



North Carolina Department of Environment and Natural Resources
Division of Air Quality

Beverly Eaves Perdue
Governor

B. Keith Overcash, P.E.
Director

Dee Freeman
Secretary

date, 2010

Mr. James Schonover
Director of Facilities
RF Micro Devices, Inc.
7628 Thorndike Road
Greensboro, NC 27409-9421

Dear Mr. Schonover:

SUBJECT: Air Quality Permit No. 08409T12
Facility ID: 4101022
RF Micro Devices, Inc.
Greensboro
Guilford County
Fee Class: Title V

In accordance with your completed Air Quality Permit Application for **renewal** of your Title V permit received **October 29, 2009**, we are forwarding herewith Air Quality Permit No. **08409T12** to RF Micro Devices, Inc., 7628 Thorndike Road, Greensboro, Guilford County, North Carolina, authorizing the construction and operation of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code **2Q .0503(8)** have been listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. **The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.**

As the designated responsible official it is your responsibility to review, understand, and abide by all of the terms and conditions of the attached permit. It is also your responsibility to ensure that any person who operates any emission source and associated air pollution control device subject to any term or condition of the attached permit reviews, understands, and abides by the condition(s) of the attached permit that are applicable to that particular emission source.

Permitting Section
1641 Mail Service Center, Raleigh, North Carolina 27699-1641
2728 Capital Blvd., Raleigh, NC 27604
Phone: 919-715-6237 \ FAX: 919-733-5317 \ Internet: www.daq.state.nc.us

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If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with **both** the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.

You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in **writing** to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of GS 143-215-108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of GS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in GS 143-215.114A and 143-215.114B.

This Air Quality Permit shall be effective from **date, 2010** to **date, 2015**, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Should you have any questions concerning this matter, please contact Mr. Mark J. Cuilla, E.I.T., at (919) 733-1499 or Mark.Cuilla@ncdenr.gov.

Sincerely yours,

Donald R. van der Vaart, Ph.D., P.E.,
Chief

Enclosure

c: Winston-Salem Regional Office
Central Files
Gregg Worley, EPA Region 4 (with review)

ATTACHMENT to Cover Letter to Air Quality Permit Number 08409T12

Table of Changes

Pages	Section	Description of Changes
Attachment	Insignificant activities	-amended permit revision number -clarified emergency generator applicability to area source MACT (40 CFR 63, Subpart ZZZZ)
Cover	-	-amended all dates and permit revision numbers
All	Header	-amended permit revision number
3-5	Equipment table	-added MACT designations where needed with asterisk language -removed references to “need not be operating” and replaced with asterisk language
6	2.1 A 2.1 A (table)	-clarified equipment description -clarified emission table where needed
7	2.1 A.1.a 2.1 A.1.b 2.1 A.1.c	-added ID numbers -corrected testing rule cross reference -added ID numbers and updated shell language
8	2.1 A.2.b 2.1 A.2.c.ii	-corrected testing rule cross reference -updated shell language
9	2.1 B.1.b 2.1 B.1.c	-corrected testing rule cross reference -added ID numbers
10	2.1 B.2.b 2.1 B.2.c.ii	-corrected testing rule cross reference -updated shell language
11	2.1 C (table) 2.1 D (table)	-clarified emission table where needed -clarified emission table where needed
12	2.1 D.1.b 2.1 D.1.c 2.1 D.2.b 2.1 D.2.c	-corrected testing rule cross reference -added ID numbers -corrected testing rule cross reference -added ID numbers
13	2.1 E 2.1 E (table) 2.1 E.1.a 2.1 E.1.b 2.1 E.1.c 2.1 E.2.a	-combined old Sections 2.1 E and 2.1 F into one Section -added MACT reference/clarified emission table where needed -added ID numbers -corrected testing rule cross reference -added ID numbers -added ID numbers
14	2.1 E.2.b 2.1 E.2.c 2.1 E.3.b 2.1 E.3.d 2.1 E.3.e	-corrected testing rule cross reference -added ID numbers -added ID numbers -added ID numbers -corrected testing rule cross reference
15	2.1 E.3.f 2.1 E.3.g 2.1 E.3.h 2.1 E.3.i	-added ID numbers -added ID numbers -added ID numbers -added ID numbers
16	2.1 F 2.1 F (table) 2.1 F.1.a 2.1 F.1.b 2.1 F.1.c 2.1 F.2.a 2.1 F.2.b	-combined old Sections 2.1 G, H and I into one Section -clarified emission table where needed -added ID numbers -corrected testing rule cross reference -added ID numbers -added ID numbers -corrected testing rule cross reference

Pages	Section	Description of Changes
17	2.1 F.2.c 2.1 F.3.a 2.1 F.3.b 2.1 F.3.c 2.1 F.4.a 2.1 F.4.b 2.1 F.4.d	-added ID numbers -added ID numbers -corrected testing rule cross reference -added ID numbers -added ID numbers -updated shell language -updated shell language
18	2.1 G 2.1 H	-renumbered Section (formerly Section 2.1 J) -renumbered Section (formerly Section 2.1 K)
19	2.1 H.1.b 2.1 H.2.a 2.1 H.2.b	-corrected testing rule cross reference -added ID numbers -corrected testing rule cross reference
19-20	2.1 H.2.c	-updated shell language
20	2.1 H.2.d 2.1 H.2.e 2.2 (table)	-updated shell language -updated shell language -clarified emission table where needed
21	2.2 A.1.a.v 2.2 A.1.a.vi 2.2 A.1.b.iv 2.2 A.1.b.v 2.2 A.1.c	-updated shell language -updated shell language -updated shell language -updated shell language -updated shell language
22	2.2 A.2 2.2 A.2.b 2.2 A.2.b.i 2.2 A.2.b.ii 2.2 A.2.b.iii 2.2 A.2.b.iv 2.2 A.2.c 2.2 A.2.d-e	-corrected rule citation -added ID numbers and updated shell language -added ID numbers and updated shell language -added ID numbers and updated shell language -added ID numbers and updated shell language -added ID numbers and updated shell language -corrected testing rule cross reference -removed unnecessary monitoring/recordkeeping/reporting requirements per WSRO inspection comments
23	2.2 A.3 2.2 A.3.b 2.2 A.3.d 2.2 A.4 2.2 A.4.b	-corrected rule citation -updated shell language -updated shell language -corrected rule citation -updated shell language
23-24	2.2 A.4.c	-modified PSD avoidance equation per Permittee request
24	2.2 A.4.d 2.2 A.5	-updated shell language -corrected rule citation
24-25	2.2 A.5.c (table)	-added CAS numbers
25	2.2 B 2.2 B (table)	-amended applicable equipment description -clarified table where needed
26	2.2 B.1.d	-updated shell language
27-37	General conditions	-updated shell conditions (v3.1)
Attachment	List of acronyms	-added acronyms for CAIR, NAA and RACT per current shell

