

## INITIAL TITLE V AIR PERMIT APPLICATION REVIEW

<b>APPLICANT:</b>	<b>SITE LOCATION:</b>	<b>COUNTY:</b>	
PPG Industries Fiber Glass Products, Inc.	Lexington	Davidson	
<b>TECHNICAL CONTACT:</b>	<b>PHONE:</b>	<b>RESPONSIBLE OFFICIAL:</b>	<b>TITLE:</b>
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<b>REVIEW ENGINEER:</b>	<b>SIGNATURE:</b>	<b>DATE:</b>	
Gautam Patnaik		9/16/03	
<b>REGIONAL CONTACT:</b>	<b>REGIONAL OFFICE:</b>	<b>SIC CODE:</b>	
Steve Moser	Winston Salem	3229	
<b>APPLICATION NUMBER:</b>	<b>EXISTING PERMIT NUMBER:</b>	<b>NEW PERMIT NUMBER:</b>	
290109A5.A	02688R20	02688T21	

### I. Introduction

The U.S. Environmental Protection Agency (EPA) has given final approval to North Carolina's Title V operating permits program effective on October 1, 2001. Title V facilities are required to obtain an operating permit which addresses all applicable regulations under the State Implementation Plan, Federal Implementation Plan, and other provisions of the Clean Air Act (CAA). The Title V Operating Permit will define all of the facility's obligations under the CAA.

This Initial Title V Air Permit application Review intends to convey all pertinent emissions data, rules, policies, and engineering assumptions used to construct the DRAFT Title V operating permit. The primary source of information used to construct the DRAFT permit is the above referenced air permit application.

### II. Background Information

The DRAFT Title V operating permit replaces an existing Air Quality Construction and Operation Permit No. 02688R20 which was issued on 7/29/2003 and is currently scheduled to expire on 6/30/2003.

Pursuant to 15A NCAC 2Q .0506 PPG Industries Fiber Glass Products, Inc. submitted its initial Title V application to the Division of Air Quality on 5/10/96. The application was considered complete for processing on 8/22/2003. The DRAFT permit is required to go to public notice pursuant to 15A NCAC 2Q .0521.

### III. Facility Description

This is a glass manufacturing unit, and is a title V facility based on emission of more than 100 tons per year of NO<sub>x</sub>, PM<sub>10</sub>, and SO<sub>2</sub>, and more than 10 tons per year of Hexane, n- .(based on 2000 emissions inventory).

**IV. Summary of Emission Sources and Control Devices**

The following table identifies all emission sources and associated control devices for which the Initial Title V Operating Permit is being issued:

<b>Emission Source ID No.</b>	<b>Emission Source Description</b>	<b>Control Device ID No.</b>	<b>Control Device Description</b>
ESB64, ESB65, ESB66, ESB67 and ESB68	five natural gas/No. 2, No. 4, No. 5 and No. 6 fuel oil-fired boilers	NA	NA
507	fiberglass melting furnace	NA	NA
504	fiberglass melting furnace	NA	NA
<b>NSPS</b>			
501	fiberglass melting furnaces	NA	NA
503	fiberglass melting furnaces	NA	NA
509	fiberglass melting furnace	NA	NA
502	fiberglass melting furnace	CD153	emission control system

**VI. Emission Source-by-Source Evaluation**

**A. five natural gas/No. 2, No. 4 through No. 6 fuel oil-fired boilers (Boiler Nos. ESB64, ESB65, ESB66, ESB67 and ESB68, 21.0 million Btu per hour maximum heat input each)**

1. Description:

All these boilers were constructed prior to June 9, 1989 and thus, are not subject to NSPS Subpart Dc regulation.

