT**),
- E. one para dichlorobenzene storage tank (47,000 gallons capacity, ID No. TA-132, **MACT**),
- F. one emergency use diesel generator (1,100 kW rated capacity, ID No. MS-726) used primarily to supply power to reactor mixing, circulation, and cooling equipment, and
- G. one emergency use diesel generator (1,350 kW rated capacity, ID No. MS-2726, **NSPS, MACT**) used primarily to supply power to reactor mixing, circulation, and cooling equipment.

\*\*\*\*\* **Applicable Regulatory Requirements** \*\*\*\*\*

The sources listed above are subject to the following regulations:

- 15A NCAC 2D .0503 "Particulates from Fuel Burning Indirect Heat Exchangers"
- 15A NCAC 2D .0515 "Particulates from Miscellaneous Industrial Processes"
- 15A NCAC 2D .0516 "Sulfur Dioxide Emissions From Combustion Processes"
- 15A NCAC 2D .0521 "Control of Visible Emissions"
- 15A NCAC 2D .0524 "New Source Performance Standards for Steam Generating Units (Subpart Dc) and Stationary Compression Ignition Engines (Subpart IIII)"
- 15A NCAC 2D .0535 "Excess Emissions and Malfunctions"
- 15A NCAC 2D .0958 "Work Practices for Sources of Volatile Organic Compounds"
- 15A NCAC 2D .1100 "Control of Toxic Air Pollutants"
- 15A NCAC 2D .1111 "Maximum Achievable Control Technology" (40 CFR Part 63)
  - Subpart FFFF "National Emissions Standards For Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing" (MON)
  - Subpart ZZZZ "National Emissions Standards For Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE)"
- 15A NCAC 2D .1806 "Control and Prohibition of Odorous Emissions"

**No regulatory review is required for the regulations listed above at this time since there are no new sources being added for this renewal application. MACT language will be added into the 1<sup>st</sup> Time Title V Permit for Subparts ZZZZ (RICE) and FFFF (MON).**

**Reciprocating Internal Combustion Engine, 40 CFR Part 63, Subpart ZZZZ (RICE MACT)**

- MS-726 (“Existing” diesel-fired emergency use generator, 1100 kW, 1475.1 hp)

Generator (MS-726) was permitted in 1999 and is considered an “existing” RICE because it is located at a Major Source of HAPs, and it commenced construction (placed onsite) prior to December 19, 2002 [40 CFR §63.9590(a)(1)(i)]. In accordance with 40 CFR §63.9590(b)(3), and existing emergency generator does not have to meet the requirements of this Subpart nor Subpart A. No initial notification is required.

- MS-726 (Diesel-fired emergency use generator, 1100 kW, 1475.1 hp)

Generator (MS-2726) was permitted in April 2007 and is by definition a “new” RICE because it is located at a Major Source of HAPs, and it commenced construction (placed onsite) after December 19, 2002 [40 CFR §63.9590(a)(2)(i)]. In accordance with 40 CFR §63.9590(b)(1)(i), this “new” emergency generator does not have to meet the requirements of this Subpart (ZZZZ), or Subpart A (General provisions) except for the initial notification requirements of 40 CFR §63.6645(h). These notification requirements will be placed into the body of the permit.

- IV.** A Professional Engineers Seal **is not** required for this 1<sup>st</sup> Time Title V Permit because no new control devices are being added.
- V.** A consistency determination **is not required** for this 1<sup>st</sup> Time Title V Permit modification because no new sources are being added.
- VI.** An application fee **is required** for this 1<sup>st</sup> Time Title V Permit and was received with the application on October 2, 2006.
- VII.** The appropriate number of copies of the application were received by the DAQ on October 2, 2006.
- VIII.** The application was signed by an authorized official as defined by 15A NCAC 2Q .0304(j).
- IX.** **Air toxics:** There are no toxic air pollutant increases associated with this 1<sup>st</sup> Title V permit application.
- X.** **Public Notice is required for the 1<sup>st</sup> Time Title V permit processed as a 15 NCAC 2Q .0501(c)(1) modification.**

**30-Day public Notice:** The 30 day public notice period was from \_\_\_\_, 2008 through \_\_\_\_\_. \_\_\_\_public comments were received for this permit application.

**EPA 45-Day review Period:** The DAQ sent copies of the appropriate information to the USEPA prior to the public notice. The EPA 45-day review period was from \_\_\_\_\_, 2008 through \_\_\_\_\_2008. The USEPA \_\_\_\_ have any comments on this modification.

- XI. NonAttainment:**  
New Hanover County **has not been** designated nonattainment for the eight-hour ozone standard and is not an Early Action Compact (EAC) participant.
- XII. Prevention of Significant Deterioration (PSD)**  
The Minor Source Baseline date for New Hanover County was triggered for PM-10 & SO<sub>2</sub> in December 1979, and for NO<sub>x</sub> in November 1990. There are no increases in emissions with this 1<sup>st</sup> Time Title V permit application and PSD does not apply.

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- XIII.** This facility **is not** subject to 15A NCAC 2Q .0508(g) "Prevention of Accidental Releases" because this facility does not store any of the regulated substances in quantities above the thresholds.
- XIV. Applicant Comments to "Final Draft" Prior to Public Notice:**
- A. Add the averaging time of "15 minutes" to the continuous temperature monitoring and reporting requirements of the thermal oxidizer in Sections 2.2 A. 1. b., A. 2. a., A. 3. b. and A. 3. c. in the Air Permit. This averaging time reflects the averaging requirement of the MACT, Subpart FFFF (MON).
  - B. Add two NMP (N-Methyl-2-Pyrrolidone, 50-60 gallon capacity) waste drums (IVE-554 and IVE-2554) to the insignificant activities list.
- XV.** This modification, issued in accordance with 15A NCAC 2Q .0501(c)(1) to Fortron Industries, located in New Hanover County, Wilmington, North Carolina, has been reviewed by the DAQ to determine compliance with all procedures and requirements. The DAQ has determined that this facility is complying or will achieve compliance as specified in the permit with all applicable requirements.

The Wilmington Regional Office did not comment on the initial application, however, they did comment on the engineering review and draft permit. A copy of the draft permit was sent to the Wilmington Regional office on \_\_\_\_\_ 2008. The Wilmington Regional Office concurs with the issuance of this permit.

**Issue permit No. 07323T16.**