ATTACHMENT to Air Quality Permit Number 08409T12

Insignificant Activities

Emission Source ID	Emission Source Description
I-GH1 I-GH2 I-GH3 I-GH4	Four natural gas-fired humidifiers (0.3 million Btu per hour maximum heat input rate, each) at FAB1
I-GH5 I-GH6	Two natural gas-fired humidifiers (0.4 million Btu per hour maximum heat input rate, each) at FAB1
I-FG1 (MACT, Subpart ZZZZ)***	One 100 kW No. 2 fuel oil-fired emergency generator at Old Corp.
I-FG2(MACT, Subpart ZZZZ)***	One 350 kW No. 2 fuel oil-fired emergency generator at Old Corp.
I-FG3(MACT, Subpart ZZZZ)***	One 100 kW No. 2 fuel oil-fired emergency generator at Headquarters

**** These existing emergency stationary RICE located at an area source of HAP emissions, do not have to meet the requirements of 40 CFR 63, Subpart ZZZZ and of Subpart A. No initial notifications are necessary. [63.6590(b)(3)]*



AIR QUALITY PERMIT

Permit No.	Replaces Permit No.(s)	Effective Date	Expiration Date
08409T12	08409T11	date, 2010	date, 2015

Until such time as this permit expires or is modified or revoked, the below named Permittee is permitted to construct and operate the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes (15A NCAC), Subchapters 2D and 2Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 2Q, the Permittee shall not construct, operate, or modify any emission source(s) or air pollution control device(s) without having first submitted a complete Air Quality Permit Application to the permitting authority and received an Air Quality Permit, except as provided in this permit.

Permittee: **RF Micro Devices, Inc.**

Facility ID: **4101022**

Facility Site Location: **FAB1: 7914 Piedmont Triad Parkway
FAB3: 7908 Piedmont Triad Parkway
Packaging: 7907 Piedmont Triad Parkway
Headquarters: 7628 Thorndike Road
Old Corp.: 7625 Thorndike Road**
City, County, State, Zip: **Greensboro, Guilford County, North Carolina 27409**
Mailing Address: **7628 Thorndike Road**
City, State, Zip: **Greensboro, North Carolina 27409-9421**

Application Number: **4101022.09A**
Complete Application Date: **October 29, 2009**

Primary SIC Code: **3674**
Division of Air Quality, **Winston-Salem Regional Office**
Regional Office Address: **585 Waughtown Street**
Winston-Salem, North Carolina 27107

Permit issued this the xxth day of xxxx, 2010

Donald R. van der Vaart, Ph.D., P.E., Chief, Air Permits Section
By Authority of the Environmental Management Commission

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- 2.2- Multiple Emission Source(s) Specific Limitations and Conditions (Including specific requirements, testing, monitoring, recordkeeping, and reporting requirements)

SECTION 3: GENERAL PERMIT CONDITIONS

ATTACHMENT

List of Acronyms

SECTION 1- PERMITTED EMISSION SOURCE(S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE(S) AND APPURTENANCES

The following table contains a summary of all permitted emission sources and associated air pollution control devices and appurtenances:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
FAB1 SEMICONDUCTOR MANUFACTURING OPERATION			
ESMAN1	Semiconductor manufacturing line consisting of various organic and inorganic emission sources from processes including photolithography, metallization, etch and deposition, and testing at FAB1. Emissions are vented via the acid gas exhaust or the solvent exhaust. Acid gas exhaust is vented directly to scrubbers for control. ICP etching is either vented to the stirred tank control devices in series with the acid gas scrubbers or directly to the acid gas scrubbers. Solvent exhaust is uncontrolled.	CDEB1 CDEB2 And CD1 CD2	ICP etching vented to two parallel constant stirred tank particulate abatement devices* Acid gas exhaust system vented to two parallel cross flow packed bed acid gas scrubbers (75 gallons per minute minimum caustic solution injection each)
EST1 EST2 EST3	Three waste solvent storage tanks (2,500 gallon capacity each)	NA	NA
ESG1(MACT, Subpart ZZZZ)***	One No. 2 fuel oil-fired emergency generator (2,200 kW output)	NA	NA
G1(MACT, Subpart ZZZZ)***	One No. 2 fuel oil-fired emergency generator (500 kW output)	NA	NA
B4 through B8	Five natural gas-fired boilers (1.56 million Btu per hour heat input each)	NA	NA
B9	Small tool parts bead blast system with integral cyclone	CDB9	One cartridge filter

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
FAB3 SEMICONDUCTOR MANUFACTURING OPERATION			
ESG31 ESG32 ESG33 (MACT, Subpart ZZZZ)***	Three No. 2 fuel oil-fired emergency generators (2,200 kW output each)	NA	NA
ESG34 ESG35 (NSPS, Subpart III; MACT, Subpart ZZZZ)	Two No. 2 fuel oil-fired emergency generators (2,200 kW output each)	NA	NA
ESB31 ESB32 ESB33 (NSPS, Subpart Dc)	Three natural gas/No. 2 fuel oil-fired boilers (16.33 million Btu per hour heat input each)	NA	NA
ESMAN31	Semiconductor manufacturing line consisting of various organic and inorganic emission sources from processes including photolithography, metallization, etch and deposition, and testing at FAB3. Emissions are vented via the acid gas exhaust or the solvent exhaust. Acid gas exhaust is vented directly to scrubbers for control. ICP etching is either vented to the stirred tank control devices in series with the acid gas scrubbers or directly to the acid gas scrubbers. Solvent exhaust is uncontrolled.	CDEB3 CDEB4 CDEB5 And CD31 CD32 CD33	ICP etching vented to three parallel constant stirred tank particulate abatement devices* Acid gas exhaust system vented to two of three parallel cross flow packed bed acid gas scrubbers (160 gallons per minute minimum caustic solution injection each)
ESMAN32	Semiconductor manufacturing line consisting of various organic and inorganic emission sources from processes including photolithography, metallization, etch and deposition, and testing at FAB3. Emissions are vented via the acid gas exhaust or the solvent exhaust. Acid gas exhaust is vented directly to scrubbers for control. ICP etching is either vented to the stirred tank control devices in series with the acid gas scrubbers or directly to the acid gas scrubbers. Solvent exhaust is uncontrolled.	CDEB6 And CD31 CD32 CD33	ICP etching vented to one constant stirred tank particulate abatement devices* Acid gas exhaust system vented to two of three parallel cross flow packed bed acid gas scrubbers (160 gallons per minute minimum caustic solution injection each)
EST31 EST32 EST33	Three waste solvent storage tanks (8,000, 5,000, and 3,530 gallon capacity, respectively)	NA	NA
B10	Small tool parts bead blast system with integral cyclone	CDB10	One cartridge filter

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
PACKAGING FACILITY			
ESGP (NSPS, Subpart III; MACT, Subpart ZZZZ)	One No. 2 fuel oil-fired emergency generator (2,200 kW output)	NA	NA
B1 B2 B3	Three natural gas-fired boilers (3.5 million Btu per hour heat input each)	NA	NA
PL	Packaging lab operations	NA	NA
WAFER DICING CENTERS			
ESWD1	Wafer dicing center No. 1	CDWD1a CDWD1c And CDWD1b CDWD1d And CD1 CD2	One of two fabric filters (maximum air-to-cloth ratio of 4.97 each) Either or both HEPA filters (maximum air-to-cloth ratio of 8.00 each) Two parallel cross flow packed bed acid gas scrubbers (75 gallons per minute minimum caustic solution injection each)**
ESWD2	Wafer dicing center No. 2	CDWD2a CDWD2c And CDWD2b CDWD2d And CD31 CD32 CD33	One fabric filter (maximum air-to-cloth ratio of 4.97) Either or both HEPA filters (maximum air-to-cloth ratio of 8.00 each) Two of three parallel cross flow packed bed acid gas scrubbers (160 gallons per minute minimum caustic solution injection each)**

* Operation of the particulate abatement devices to reduce emissions from ICP Etching is not required to achieve compliance with any state or Federal air quality standard.