2. Applicable Regulatory Requirements

The following table provides a summary of limits and standards for the emission source(s) described above:

<b>Regulated Pollutant</b>	<b>Limits/Standards</b>	<b>Applicable Regulation</b>
particulate matter	0.326 pounds per million Btu heat input	15A NCAC 2D .0503
visible emissions	40 percent opacity - (for boilers ESB64, ESB65 and ESB66)	15A NCAC 2D .0521
	20 percent opacity - (for boilers ESB67 and ESB68)	
sulfur dioxide	fuel oil firing	15A NCAC 2D .0524
toxic air pollutants	<b>State-enforceable only</b> - See Section VII B.	15A NCAC 2Q .1100
toxic air pollutants	<b>State-enforceable only</b> - See Section VII C.	15A NCAC 2Q .0711
odors	<b>State-enforceable only</b> - See Section VII D.	15A NCAC 2D .1806

a.) 2D .0503 “Particulates from Fuel Burning Indirect Heat Exchangers”

i. Regulatory Analysis

These boilers are subject to 2D .0503(a) since natural gas/No. 2 through No. 6 fuel oil, is burned for the primary purpose of producing heat by indirect heat transfer. Allowable emissions of particulate matter from fuel combustion shall be calculated as follows:

$$E = 1.090 \times Q^{0.2594}$$

Where E = allowable particulate emission rate per boiler, pounds per million Btu  
 Q = facility wide maximum heat input rate, million Btu per hour

The allowable emission rate of particulate matter from the boilers, based on the construction dates of the boilers and as per this regulation, is at a rate of 0.326 pounds per million Btu heat input, from each of the boilers. Or, based on the rating of the boiler, the allowable emission rate of particulate matter from each of the boiler is 6.846 lbs per hour. The worst case scenario of the emissions of particulate matter from the boilers will be caused by the combustion of No. 6 fuel oil. The potential emission estimation based on the Air Permits spreadsheet, which utilizes an AP-42 emission factor, is at a rate of 3.4 lbs per hour of particulate matter from each of the boilers. Since, the potential is less than the allowable rate of particulate matter emission rate, the boilers will be in compliance with this regulation.

ii. Monitoring/Recordkeeping/Reporting Requirements

Since the potential particulate matter emissions are less than the allowable, no monitoring, recordkeeping or reporting are required. Stack testing is not required to ensure compliance with this regulation. However the test method condition will be put in the permit in the event that DAQ finds that due to improper operation, violations, etc, source testing is required.

b.) 2D .0516 “Sulfur Dioxide Emissions from Combustion Sources”

i. Regulation Analysis

These boilers are sources of combustion which discharge through a stack and therefore are subject to 2D .0516(a). Allowable emissions of sulfur dioxide from shall not exceed 2.3 pounds per million Btu heat input. Based on the rating of the boiler, the allowable emission rate of sulfur dioxide from each of the boiler is 48.3 lbs per hour. The worst case scenario of the emissions of sulfur dioxide will take place while the boilers are firing No. 6 fuel oil. The potential emission of sulfur dioxide, based on the Air Permits spreadsheet which utilizes an AP-42 emission factor, will be at a rate of 46 lbs per hour. This emission is based on a sulfur content of 2.1 percent by weight for the No. 6 fuel oil. Since, the potential emission of sulfur dioxide from the boilers are less than the allowable, the boilers will be in compliance with the 2D .0516 regulation.

ii. Monitoring/Recordkeeping Requirements

The sulfur content of the No. 6 fuel oil received will be monitored using supplier certification to

ensure compliance with the emission limit of 2.3 pounds of sulfur dioxide per million Btu heat input. The maximum sulfur content in any No. 4/5/6 fuel oil shall not exceed 2.1 percent by weight to assure compliance.

iii. Reporting Requirements

The Permittee will report by January 30 and July 30 of each year records of the fuel oil supplier certification.

c) 2D .0521 “Control of Visible Emissions”

i.. Regulation Analysis

Since these boilers ESB67 and ESB68 were established after July 1, 1971, these boilers are subject to 2D .0521(d). Per this regulation, visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period. The other boilers ESB64, ESB65 and ESB66 were established prior to July 1, 1971, and are subject to 40 percent opacity . The latest inspection report did not cite any opacity exceedences.

ii. Monitoring Requirements

While firing No. 4/5/6 fuel oil from these boilers, daily visual observation of the emission stacks shall be performed.

iii. Recordkeeping Requirements

A log will be kept of the daily visible emission stack observation.

iv. Reporting Requirements

A summary report of the daily visible emission stack observation results will be maintained by the application, by January 30 and July 30 of each year.