** Emissions from the wafer dicing operations shall be vented through the acid gas scrubber stacks as described to demonstrate compliance with the state-enforceable only acceptable ambient level (AAL) for arsenic pursuant to 15A NCAC 2D .1100 as originally modeled. However, operation of the acid gas scrubbers is not required to achieve compliance with any state or federal air quality standard at the wafer dicing centers.

*** These existing emergency stationary RICE located at an area source of HAP emissions, do not have to meet the requirements of 40 CFR 63, Subpart ZZZZ and of Subpart A. No initial notifications are necessary. [63.6590(b)(3)]

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1- Emission Source(s) and Control Device(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) and appurtenances listed below are subject to the following specific terms, conditions, and limitations, including the testing, monitoring, recordkeeping, and reporting requirements as specified herein:

- A. Semiconductor manufacturing line (ID No. ESMAN1) with associated particulate **abatement** devices for ICP Etching (ID Nos. CDEB1 and CDEB2*) and acid gas control scrubbers (ID Nos. CD1 and CD2)

Semiconductor manufacturing line (ID No. ESMAN31) with associated particulate **abatement** devices for ICP Etching (ID Nos. CDEB3 through CDEB5*) and acid gas control scrubbers (ID Nos. CD31, CD32, and/or CD33)

Semiconductor manufacturing line (ID No. ESMAN32) with associated particulate **abatement** device for ICP Etching (ID No. CDEB6*) and acid gas control scrubbers (ID Nos. CD31, CD32, and/or CD33)

* Operation of the particulate **abatement** devices to reduce emissions from ICP Etching is not required to achieve compliance with any state or Federal air quality standard.

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
Visible emissions	20 percent opacity	15A NCAC 2D .0521
Volatile organic compounds	See Section 2.2 A.1	15A NCAC 2D .0958
Toxic air pollutants	State-enforceable only See Section 2.2 A.2	15A NCAC 2D .1100
Volatile organic compounds	See Section 2.2 A.3	15A NCAC 2Q .0317 (PSD Avoidance)
Toxic air pollutants	State-enforceable only See Section 2.2 A.5	15A NCAC 2Q .0711
Odors	State-enforceable only See Section 2.2 A.6	15A NCAC 2D .1806
Hazardous air pollutants	See Section 2.2 B.1	15A NCAC 2Q .0317 (MACT Avoidance)

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from these sources (**ID Nos. ESMAN1, ESMAN31, and ESMAN32**) shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67} \quad \text{Where: } E = \text{allowable emission rate in pounds per hour} \\ P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. Particulate matter emissions from these sources (**ID Nos. ESMAN1, ESMAN31, and ESMAN32**) including those from ICP etching and acid gas aerosols from the acid gas ventilation systems shall be controlled as stipulated in the equipment list and minimum scrubbant flow rates shall be maintained as stipulated in the equipment list for each scrubber (**ID Nos. CD1, CD2, CD31, CD32, and CD33**). To assure compliance, the Permittee shall monitor the flow rate to each scrubber once per day and perform inspections and maintenance as recommended by the manufacturer. The daily observation must be made for each day of the calendar year period to ensure compliance with this requirement. The Permittee shall be allowed three days of absent observations per semi-annual period. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:

- i. monthly visual inspection of the collection systems and scrubber bodies for leaks; and
- ii. an annual (for each 12 month period following the initial inspection) inspection of scrubber packing and other internal components including scrubbant delivery systems. The internal inspection may be performed using the external view ports of the scrubber device.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the scrubbers are not inspected and maintained **or if the minimum scrubber flow rates are not maintained**.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on any scrubber; and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.

- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from the scrubber stacks of these sources (**ID Nos. ESMAN1, ESMAN31, and ESMAN32**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a month the Permittee shall observe the scrubber stacks of these sources (**ID Nos. ESMAN1, ESMAN31, and ESMAN32**) for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
 - i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2601 (Method 9) for 12 minutes is below the limit given in Section 2.1 A.2.a above.

If the above-normal emissions are not corrected per i. above or if the demonstration in ii. above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

B. Two small tool parts bead blast systems (ID Nos. B9 and B10) with integral cyclones, one each, and associated cartridge filters, one each (ID Nos. CDB9 and CDB10)

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
Visible emissions	20 percent opacity	15A NCAC 2D .0521
Toxic air pollutants	State-enforceable only See Section 2.2 A.2	15A NCAC 2D .1100

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from these sources (ID Nos. B9 and B10) shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67} \text{ Where: } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. Particulate matter emissions from these sources (ID Nos. B9 and B10) shall be controlled by two cartridge filters (ID Nos. CDB9 and CDB10) as described above. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer’s inspection and maintenance recommendations, or if there are no manufacturer’s inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
 - i. a monthly visual inspection of the bead blast exhaust and control systems for leaks; and
 - ii. an annual (for each 12 month period following the initial inspection) inspection of the cartridge filters and cyclones for wear.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the systems are not inspected and maintained.
- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the bagfilters; and
 - iv. any variance from manufacturer’s recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources (**ID Nos. B9 and B10**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of these sources (**ID Nos. B9 and B10**) for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
 - i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2601 (Method 9) for 12 minutes is below the limit given in Section 2.1 B.2.a above.

If the above-normal emissions are not corrected per i. above or if the demonstration in ii. above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- e The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

C. Six waste solvent storage tanks (ID Nos. EST1, EST2, EST3, EST31, EST32, and EST33)

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Volatile organic compounds	See Section 2.2 A.1	15A NCAC 2D .0958
Toxic air pollutants	State-enforceable only See Section 2.2 A.2	15A NCAC 2D .1100
Volatile organic compounds	See Section 2.2 A.3	15A NCAC 2Q .0317 (PSD Avoidance)
Toxic air pollutants	State-enforceable only See Section 2.2 A.5	15A NCAC 2Q .0711
Odors	State-enforceable only See Section 2.2 A.6	15A NCAC 2D .1806
Hazardous air pollutants	See Section 2.2 B.1	15A NCAC 2Q .0317 (MACT Avoidance)

D. Four 2,200 kW No. 2 fuel oil-fired emergency generators (ID Nos. ESG1 and ESG31 through ESG33)

One 500 kW No. 2 fuel oil-fired generator (ID No. G1)

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	Less than 2.3 pounds per million Btu heat input	15A NCAC 2D .0516
Visible emissions	20 percent opacity	15A NCAC 2D .0521
Sulfur dioxide	See Section 2.2 A.4	15A NCAC 2Q .0317 (PSD Avoidance)
Hazardous air pollutants	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) -Per 63.6590(b)(3), these existing emergency stationary RICE located at an area source of HAP emissions, do not have to meet the requirements of 40 CFR 63, Subpart ZZZZ and of Subpart A. No initial notifications are necessary.	15A NCAC 2D .1111 (40 CFR 63, Subpart ZZZZ)

1. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from these sources (**ID Nos. ESG1, ESG31, ESG32, ESG33, and G1**) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test exceed the limit given in Section 2.1 D.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of No. 2 fuel oil in these sources (**ID Nos. ESG1, ESG31, ESG32, ESG33, and G1**).

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources (**ID Nos. ESG1, ESG31, ESG32, ESG33, and G1**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 D.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for **visible** emissions from the firing of No. 2 fuel oil in these **sources** (**ID Nos. ESG1, ESG31, ESG32, ESG33, and G1**).

E. Three 2,200 kW No. 2 fuel oil-fired emergency generators (ID Nos. ESG34, ESG35, and ESGP)

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	Less than 2.3 pounds per million Btu heat input	15A NCAC 2D .0516
Visible emissions	20 percent opacity	15A NCAC 2D .0521
HC, NOx, CO, and PM	Hydrocarbon, nitrogen oxide, carbon monoxide, and particulate matter emissions shall not exceed the limits listed in Section 2.1 E.3.b below	15A NCAC 2D .0524 (40 CFR 60, Subpart III)
Sulfur dioxide	Fuel sulfur content shall not exceed 500 ppm by weight beginning October 1, 2007 and 15 ppm beginning October 1, 2010	15A NCAC 2D .0524 (40 CFR 60, Subpart III)
Hazardous air pollutants	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines -Per 63.6590(c), an affected source that is a new or reconstructed stationary RICE located at an area source must meet the requirements of this part by meeting the requirements of 40 CFR 60 Subpart III, for compression ignition engines or 40 CFR 60 Subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.	15A NCAC 2D .1111 (40 CFR 63, Subpart ZZZZ)
Sulfur dioxide	See Section 2.2 A.4	15A NCAC 2Q .0317 (PSD Avoidance)

1. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from these sources (**ID Nos. ESG34, ESG35, and ESGP**) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test exceed the limit given in **Section 2.1 E.1.a** above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of No. 2 fuel oil in these sources (**ID Nos. ESG34, ESG35, and ESGP**).

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources (**ID Nos. ESG34, ESG35, and ESGP**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 E.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of No. 2 fuel oil in these sources (ID Nos. ESG34, ESG35, and ESGP).

3. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS [40 CFR 60 SUBPART III]

- a. The Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, monitoring, recordkeeping, and reporting, contained in Environmental Management Commission Standard 15A NCAC 2D .0524 “New Source Performance Standards (NSPS)” as promulgated in 40 CFR 60, Subpart III, including Subpart A “General Provisions.”

Emission Standards [40 CFR 60.4205(a)]

- b. Air emissions from these sources (ID Nos. ESG34, ESG35, and ESGP) shall not exceed the following limits:

Air Pollutant	Emission Limit
Hydrocarbons (HC)	1.3 grams/kW-hr 1.0 grams/HP-hr
Nitrogen oxides (NOx)	9.2 grams/kW-hr 6.9 grams/HP-hr
Carbon monoxide (CO)	11.4 grams/kW-hr 8.5 grams/HP-hr
Particulate matter (PM)	0.54 grams/kW-hr 0.40 grams/HP-hr

Operational Limits [40 CFR 60.4207(a) and (b) and 40 CFR 80.510(a) and (b)]

- c. The Permittee shall use diesel fuel with a maximum sulfur content of 500 parts per million beginning **October 1, 2007** and with a maximum sulfur content of 15 parts per million beginning **October 1, 2010**.
- d. Non-emergency operation of these sources (ID Nos. ESG34, ESG35, and ESGP) for maintenance and testing may not exceed 100 hours in any 12 month period unless the Permittee has either obtained approval from the Administrator to operate additional hours beyond 100 hours or the Permittee maintains records indicating that Federal, State, and/or local standards require additional operation for maintenance and testing. Any operation other than for emergencies, maintenance, and testing is prohibited. Emergency operation of the generator is not limited. [40 CFR 60.4211]

Testing [15A NCAC 2D .2601]

- e. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 E.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- f. These sources (**ID Nos. ESG34, ESG35, and ESGP**) shall be certified according to 40 CFR 89 or 40 CFR 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if he does not meet the above requirements. [40 CFR 60.4211(b)(1)]
- g. The Permittee shall operate and maintain these sources (**ID Nos. ESG34, ESG35, and ESGP**) in accordance with either the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer. The Permittee may only change engine settings as allowed and documented by the manufacturer. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if he does not meet the above requirements. [40 CFR 60.4211(a)]
- h. The Permittee shall monitor the number of hours each source (**ID Nos. ESG34, ESG35, and ESGP**) operates using a non-resettable hour meter. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if the non-resettable hour meters are not installed. [40 CFR 60.4209(a)]

Reporting [15A NCAC 2Q .0508(f)]

- i. No initial notification under 40 CFR 60.7(a)(1) and (a)(3) is required for these sources (**ID Nos. ESG34, ESG35, and ESGP**).
- j. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit shall be clearly identified.

F. Three natural gas/No. 2 fuel oil-fired boilers (ID Nos. ESB31 through ESB33)

Three natural gas-fired boilers (ID Nos. B1 through B3) at the Packaging Facility

Five natural gas-fired boilers (ID Nos. B4 through B8) at FAB1

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	Less than 0.3658 pounds per million Btu heat input	15A NCAC 2D .0503
Sulfur dioxide	Less than 2.3 pounds per million Btu heat input	15A NCAC 2D .0516
Visible emissions	20 percent opacity	15A NCAC 2D .0521
Sulfur dioxide	(ID Nos. ESB31 through ESB33 only) Fuel oil sulfur content shall not exceed 0.5 percent by weight	15A NCAC 2D .0524 (40 CFR 60, Subpart Dc)
Sulfur dioxide	See Section 2.2 A.4	15A NCAC 2Q .0317 (PSD Avoidance)

1. 15A NCAC 2D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

- a. Emissions of particulate matter from these sources **(ID Nos. ESB31 through ESB33 and B1 through B8)** discharged into the atmosphere shall not exceed 0.3658 pounds per million Btu heat input.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 F.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas/No. 2 fuel oil in these sources **(ID Nos. ESB31 through ESB33 and B1 through B8)**.

2. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from these sources **(ID Nos. ESB31 through ESB33 and B1 through B8)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 F.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas/No. 2 fuel oil in these sources (**ID Nos. ESB31 through ESB33 and B1 through B8**).

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources (**ID Nos. ESB31 through ESB33 and B1 through B8**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 F.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas/No. 2 fuel oil in these sources (**ID Nos. ESB31 through ESB33 and B1 through B8**).

4. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS [40 CFR 60 SUBPART Dc] - The Permittee shall comply with all applicable provisions, including the notification, testing, monitoring, recordkeeping, and reporting requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 “New Source Performance Standards (NSPS)” as promulgated in 40 CFR 60 Subpart Dc, including Subpart A “General Provisions.”