- B. - Fiberglass melting furnace No. 501 ( 2,531 pound per hour glass pull rate) consisting of:**  
**a. One direct fired melter utilizing 100% oxygen firing,**

- b. **One natural gas / No. 2 through No. 6 fuel oil-fired refiner, and**
  - c. **One natural gas / No. 2 through No. 6 fuel oil-fired forehearth.**
  
- C. - **one emission control system (ID No. CD153) installed on one natural gas-fired fiberglass melting furnace No. 502 (3,000 pounds per hour glass pull rate) consisting of:**
  - a. **One direct fired melter utilizing 100% oxygen firing,**
  - b. **One natural gas-fired refiner, and**
  - c. **One natural gas-fired forehearth.**
  
- D. - **one natural gas/No. 2 through No. 6 fuel oil-fired fiberglass melting furnaces No. 503 (2,531 pounds per hour glass pull rate) consisting of:**
  - a. **One direct fired melter utilizing 100% oxygen firing,**
  - b. **One natural gas-fired refiner, and**
  - c. **One natural gas-fired forehearth.**
  
- E. - **one natural gas/No. 2 fuel oil-fired fiberglass melting furnace No. 504 (4,000 pounds per hour glass pull rate) consisting of:**
  - a. **One direct fired melter utilizing 100% oxygen firing,**
  - b. **One natural gas-fired refiner, and**
  - c. **One natural gas-fired forehearth.**
  
- F. - **one natural gas/No. 2 fuel oil-fired fiberglass melting furnace No. 507 (7,131 pounds per hour glass pull rate) consisting of:**
  - a. **One direct fired melter utilizing 100% oxygen firing,**
  - b. **One natural gas-fired refiner, and**
  - c. **One natural gas-fired forehearth.**
  
- G. - **one natural gas/No. 2 through No. 6 fuel oil-fired fiberglass melting furnace No. 509 (8,600 pounds per hour glass pull rate) consisting of:**
  - a. **One direct fired melter utilizing 100% oxygen firing,**
  - b. **One natural gas-fired refiner, and**
  - c. **One natural gas-fired forehearth.**

(All the above sources are listed separately in the permit, but are grouped here to provide a summarized review of all the sources.)

The following table provides a summary of limits and standards for the emission source(s) described above:

<b>Regulated Pollutant</b>	<b>Limits/Standards</b>	<b>Applicable Regulation</b>
particulate matter from melter, refiner and forehearth  particulate matter from melter (for furnace 504 only)	$E=4.10P^{0.67}$ where E = allowable emission rate in pounds per hour P = process weight in tons per hour  See Section VII A.	15A NCAC 2D .0515  and  15A NCAC 2D .0524 NSPS Subpart CC
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
visible emissions	40 percent opacity - furnaces (ID Nos. 501, 502, 504, 507, and 509)  20 percent opacity - furnaces (ID No. 503)	15A NCAC 2D .0521
particulate matter	less than 3.05 pounds per hour for furnace No. 504 and less than 6.08 pounds per hour for furnace No. 507	15A NCAC 2D .0524 (avoidance)
Furnace (502) PM-10 particulate matter fluorides	55.26 tons per year  70.61 tons per year  19.14 tons per year	15A NCAC 2D .0530 (avoidance)

Furnace (504)		15A NCAC 2D .0530
PM-10	101.7 tons per year	(avoidance)
particulate matter	122.86 tons per year	
sulfur dioxide	86.75 tons per year	
nitrogen oxide	216.86 tons per year	
fluorides	86.37 tons per year	
Furnace (507)		15A NCAC 2D .0530
particulate matter	70.7 tons per year	
fluorides	60.7 tons per year	
nitrogen oxide	164.64 tons per year	
carbon monoxide	106.03 tons per year	
lead	0.6026 tons per year	
sulfur dioxide	94.26 tons per year	
particulate matter	less than 6.08 pounds per hour	15A NCAC .0524 (NSPS avoidance)
toxic air pollutants	<b>State-enforceable only</b> - See Section VII B.	15A NCAC 2Q .1100
toxic air pollutants	<b>State-enforceable only</b> - See Section VII C.	15A NCAC 2Q .0711
odors	<b>State-enforceable only</b> - See Section VII D.	15A NCAC 2D .1806