- a. The maximum sulfur content of any fuel oil received and burned in these sources (**ID Nos. ESB31 through ESB33**) shall not exceed 0.5 percent by weight.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- b. Sulfur dioxide emissions shall be monitored using fuel oil supplier certifications to demonstrate compliance as described under 40 CFR 60.46c(e). The Permittee shall be deemed in noncompliance with 15A NCAC 3D .0524 if sulfur dioxide emissions are not monitored as described above.
- c. In addition to any other recordkeeping required by 40 CFR 60.48c or recordkeeping requirements of the EPA, the Permittee shall record and maintain records of the amounts of each fuel fired during each month. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- d. In addition to any other reporting required by 40 CFR 60.48c or notification requirements to the EPA, the Permittee is required to submit to the DAQ a summary report, acceptable to the Regional Air Quality Supervisor, of the sulfur content of the distillate oil-fired, **postmarked on or before** January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall consist of the distillate fuel oil supplier certification and shall include:
 - i. the name of the fuel oil supplier;

- ii. a statement from the oil supplier that the fuel oil complies with the specification under the definition of distillate oil in 40 CFR 60.41c; and
- iii. a certified statement signed by the owner or operator of an affected facility that the records of fuel oil supplier certification submitted represents all of the fuel oil fired during the semi-annual period.

All instances of deviations from the requirements of this permit must be clearly identified.

G. Packaging Laboratory Operations (ID No. PL)

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Volatile organic compounds	See Section 2.2 A.1	15A NCAC 2D .0958
Toxic air pollutants	State-enforceable only See Section 2.2 A.2	15A NCAC 2D .1100
Volatile organic compounds	See Section 2.2 A.3	15A NCAC 2Q .0317 (PSD Avoidance)
Toxic air pollutants	State-enforceable only See Section 2.2. A.5	15A NCAC 2Q .0711
Odor	State-enforceable only See Section 2.2 A.6	15A NCAC 2D .1806

H. Wafer Dicing Center No. 1 (ID No. ESWD1) with associated fabric filters (ID Nos. CDWD1a and CDWD1c) and HEPA filters (ID Nos. CDWD1b and CDWD1d) and acid gas control scrubbers (ID Nos. CD1 and CD2**)

Wafer Dicing Center No. 2 (ID No. ESWD2) with associated fabric filters (ID Nos. CDWD2a and CDWD2c) and HEPA filters (ID Nos. CDWD2b and CDWD2d) and acid gas control scrubbers (ID Nos. CD31, CD32 and CD33**)

**** Emissions from the wafer dicing operations shall be vented through the acid gas scrubber stacks as described to demonstrate compliance with the state-enforceable only acceptable ambient level (AAL) for arsenic pursuant to 15A NCAC 2D .1100 as originally modeled. However, operation of the acid gas scrubbers is not required to achieve compliance with any state or federal air quality standard at the wafer dicing centers.**

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
Visible emissions	20 percent opacity	15A NCAC 2D .0521
Toxic air pollutants	State-enforceable only See Section 2.2 A.2	15A NCAC 2D .1100
Odors	State-enforceable only See Section 2.2 A.6	15A NCAC 2D .1806

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from these sources (**ID Nos. ESWD1 and ESWD2**) shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67} \quad \text{Where: } E = \text{allowable emission rate in pounds per hour} \\ P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 H.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. The Permittee shall maintain production records such that the process rates “P” in tons per hour, as specified by the formula contained above can be derived, and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the production records are not maintained or the types of materials and finishes are not monitored.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit shall be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources (**ID Nos. ESWD1 and ESWD2**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 H.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. As required by Section 2.1 A.2.c-d, to assure compliance, once a month the Permittee shall observe the scrubber stacks of sources (**ID Nos. ESMAN1, ESMAN31, and ESMAN32**) for any visible emissions above normal. These scrubber stacks are the release points for sources (**ID Nos. ESWD1 and ESWD2**). The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:

- i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
- ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2601 (Method 9) for 12 minutes is below the limit given in Section 2.1 H.2.a above.

If the above-normal emissions are not corrected per i. above or if the demonstration in ii. above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- e. As required in Section 2.1 A.2.e, the Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2.2 - Multiple Emission Source(s) Specific Limitations and Conditions

A. Facility-wide affected sources

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Volatile organic compounds	Work practice standards	15A NCAC 2D .0958
Toxic air pollutants	State-enforceable only Facility-wide emissions shall be less than modeled emission rates	15A NCAC 2D .1100
Volatile organic compounds	Less than 250 tons per consecutive 12-month period	15A NCAC 2Q .0317 (PSD Avoidance)
Sulfur dioxide	Less than 250 tons per consecutive 12-month period	15A NCAC 2Q .0317 (PSD Avoidance)
Toxic air pollutants	State-enforceable only Emissions shall be less than toxic permit emission rates without a permit	15A NCAC 2Q .0711
Odor	State-enforceable only Odorous emissions shall be controlled	15A NCAC 2D .1806

1. 15A NCAC 2D .0958: WORK PRACTICES FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS

- a. Pursuant to 15A NCAC 2D .0958, for all sources that use volatile organic compounds (VOC) as solvents, carriers, material processing media, or industrial chemical reactants, or in similar uses that mix, blend, or manufacture VOCs, or emit VOCs as a product of chemical reactions, and whose emissions of VOCs are greater than 15 pounds per day; the Permittee shall:
 - i. store all material, including waste material, containing VOCs in tanks or in containers covered with a tightly fitting lid that is free of cracks, holes, or other defects, when not in use,
 - ii. clean up spills of VOCs as soon as possible following proper safety procedures,
 - iii. store wipe rags containing VOCs in closed containers,
 - iv. not clean sponges, fabric, wood, paper products, and other absorbent materials with VOCs,
 - v. transfer solvents containing VOCs used to clean supply lines and other coating equipment into close able containers and close such containers immediately after each use, or transfer such solvents to closed tanks, or to a treatment facility regulated under section 402 of the Clean Water Act, and
 - vi. clean mixing, blending, and manufacturing vats and containers containing VOCs by adding cleaning solvent and close the vat or container before agitating the cleaning solvent. The spent cleaning solvent shall then be transferred into a closed container, a closed tank or a treatment facility regulated under section 402 of the Clean Water Act.
- b. When cleaning parts with a solvent containing a VOC, the Permittee shall:
 - i. flush parts in the freeboard area,
 - ii. take precautions to reduce the pooling of solvent on and in the parts,
 - iii. tilt or rotate parts to drain solvent and allow a minimum of 15 seconds for drying or until all dripping has stopped, whichever is longer,
 - iv. not fill cleaning machines above the fill line, and
 - v. not agitate solvent to the point of causing splashing.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. To ensure compliance with paragraphs (a) and (b) above, the Permittee shall, at a minimum, perform a visual inspection once per month of all operations and processes utilizing VOCs. The inspections shall be conducted during normal operations. If the required inspections are not conducted the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.
- d. The results of the inspections shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each inspection; and
 - ii. the results of each inspection noting whether or not noncompliant conditions were observed.If the required records are not maintained the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

State-enforceable only

2. 15A NCAC 2D .1100: CONTROL OF TOXIC AIR POLLUTANTS

- a. Pursuant to 15A NCAC 2D .1100 “Control of Toxic Air Pollutants”, and in accordance with the approved application for an air toxic compliance demonstration, the following permit limits shall not be exceeded based on a facility-wide worst-case single source scenario:

Toxic Air Pollutant	Emission Limit(s)
Arsenic	0.36 pounds per year
Chlorine	10.41 pounds per hour AND 34.28 pounds per 24 hour period
Chlorobenzene	2,017 pounds per 24 hour period
Xylene	851.58 pounds per hour AND 2,475.4 pounds per 24 hour period

- b. To comply with the arsenic standard, the Permittee shall operate the two wafer dicing centers (**ID Nos. ESWD1 and ESWD2**) as follows:
 - i. emissions from wafer dicing center No. 1 (**ID No. ESWD1**) shall be controlled by either of the available fabric filters (**ID Nos. CDWD1a or CDWD1b**) and either or both of the available HEPA filters (**ID Nos. CDWD1b or CDWD1d**);
 - ii. exhaust from wafer dicing center No. 1 (**ID No. ESWD1**) shall be released to the atmosphere from either of the acid gas scrubber stacks (**ID Nos. CD1 or CD2**) associated with the semiconductor manufacturing line FAB1;
 - iii. emissions from wafer dicing center No. 2 (**ID No. ESWD2**) shall be controlled by either of the available fabric filters (**ID Nos. CDWD2a or CDWD2b**) and either or both of the available HEPA filters (**ID Nos. CDWD2b or CDWD2d**);
 - iv. exhaust from wafer dicing center No. 2 (**ID No. ESWD2**) shall be released to the atmosphere from any of the acid gas scrubber stacks (**ID Nos. CD31, CD32 or CD33**) associated with the semiconductor manufacturing line FAB3.

The Permittee shall not operate either of the wafer dicing centers (**ID Nos. ESWD1 and ESWD2**) in a manner that is inconsistent with the requirements listed above.

Testing [15A NCAC 2D .2601]

- c. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. The results of this test shall not exceed the limits given in Section 2.2 A.2.a above.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- d. The Permittee shall maintain the following records:
 - i. the highest hourly and daily chlorine emission rates during each calendar month;
 - ii. the highest hourly and daily Xylene emission rates during each calendar month;
 - iii. the highest daily chlorobenzene emission rate during each calendar month; and
 - iv. the monthly arsenic emission rate.

Reporting [15A NCAC 2Q .0508(f)]

- e. Within 30 days after each calendar year quarter, regardless of the actual emissions, the following shall be reported to the Regional Supervisor, DAQ:
 - i. records of the highest hourly and daily chlorine emission rates during each month of the reporting quarter;

- ii. records of the highest hourly and daily Xylene emission rates during each month of the reporting quarter;
- iii. records of the highest daily chlorobenzene emission rate during each month of the reporting quarter; and
- iv. records of the monthly arsenic emissions for the previous 14 months. The emissions must be calculated for each of the 12-month periods over the previous 14 months.

3. 15A NCAC 2Q .0317: AVOIDANCE CONDITIONS

for 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. In order to avoid applicability of this regulation, the emission sources shall discharge into the atmosphere less than 250 tons of volatile organic compounds (VOCs) per consecutive 12-month period.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- b. Calculations of VOC emissions per month shall be made at the end of each month. VOC emissions shall be determined by multiplying the total amount of each type of VOC-containing material consumed during the month by the VOC content of the material. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the amounts of VOC containing materials or the VOC emissions are not monitored and recorded.
- c. Calculations of the total amount of VOC emissions shall be recorded monthly in a logbook (written or electronic format). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the VOC emissions exceed the limit in Section 2.2 A.3.a above.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between **January and June**. The report shall contain the following the monthly VOC emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.

4. 15A NCAC 2Q .0317: AVOIDANCE CONDITIONS

for 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. In order to avoid applicability of this regulation, the emission sources shall discharge into the atmosphere less than 250 tons of sulfur dioxide per consecutive 12-month period.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- b. The Permittee shall keep monthly records of the amount of fuel used and the sulfur content, including certification of the fuel, in a logbook (written or electronic format). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the sulfur content of the fuel is not monitored.
- c. The use of fuel in the boilers and generators shall be limited such that sulfur dioxide emissions shall not exceed 250 tons for any consecutive 12-month period. Calculations shall be made monthly and recorded in a logbook (written or electronic format), according to the following formula

$$X = (Z \times 142S)/2000$$

Where: X = emissions of sulfur dioxide in tons per month
 Z = No. 2 fuel oil used in the boilers and generators in thousands gallons
 S = sulfur content of fuel in percent by weight

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the above records are not kept or if the sulfur dioxide emissions exceed the limit in Section 2.2 A.4.a above.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of the **monitoring and recordkeeping activities** postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between **January and June**. The report shall contain the total monthly sulfur dioxide emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.

State-enforceable only

- 5. **15A NCAC 2Q .0711: EMISSION RATES REQUIRING A PERMIT** – Pursuant to 15A NCAC 2Q .0711 “Emission Rates Requiring a Permit,” for each of the below listed toxic air pollutants (TAPs), the Permittee has made a demonstration that facility-wide actual emissions do not exceed the Toxic Permit Emission Rates (TPERs) listed in 15A NCAC 2Q .0711. 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 the TPERs listed in 15A NCAC 2Q .0711.
 - a. A permit to emit any of the below listed TAPs shall be required for this facility if actual emissions from all sources will become greater than the corresponding TPERs.
 - b. Prior to exceeding any of these listed TPERs, the Permittee shall be responsible for obtaining a permit to emit TAPs and for demonstrating compliance with the requirements of 15A NCAC 2D .1100 “Control of Toxic Air Pollutants”.
 - c. In accordance with the approved application, the Permittee shall maintain records of operational information demonstrating that the TAP emissions do not exceed the TPERs as listed below:

Pollutant (CAS)	Emission Rate(s)			
	Carcinogens (lbs/yr)	Chronic Toxicants (lbs/day)	Acute Systemic Toxicants (lbs/hr)	Acute Irritants (Lbs/hr)
Ammonia (as NH ₃) (7664-41-7)				0.68
Beryllium (7440-41-7)	0.28			
Bromine (7726-95-6)				0.052
Hydrogen chloride (hydrochloric acid) (7647-01-0)				0.18
Hydrogen fluoride (hydrofluoric acid component of Fluorides) (7664-39-3)		0.63		0.064
Nitric acid (7697-37-2)				0.256

Pollutant (CAS)	Emission Rate(s)			
	Carcinogens (lbs/yr)	Chronic Toxicants (lbs/day)	Acute Systemic Toxicants (lbs/hr)	Acute Irritants (Lbs/hr)
Phenol (108-95-2)			0.24	
Sulfuric acid (7664-93-9)		0.25	0.025	

State-enforceable only

6. 15A NCAC 2D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS

The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

B. Semiconductor manufacturing line (ID No. ESMAN1) with associated particulate abatement devices for ICP Etching (ID Nos. CDEB1 and CDEB2*) and acid gas control scrubbers (ID Nos. CD1 and CD2)

Semiconductor manufacturing line (ID No. ESMAN31) with associated particulate abatement devices for ICP Etching (ID Nos. CDEB3 through CDEB5*) and acid gas control scrubbers (ID Nos. CD31, CD32, and/or CD33)