a. 2D. .0515 “Particulates from Miscellaneous Industrial Processes”

i. Regulation Analysis

The allowable particulate emission limit is calculated by the following equation:

$$E = 4.10P^{0.67}$$

where E = allowable emission rate for particulate matter in pounds per hour,

and P = process weight in tons per hour

Table I shows the emission of particulate matter from the furnaces and ovens. None of these ovens have control devices to capture particulate matter. The applicant stated that the emissions of particulate matter from the sources are derived from engineering estimation. Since the emission of particulate matter from all the sources are less or equal to the allowable emissions rate of

particulate matter all these sources are in compliance.

**Table I** (shows the emissions of particulate matter from the furnaces)

Sources ID Nos.	Process rate lbs/hour	<sup>515</sup> PM. Allowable rate lbs/hour	PM emissions rate lbs /hr
501	3,262	5.69	5.69
502	3,262	5.69	5.69
503	3,262	5.69	5.69
504	3,262	5.69	5.69
507	9,189	11.38	9.38
509	11,082	12.91	12.91

ii Testing Requirements

The applicant shall conduct annual testing of the all the fiberglass melting furnaces as outlined in the SOC (Special Order By Consent) signed on February 8th, 2002. The SOC specifies that the facility will adhere to the EPA Reference Method No. 5 and in accordance with a testing protocol approved by the Division, while conducting the testing.

iii Monitoring/Record keeping Requirements

The applicant shall maintain production records which specify the types of materials and finishes processed and shall make these records available to a DAQ.

iv Reporting Requirements

The applicant shall submit a semi-annual summary report of monitoring, recordkeeping and testing activities.

b. 2D.0516 “Sulfur Dioxide Emissions from Combustion Sources”

i. Regulation Analysis

These furnaces utilizing natural gas and fuel oil and are a source of combustion which discharges

through a stack and therefore is subject to 2D.0516(a). Allowable emissions of sulfur dioxide from these sources while firing natural gas and fuel oil shall not exceed 2.3 pounds per million Btu heat input.

Table II shows the emission of sulfur dioxide from the furnaces. The applicant stated that the emissions of sulfur dioxide from the sources are derived from engineering estimation. Since the emission of sulfur dioxide from all the sources are less or equal to the allowable emissions rate of sulfur dioxide, all these sources are in compliance.

**Table II,** (shows the emissions of sulfur dioxide from the furnaces)

Sources ID Nos.	maximum heat input rate, million But/hour	<sup>516</sup> sulfur dioxide allowable rate lbs/hour	sulfur dioxide emissions rate lbs /hr
501	21.15	48.645	48.645
502	21.15	48.645	48.645
503	21.15	48.645	48.645
504	21.15	48.645	48.645
507	36.98	85.05	21.52
509	56.12	129.076	129.06

ii. Monitoring Requirements

The sulfur content of any No. 3 through No. 6 fuel oil received will be monitored using supplier certification to ensure compliance with the emission limit of 2.3 pounds of sulfur dioxide per million Btu heat input. The maximum sulfur content in any No. 3/4/5/6 fuel oil shall not exceed 2.1 percent by weight to assure compliance.

iii. Reporting Requirements

The permittee will report by January 30 and July 30 of each year records of the fuel oil supplier certification.

c. 2D .0521 “Control of Visible Emissions”

i Regulation Analysis

Since the furnace (ID No. 503) was established after July 1, 1971, it is subject to 2D .0521(d). Visual emissions from this source shall not be more than 20 percent opacity.