Semiconductor manufacturing line (ID No. ESMAN32) with associated particulate abatement device for ICP Etching (ID No. CDEB6*) and acid gas control scrubbers (ID Nos. CD31, CD32, and/or CD33)

** Operation of the particulate abatement devices to reduce emissions from ICP Etching is not required to achieve compliance with any state or Federal air quality standard.*

Six waste solvent storage tanks (ID Nos. EST1, EST2, EST3, EST31, EST32, and EST33)

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous air pollutants	Less than 10 tons per year of any individual HAP; and Less than 25 tons per year of any combination of HAPs	15A NCAC 2Q .0317 (MACT Avoidance)

**1. 15A NCAC 2Q .0317: AVOIDANCE CONDITIONS
for 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY**

a. In order to remain classified a minor source for hazardous air pollutants (HAPs) and avoid applicability of this regulation, facility emissions shall be less than:

- i. 10 tons per year of each hazardous air pollutant; and
- ii. 25 tons per year of all hazardous air pollutants combined.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the HAP emissions exceed these limits.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- b. The Permittee shall maintain monthly records of each material emitted containing HAPs as follows:
 - i. the quantity of each individual HAP in pounds emitted for each month and for each 12-month period ending on that month,
 - ii. the quantity of all **combined** HAPs in pounds emitted for each month and for each 12-month period ending on that month.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these HAP emissions are not monitored or records are not maintained.
- c. The Permittee shall keep a record of the applicability determination on site at the source for a period of five years after the determination or until the source becomes an affected source. The determination must include the analysis demonstrating why the Permittee believes the source is unaffected pursuant to 40 CFR 63.10(b)(3). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between **January and June**. The report shall contain the following:
 - i. **the quantity of the highest individual HAP in pounds emitted:**
 - A. for each month during the semi-annual period; and
 - B. for each 12-month period ending on each month during the semi-annual period using a 12-month rolling total;
 - ii. **the quantity of all combined HAPs in pounds emitted:**
 - A. for each month during the semi-annual period; and
 - B. for each 12-month period ending on each month during the semi-annual period using a 12-month rolling total.

SECTION 3 - GENERAL CONDITIONS (v3.1)

This section describes terms and conditions applicable to this Title V facility.

A. **General Provisions** [NCGS 143-215 and 15A NCAC 2Q .0508(i)(16)]

1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 2D and 2Q.
2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.

B. **Permit Availability** [15A NCAC 2Q .0507(k) and .0508(i)(9)(B)]

The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environment and Natural Resources upon request.

C. **Severability Clause** [15A NCAC 2Q .0508(i)(2)]

In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.

D. **Submissions** [15A NCAC 2Q .0507(e) and 2Q .0508(i)(16)]

Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NO_x budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

Supervisor, Stationary Source Compliance
North Carolina Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27699-1641

All submittals shall include the Facility name and Facility ID number (refer to the cover page of this permit).

E. **Duty to Comply** [15A NCAC 2Q .0508(i)(2)]

The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

F. **Circumvention** - STATE ENFORCEABLE ONLY

The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.

G. **Permit Modifications**

1. Administrative Permit Amendments [15A NCAC 2Q .0514]

The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 2Q .0514.

2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 2Q .0524 and 2Q .0505]

The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 2Q.0524 and 2Q .0505.

3. Minor Permit Modifications [15A NCAC 2Q .0515]

The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 2Q .0515.

4. Significant Permit Modifications [15A NCAC 2Q .0516]

The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 2Q .0516.

5. Reopening for Cause [15A NCAC 2Q .0517]

The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 2Q .0517.

H. **Changes Not Requiring Permit Modifications**

1. Reporting Requirements.

Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:

- a. changes in the information submitted in the application;
- b. changes that modify equipment or processes; or
- c. changes in the quantity or quality of materials processed.

If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

2. Section 502(b)(10) Changes [15A NCAC 2Q .0523(a)]
 - a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
 - b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
 - i. the changes are not a modification under Title I of the Federal Clean Air Act;
 - ii. the changes do not cause the allowable emissions under the permit to be exceeded;
 - iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
 - iv. the Permittee shall attach the notice to the relevant permit.
 - c. The written notification shall include:
 - i. a description of the change;
 - ii. the date on which the change will occur;
 - iii. any change in emissions; and
 - iv. any permit term or condition that is no longer applicable as a result of the change.
 - d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
3. Off Permit Changes [15A NCAC 2Q .0523(b)]

The Permittee may make changes in the operation or emissions without revising the permit if:

 - a. the change affects only insignificant activities and the activities remain insignificant after the change; or
 - b. the change is not covered under any applicable requirement.
4. Emissions Trading [15A NCAC 2Q .0523(c)]

To the extent that emissions trading is allowed under 15A NCAC 2D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 2Q .0523(c).

I.A. Reporting Requirements for Excess Emissions and Permit Deviations

[15A NCAC 2D .0535(f) and 2Q .0508(f)(2)]

"Excess Emissions" - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 2D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 2Q .0700. *(Note: Definitions of excess emissions under 2D .1110 and 2D .1111 shall apply where defined by rule.)*

"Deviations" - for the purposes of this condition, any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.

Excess Emissions

1. If a source is required to report excess emissions under NSPS (15A NCAC 2D .0524), NESHAPS (15A NCAC 2D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
2. If the source is not subject to NSPS (15A NCAC 2D .0524), NESHAPS (15A NCAC 2D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 2D .0535 as follows:
 - a. Pursuant to 15A NCAC 2D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
 - i. notify the Regional Supervisor or Director of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and provide:
 - name and location of the facility;

- nature and cause of the malfunction or breakdown;
 - time when the malfunction or breakdown is first observed;
 - expected duration; and
 - estimated rate of emissions;
- ii. notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and
 - iii. submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 2D .0535(f)(3).

Permit Deviations

3. Pursuant to 15A NCAC 2Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
 - a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 2D .0535 quarterly. A written report to the Regional Supervisor shall include the probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

I.B. Other Requirements under 15A NCAC 2D .0535

The Permittee shall comply with all other applicable requirements contained in 15A NCAC 2D .0535, including 15A NCAC 2D .0535(c) as follows:

1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director, that the excess emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 2D .0535(c)(1) through (7).
2. 15A NCAC 2D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

J. Emergency Provisions [40 CFR 70.6(g)]

The Permittee shall be subject to the following provisions with respect to emergencies:

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
 - a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
 - b. the permitted facility was at the time being properly operated;
 - c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
 - d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

K. Permit Renewal [15A NCAC 2Q .0508(e) and 2Q .0513(b)]

This permit is issued for a fixed term of five years for facilities subject to Title IV requirements and for a term not to exceed five years in the case of all other facilities. This permit shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete renewal application is submitted at least nine months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 2Q .0512(b)(1), this permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of this permit shall remain in effect until the renewal permit has been issued or denied.