The furnaces (ID Nos. 501, 502, 504, 507, and 509) were established prior to July 1, 1971, and thus subject to 2D .0521(c), with a 40 percent opacity limit.

ii. Monitoring Requirements

Once a day visual observation of the emission stacks shall be performed with the requirement to reduce visible emissions to the greatest extent possible.

iii. Record keeping Requirements

The Record keeping requirements to ensure compliance with the visual emission standard will be followed. In addition, a log will be kept of the daily visible emission stack observation.

iv. Reporting Requirements

A summary report of the daily visible emission stack observation results will be submitted by the application, by July 30, and January 30 of each year.

d. 15A NCAC 2D .0524: NSPS 40 CFR PART 60 SUBPART CC (Avoidance)

i Regulation Analysis

The current permit has a emissions limit of less than 3.05 pounds per hour of particulate matter from the Furnace 504. On a meeting with various representatives of the applicant on 8/21/03 they did agree that this furnace was subject to NSPS subpart CC requirement. Thus, this facility is subject to the requirements of NSPS subpart CC as outlined in section VII A.

The current permit also had a stipulation for furnace 507, which stated that the “particulate matter (including PM-10) emissions from the melter of Furnace (ID No. 507) shall not exceed 6.08 pounds per hour.” This condition appeared as a stand alone condition in the current permit. On 4/22/02 John C. Evans of this office stated that, he recalled this was done for avoidance of NSPS, Subpart

CC, under his tutelage. Thus, this condition is included in the same NSPS, Subpart CC avoidance regulation. This was verified by Steve Moser of the Regional Office, in an E-mail on 4/23/02, he referenced Kelly Saavedra, again, of the Regional Office, and stated that ““6.08 pound per hour PM limit on the furnace 507 melter is indeed an NSPS avoidance limit. The furnace was modified in the late 1980's, and originally the NSPS avoidance limit was set at 5.29 pounds per hour. In the mid 1990's PPG claimed that 5.29 pound per hour limit had been calculated incorrectly, and the limit was recalculated to the 6.08 pound per hour value currently in the permit”

This limit was specified to ensure that the rebuild of the furnace would not be considered a modification pursuant to NSPS, Subpart CC. As per, 40 CFR 60.14 (a) which states that “any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere.” Thus, by taking a limit this source will not be subject to NSPS Subpart CC.

The current permit also has some testing and reporting stipulations under this regulation for furnace 507. The applicant stated that this test has been done and the results submitted to the Regional Office. The latest inspection report stated that the facility was in compliance. This furnace is also subject to an annual testing requirement as outlined in the SOC signed on February 8th, 2002. The SOC specifies that the facility will adhere to the EPA Reference Method No. 5 and in accordance with a testing protocol approved by the Division, while conducting the testing. Results of this testing will ensure that this facility avoids the application of NSPS Subpart CC.

e. 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION (Avoidance)

i. Regulation Analysis

To avoid the applicability of 15A NCAC 2D .0530 "Prevention of Significant Deterioration," the furnaces are subject to the following limits as outlined in the table below:

(For furnace ID No. 502)

<u>Pollutant</u>	<u>Emissions Limitation</u>
Particulate Matter	70.61 tons per consecutive 12-month period
PM-10	55.26 tons per consecutive 12-month period
fluorides	19.14 tons per consecutive 12-month period

(For furnace ID No. 504)

<u>Pollutant</u>	<u>Emissions Limitation</u>
Particulate Matter (including PM-10) (filterable and condensable)	122.86 tons per consecutive 12-month period
PM-10 (filterable and condensable)	101.70 tons per consecutive 12-month period
Sulfur Dioxide	86.75 tons per consecutive 12-month period
Nitrogen Oxide	216.86 tons per consecutive 12-month period
Fluorides	86.37 tons per consecutive 12-month period

(For furnace ID No. 507)

<u>Pollutant</u>	<u>Emissions Limitation</u>
Particulate (including PM-10)	70.7 tons per consecutive 12-month period
PM-10	60.7 tons per consecutive 12-month period
Fluorides	110 tons per consecutive 12-month period
Nitrogen Oxides	164.64 tons per consecutive 12-month period
Carbon Monoxide	106.03 tons per consecutive 12-month period
Lead	0.6026 tons per consecutive 12-month period
Sulfur Dioxide	94.26 tons per consecutive 12-month period

i. Operations Restrictions

To ensure emissions do not exceed the limitations above, the furnaces shall not exceed their permitted pull rates.

ii. Testing/Monitoring

The furnaces will be tested annually for each of the individual pollutants listed with specific limits, for each furnaces, respectively. This testing will be done with pre approved protocol by DAQ, utilizing the average hourly pull rate for which the furnaces normally operate.

iii. Recordkeeping/Reporting.

The applicant shall record the monthly pollutant emissions from each of the furnaces listed above. Monthly emissions shall be based on the actual production rate of the furnace multiplied by an emission factor determined during the last annual testing of each furnace. The applicant shall submit a quarterly report to DAQ of all the monitoring and recordkeeping activities for these furnaces.

**VII. Multiple Emission Source Limits**

- A. - **one natural gas/No. 2 fuel oil-fired fiberglass melting furnace No. 504 (4,000 pounds per hour glass pull rate and 3,262 pounds per hour, raw material maximum input rate) consisting of:**
  - a. **one direct fired melter utilizing 100% oxygen firing.**

<b>Regulated Pollutant</b>	<b>Limits/Standards</b>	<b>Applicable Regulation</b>
particulate matter from melter (for furnace 504 only)	less than 0.5 gram of particulate per kilogram of glass	15A NCAC 2D .0524 NSPS Subpart CC

i. Regulation Analysis

This source is now subject to NSPS subpart CC as per the applicant in their meeting on 8/21/03. Since the applicant is not in compliance with this requirement and have signed a Special Order By Consent (SOC) on February 8, 2002, which specifies a schedule of compliance. Requirements include the installation of a continuous monitoring system for the measurement of the opacity of emissions discharged into the atmosphere from the affected facility and a particulate matter at emission rate no greater than 0.5 gram of particulate per kilogram of glass produced.

ii. Monitoring/Recordkeeping [40 CFR § 60.293]

The applicant shall Install, calibrate, maintain, and operate a continuous monitoring system for the measurement of the opacity at this furnace.

iii. Performance Test [40 CFR § 60.293]

The performance test shall be done as follows:

- a) Conduct continuous opacity monitoring during each test run.
- b) Calculate 6-minute opacity averages from 24 or more data points equally spaced over each 6-minute period during the test runs.
- c) Determine, based on the 6-minute opacity averages, the opacity value corresponding to the 99 percent upper confidence level of a normal distribution of average opacity values.

vi. Reporting [40 CFR § 60.293]

Any excess emissions shall be reported to DAQ.

**B. Entire Facility**

Applicable Regulatory Requirements

The following emission source(s) and associated control device(s) are subject to this limit and/or standard:

EMISSION SOURCE(S)	TOXIC AIR POLLUTANT(S)	Regulated Pollutant
Facility-wide Sources	Formaldehyde 0.1069 lbs/hr	15A NCAC 2Q .1100
Facility-wide Sources	Maleic Anhydride 1.59655 lbs/day and 0.06736 lbs/hr	15A NCAC 2Q .1100

STATE-ONLY REQUIREMENT:

- a. 15A NCAC 2Q .1100 “TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REQUIREMENT”
  - i. Regulation Analysis

To ensure compliance with this regulation the current permit stipulated the restrictions stated in the above table, for Formaldehyde and Maleic Anhydride for the entire facility. These limits are also included in the new permit. To ensure compliance with the above limits, the applicant shall maintain records of production rates, and this information shall be made available for inspection and review to DAQ personnel.