L. Need to Halt or Reduce Activity Not a Defense [15A NCAC 2Q .0508(i)(4)]

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

M. Duty to Provide Information (submittal of information) [15A NCAC 2Q .0508(i)(9)]

1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director may request in **writing** to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
2. The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

N. Duty to Supplement [15A NCAC 2Q .0507(f)]

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to address any requirement that becomes applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

O. Retention of Records [15A NCAC 2Q .0508(f) and 2Q .0508 (l)]

The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

P. Compliance Certification [15A NCAC 2Q .0508(n)]

The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:

1. the identification of each term or condition of the permit that is the basis of the certification;

2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. Certification by Responsible Official [15A NCAC 2Q .0520]

A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. Permit Shield for Applicable Requirements [15A NCAC 2Q .0512]

1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
 - a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
 - b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
 - c. the applicable requirements under Title IV; or
 - d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 2Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 2Q .0515.

S. Termination, Modification, and Revocation of the Permit [15A NCAC 2Q .0519]

The Director may terminate, modify, or revoke and reissue this permit if:

1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. Insignificant Activities [15A NCAC 2Q .0503]

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. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

U. Property Rights [15A NCAC 2Q .0508(i)(8)]

This permit does not convey any property rights in either real or personal property or any exclusive privileges.

V. Inspection and Entry [15A NCAC 2Q .0508(l) and NCGS 143-215.3(a)(2)]

1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:
 - a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
 - b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
 - c. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
 - d. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.
2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

W. Annual Fee Payment [15A NCAC 2Q .0508(i)(10)]

1. The Permittee shall pay all fees in accordance with 15A NCAC 2Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environment and Natural Resources. Annual permit fee payments shall refer to the permit number.
3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 2Q .0519.

X. Annual Emission Inventory Requirements [15A NCAC 2Q .0207]

The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 2Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

Y. Confidential Information [15A NCAC 2Q .0107 and 2Q. 0508(i)(9)]

Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 2Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 2Q .0107.

Z. Construction and Operation Permits [15A NCAC 2Q .0100 and .0300]

A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 2Q .0100 and .0300.

AA. Standard Application Form and Required Information [15A NCAC 2Q .0505 and .0507]

The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 2Q .0505 and .0507.

BB. Financial Responsibility and Compliance History [15A NCAC 2Q .0507(d)(4)]

The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

CC. Refrigerant Requirements (Stratospheric Ozone and Climate Protection) [15A NCAC 2Q .0501(e)]

1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.
2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the EPA or its designee as required.

DD. Prevention of Accidental Releases - Section 112(r) [15A NCAC 2Q .0508(h)]

If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

EE. Prevention of Accidental Releases General Duty Clause - Section 112(r)(1) -
FEDERALLY-ENFORCEABLE ONLY

Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

FF. Title IV Allowances [15A NCAC 2Q .0508(i)(1)]

This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.

GG. Air Pollution Emergency Episode [15A NCAC 2D .0300]

Should the Director of the DAQ declare an Air Pollution Emergency Episode, the Permittee will be required to operate in accordance with the Permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in 15A NCAC 2D .0300.

HH. Registration of Air Pollution Sources [15A NCAC 2D .0200]

The Director of the DAQ may require the Permittee to register a source of air pollution. If the Permittee is required to register a source of air pollution, this registration and required information will be in accordance with 15A NCAC 2D .0202(b).

II. Ambient Air Quality Standards [15A NCAC 2D .0501(c)]

In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 2D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

JJ. General Emissions Testing and Reporting Requirements [15A NCAC 2Q .0508(i)(16)]

If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ in support of a permit application or to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 2D .2600 and follow the procedures outlined below:

1. The Permittee shall submit a completed Protocol Submittal Form to the DAQ Regional Supervisor at least 45 days prior to the scheduled test date. A copy of the Protocol Submittal Form may be obtained from the Regional Supervisor.
2. The Permittee shall notify the Regional Supervisor of the specific test dates at least 15 days prior to testing in order to afford the DAQ the opportunity to have an observer on-site during the sampling program.
3. During all sampling periods, the Permittee shall operate the emission source(s) under maximum normal operating conditions or alternative operating conditions as deemed appropriate by the Regional Supervisor or his delegate.
4. The Permittee shall submit **two** copies of the test report to the DAQ. The test report shall contain at a minimum the following information:
 - a. a description of the training and air testing experience of the person directing the test;
 - b. a certification of the test results by sampling team leader and facility representative;
 - c. a summary of emissions results and text detailing the objectives of the testing program, the applicable state and federal regulations, and conclusions about the testing and compliance status of the emission source(s);
 - d. a detailed description of the tested emission source(s) and sampling location(s) process flow diagrams, engineering drawings, and sampling location schematics should be included as necessary;
 - e. all field, analytical, and calibration data necessary to verify that the testing was performed as specified in the applicable test methods;
 - f. example calculations for at least one test run using equations in the applicable test methods and all test results including intermediate parameter calculations; and
 - g. documentation of facility operating conditions during all testing periods and an explanation relating these operating conditions to maximum normal operation. If necessary, provide historical process data to verify maximum normal operation.
5. The testing requirement(s) shall be considered satisfied only upon written approval of the test results by the DAQ.
6. The DAQ will review emission test results with respect exclusively to the specified testing objectives as proposed by the Permittee and approved by the DAQ.

KK. Reopening for Cause [15A NCAC 2Q .0517]

1. A permit shall be reopened and revised under the following circumstances:
 - a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
 - b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
 - c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
 - d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 2Q .0513(c).

3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 2Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 2Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

LL. Reporting Requirements for Non-Operating Equipment [15A NCAC 2Q .0508(i)(16)]

The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. During operation the monitoring recordkeeping and reporting requirements as prescribed by the permit shall be implemented within the monitoring period.

MM. Fugitive Dust Control Requirement [15A NCAC 2D .0540] - STATE ENFORCEABLE ONLY

As required by 15A NCAC 2D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 2D .0540(f).

"Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

NN. Specific Permit Modifications [15A NCAC 2Q .0501 and .0523]

1. For modifications made pursuant to 15A NCAC 2Q .0501(c)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 2Q .0501(d)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 2Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth St., Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
 - a. a description of the change at the facility;
 - b. the date on which the change will occur;
 - c. any change in emissions; and
 - d. any permit term or condition that is no longer applicable as a result of the change.

In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

OO. Mandatory Greenhouse Gas Reporting Requirements [15A NCAC 2D .0508]

FEDERAL-ENFORCEABLE ONLY

If the Permittee is subject to requirements of 40 CFR 98.2(a), the Permittee shall submit all required reports to the EPA Administrator in accordance with 40 CFR 98.

ATTACHMENT

List of Acronyms

AOS	Alternate Operating Scenario
BACT	Best Available Control Technology
Btu	British thermal unit
CEM	Continuous Emission Monitor
CFR	Code of Federal Regulations
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
DAQ	Division of Air Quality
DENR	Department of Environment and Natural Resources
EMC	Environmental Management Commission
EPA	Environmental Protection Agency
FR	Federal Register
GACT	Generally Available Control Technology
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
NAA	Non-Attainment Area
NCAC	North Carolina Administrative Code
NCGS	North Carolina General Statutes
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standard
OAH	Office of Administrative Hearings
PM	Particulate Matter
PM₁₀	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
POS	Primary Operating Scenario
PSD	Prevention of Significant Deterioration
RACT	Reasonable Available Control Technology
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO₂	Sulfur Dioxide
tpy	Tons Per Year
VOC	Volatile Organic Compound