2. Avoidance of 15A NCAC 2D .1100 for furnace 502:

The current permit placed a restrictions on furnace 502 to limit fluoride emissions from furnace to 4.01 pounds per hour or 96.24 pounds per day, to avoid the applicability of this regulation. This restrictions and other related conditions are incorporated into the new permit.

i. Monitoring/Recordkeeping Requirements

To ensure enforceability of this limit, one or more of the following restrictions apply at all times:

1. the emission rate of furnace ID No. 502 (melter only) for fluorides must not exceed 3.52 lbs of fluorides per hour, and/or
2. the furnace-specific emission factor of furnace ID No. 502 (melter only) for fluorides, as determined from an earlier emissions testing, must not exceed 2.35 lbs of fluorides per ton of glass produced.
3. the pull rate of the furnace (ID No. 502) shall not exceed 3,000 lbs of glass per hour
4. the pull rate of the furnace (ID No. 502) shall be recorded daily.

ii. Reporting requirement

For compliance purposes, within thirty days after each calendar year quarter the following shall be reported:

1. The maximum daily pull rate of the furnace (ID No. 502), and
2. the maximum daily emissions of fluorides from the furnace (ID No. 502), within thirty days after each calendar year quarter.

3. Avoidance of 15A NCAC 2D .1100 for furnace 504:

The current permit placed a restrictions on furnace 502 to limit fluoride emissions from furnace to 20.70 pounds per hour or 496.80 pounds per day, to avoid the applicability of this regulation. This

restrictions and other related conditions are incorporated into the new permit.

i. Monitoring/Recordkeeping Requirements

To ensure enforceability of this limit, one or more of the following restrictions apply at all times:

1. The pull rate of the furnace (ID No. 504) shall not exceed 4,000 lbs of glass per hour.
2. Shall record weekly in a log book the mass balance information used to determine fluoride emissions.
3. Calculate the monthly fluoride emissions from the furnace.
4. The pull rate of the furnace (ID No. 504) shall be recorded daily in a logbook.
5. The Permittee shall keep these records on file for a minimum of five years.

ii. Reporting requirement

For compliance purposes, within thirty days after each calendar year quarter the following shall be reported:

1. The monthly emissions of the above pollutants for the previous 14 months.
2. The maximum daily pull rate of the furnace (ID No. 504).
3. Shall submit to the Regional Supervisor, Division of Air Quality, upon request, the weekly mass balance information used to determine fluoride emissions.

**C. Entire Facility.**

Applicable Regulatory Requirements

The following emission source(s) and associated control device(s) are subject to this limit and/or standard:

Pollutant (CAS Number)	TPERs Limitations			
	Carcinogens (lb/yr)	Chronic Toxicants (lb/day)	Acute Systemic Toxicants (lb/hr)	Acute Irritants (lb/hr)
Acrolein (107-02-8)			0.020	
Acetaldehyde (75-07-0)			6.8	

STATE-ONLY REQUIREMENT:

- a. 15A NCAC 2Q .0711 “Emission Rates Requiring a Permit”

The current permit listed this regulation and this is also incorporated in the new permit. This requires that the applicant demonstrate for each of the above listed toxic air pollutants (TAPs), that facility-wide actual emissions do not exceed the Toxic Permit Emission Rates (TPERs) listed in 15A NCAC 2Q .0711. And the facility shall be operated and maintained in such a manner that emissions of any listed TAPs from the facility, including fugitive emissions, will not exceed TPERs listed in 15A NCAC 2Q .0711. A permit will be required if the emissions from all sources will become greater than the corresponding TPERs.

**D. All emission sources**

Applicable Regulatory Requirements

The following emission source(s) and associated control device(s) are subject to this limit and/or standard:

<b>Regulated Pollutant</b>	<b>Limits/Standards</b>	<b>Applicable Regulation</b>
odors	odorous emissions must be controlled; <b>State-enforceable only</b>	15A NCAC 2D .1806

STATE-ONLY REQUIREMENT:

- a. 15A NCAC 2D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS

The current permit also, listed this regulation and this is also incorporated in the new permit. This requires that the applicant will not allow the emission sources to be operated without employing suitable measures for the control of odorous emissions.

**VIII. Schedule of Compliance**

By a “Special Order By Consent” signed on February 8th, 2002, the facility will adhere to the process rate of the furnaces used in the production of fiber glass, as per the table below:

<b>Furnace ID No.</b>	<b>Maximum Pull Rate</b> pounds/hour	<b>Fuel Type</b>	<b>Oxygen-Firing</b>
501	2531	Natural Gas/ No. 2 fuel oil/ No. 6 fuel oil	Yes
502	3000	Natural Gas	Yes

503	2531	Natural Gas/ No. 2 fuel oil/ No. 6 fuel oil	Yes
504	4000	Natural Gas/ No. 2 fuel oil	Yes
507	7131	Natural Gas/ No. 2 fuel oil	Yes
509	8600	Natural Gas/ No. 2 fuel oil/ No. 6 fuel oil	Yes

This agreement also over-rides the “Special Order By Consent” signed on May 30th, 2000.

Compliance Schedule

The facility has to demonstration compliance for all toxic air pollutants regulated under Title 15A NCAC 2D .1100 by December 31, 2006, by submitting a facility wide compliance plan.

Furthermore the facility has to ensure compliance with emission limits in 15A NCAC 2D .0521, .0524, and .0530. The compliance can be achieved by utilization of “environmentally friendly batch” (EFB) or the installation of an “emission control system” (“ECS”) on the furnaces, as per the schedule described below:

**Implementation Schedule for Lexington Facility**

<b>Date</b>	<b>Furnace ID</b>
December 31,2003	504
December 31, 2004	507
December 31, 2005	509

This agreement also requires the installation of a continuous emission monitors to monitor for opacity furnace 504 by December 31, 2003.

Reporting.

The facility shall submit within fifteen days after each of the task specified above, a letter, to the appropriate Air Quality Regional Supervisor, indicating their status.

**IX MACT Applicability and Requirements**

None.

**X. General Conditions**

The “General Conditions” section of the Title V Operating Permits lists additional applicable rule requirements that the permittee must adhere to, as with any other permit condition. These requirements in general are common to all Title V facilities. The general conditions include provisions such as annual fee payment, permit renewal and expiration, transfer of ownership or operation, property rights, submission of documents, inspections and entry procedures, reopen for cause, and severability.

**XI. Insignificant Activities & Sources Removed.**

The insignificant activities listed in the application have been reviewed and verified. Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.

Various sources listed in the current permit and listed table below have been listed as insignificant activity in the new permit or removed:

<b>Emission Source ID No.</b>	<b>Emission Source Description</b>	<b>Comments</b>
BL	eight raw material boot lifts	Removed from facility
OV1 through OV4	four indirect natural gas-fired fiberglass yarn drying ovens (Michigan Drying Oven)	Removed from facility
508	fiberglass melting furnace	Shut down

ESDC78, ESDC79, ESDC80, ESDC81, ESDC82, ESDC83, and ESDC84	seven raw material storage silos	Insignificant
ESDC88	scrap material storage silo	Insignificant
ESDC85 and ESDC86	two raw material transfer systems	Insignificant
ESDC87	batch tower	Insignificant)
ESDC89 and ESDC90	two raw material storage silos	Insignificant
ESDC91	a lime storage silo associated with the wastewater treatment operation	Insignificant

**XII. Regional Office comments and Applicants comments.**

The Regional Office and the applicant had an opportunity to review the draft permit send to them on 8/4/03. But, since the meeting with the applicant on 8/21/03 this draft permit has changed drastically. It is the decision of the supervisor of this Branch that this draft permit will undergo the public review, and that the Regional office and the applicant will have that time frame (30 days) to comment on this modified draft permit.

**XIII. Public Notice**

Pursuant to 15A NCAC 2Q .0521, a notice of the draft Title V Operating Permit shall be placed in a newspaper of general circulation in the area where the facility is located. The notice will provide for a 30 day comment period, with an opportunity for a public hearing. Copies of the public notice shall

be sent to persons on the Title V mailing list, and EPA.

## **IXI. Recommendations**

The initial Title V application for PPG Industries Fiber Glass Products, Inc. has been reviewed by the DAQ to determine compliance with all procedures and requirements under 15A NCAC 2Q .0500 and 40 CFR Part 70. The DAQ has made a preliminary determination that the facility is complying or will achieve compliance as specified in the draft permit with all applicable requirements. Therefore, the DAQ is proposing to issue the Title V Operating Permit upon completion of the public comment period and the EPA review.