

Agenda Item: **Request to Proceed to EMC to Request Public Hearing on Startup, Shutdown, and Malfunction State Implementation Plan (SIP) Call Rule Revisions (533)**

Explanation: The Air Quality Committee (AQC) is requested to approve proceeding to the Environmental Management Commission (EMC) to request approval to proceed to public hearing on amendments to 15A NCAC 02D .0535, Excess Emissions Reporting and Malfunctions and adoption of 02D .0545, Treatment of Malfunction Events and Work Practices for Startup and Shutdown Operations.

On May 22, 2015, the U.S. Environmental Protection Agency (EPA) issued a final action to ensure states have plans in place that are fully consistent with the Clean Air Act and recent court decisions concerning startup, shutdown and malfunction (SSM) emission limit exemptions. EPA's final action responds to the Sierra Club Petition; clarifies the EPA's SSM Policy to assure consistency with the Clean Air Act and recent court decisions; and finalizes findings that the SSM provisions in the SIPs of 36 states including North Carolina that do not meet the requirements of the Clean Air Act (CAA) and accordingly issues a "SIP call" for each of those states.

In issuing the SIP call action, the EPA directs the affected states to correct specific SSM provisions in their SIPs. The Clean Air Act allows a maximum of 18 months from the issuance of the final action to submit a SIP revision. The SIP submission deadline for each of the 36 states subject to the SIP call action is November 22, 2016.

As described in the February 2013 proposal, the Petitioner objected to two generally applicable provisions in the North Carolina SIP that provide exemptions for emissions exceeding otherwise applicable SIP emission limitations at the discretion of the state agency during malfunctions (15A NCAC 02D .0535(c)) and during startup and shutdown (15A NCAC 02D .0535(g)).

The EPA proposed to, and subsequently did, grant the Petition with respect to 15A NCAC 02D .0535(c) and (g), finding that 15A NCAC 02D .0535(c) and 15A NCAC 02D .0535(g) are substantially inadequate to meet CAA requirements. Consistent with its February 2013 proposal, EPA also proceeded to issue the final SIP call with respect to these provisions.

Since that time several states' have entered into litigation over the validity of the SIP call. North Carolina is one of those states. Nonetheless, a requirement to submit a SIP revision by November 22, 2016 currently remains in effect. As a result and after consideration of possible options to address the identified concerns, the following rule revisions are proposed.

15A NCAC 02D .0535 is proposed to be amended to include introductory language that indicates that 02D .0535 is the rule that will be in effect if the states'

lawsuits are successful.

A new rule 15A NCAC 02D .0545, Treatment of Malfunction Events and Work Practices for Startup and Shutdown Operations, is proposed for adoption and would be in effect in the event that states' lawsuits are unsuccessful as indicated in its introductory language. 02D .0545 eliminates the exemptions in paragraphs (c) & (g). For startup and shutdown, 02D .0545 allows a facility to demonstrate compliance with the applicable existing emission limits, generally available work practice standards, work practice standards in analogous federal rules that a specific source may not otherwise be subject to, or source specific startup and shutdown work practice standard permit limit. For malfunctions a facility may demonstrate compliance with the applicable existing limits or with a source specific malfunction work practice standard permit limit.

Recommendation: The Director recommends that the Committee approve proceeding to the full EMC to request to proceed to public hearing on the proposed amendments.

1 15A NCAC 02D .0535 is proposed for amendment as follows:

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3 **15A NCAC 02D .0535 EXCESS EMISSIONS REPORTING AND MALFUNCTIONS**

4 (a) Applicability: 15A NCAC 02D .0535 is not in effect if 15A NCAC 02D .0545 is valid. This Rule does not apply to
 5 sources to which Rule .0524, .1110, or .1111 of this Subchapter applies. In the event that United States Environmental
 6 Protection Agency’s regulation, *State Implementation Plans: Response to Petition for Rulemaking; Restatement and*
 7 *Update of EPA’s SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls to Amend*
 8 *Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction*, published in the Code
 9 of Federal Regulations (CFR) at 40 CFR 52 on June 12, 2015, is:

10 (1) Declared or adjudged to be invalid or unconstitutional or stayed by the United States Court of Appeals
 11 for the Fourth Circuit, by the District of Columbia Circuit, or by the United States Supreme Court; or

12 (2) Withdrawn, repealed, revoked or otherwise rendered of no force and effect by the United States
 13 Environmental Protection Agency, Congress, or Presidential Executive Order;

14 such action shall render Rule 15A NCAC 02D .0545 of this Subchapter as invalid, void, stayed, or otherwise without
 15 force and effect upon the date such action becomes final and effective. At the time of such action, sources that were
 16 subject to Rule 15A NCAC 02D .0545 of this Subchapter shall be subject to this Rule.

17 ~~(a)~~(b) For the purpose of this Rule Rule, the following definitions apply:

18 (1) "Excess Emissions" means an emission rate that exceeds any applicable emission limitation or
 19 standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of this Subchapter; or by a
 20 permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC
 21 02Q .0700.

22 (2) "Malfunction" means any unavoidable failure of air pollution control equipment, process equipment,
 23 or process to operate in a normal and usual manner that results in excess emissions. Excess emissions
 24 during periods of routine start-up and shut-down of process equipment are not considered a
 25 malfunction. Failures caused entirely or in part by poor maintenance, careless operations or any other
 26 upset condition within the control of the emission source are not considered a malfunction.

27 (3) "Start-up" means the commencement of operation of any source that has shut-down or ceased
 28 operation for a period sufficient to cause temperature, pressure, process, chemical, or a pollution
 29 control device imbalance that would result in excess emission.

30 (4) "Shut-down" means the cessation of the operation of any source for any purpose.

31 ~~(b) This Rule does not apply to sources to which Rules .0524, .1110, or .1111 of this Subchapter applies unless excess~~
 32 ~~emissions exceed an emission limit established in a permit issued under 15A NCAC 02Q .0700 that is more stringent~~
 33 ~~than the emission limit set by Rules .0524, .1110 or .1111 of this Subchapter.~~

34 (c) Any excess emissions that do not occur during start-up or shut-down are considered a violation of the appropriate
 35 rule unless the owner or operator of the source of excess emissions demonstrates to the Director, that the excess
 36 emissions are the result of a malfunction. To determine if the excess emissions are the result of a malfunction, the
 37 Director shall consider, along with any other pertinent information, the following:

- 1 (1) The air cleaning device, process equipment, or process has been maintained and operated, to the
2 maximum extent practicable, consistent with good practice for minimizing emissions;
- 3 (2) Repairs have been made expeditiously when the emission limits have been exceeded;
- 4 (3) The amount and duration of the excess emissions, including any bypass, have been minimized to the
5 maximum extent practicable;
- 6 (4) All practical steps have been taken to minimize the impact of the excess emissions on ambient air
7 quality;
- 8 (5) The excess emissions are not part of a recurring pattern indicative of inadequate design, operation, or
9 maintenance;
- 10 (6) The requirements of Paragraph (f) of this Rule have been met; and
- 11 (7) If the source is required to have a malfunction abatement plan, it has followed that plan. All
12 malfunctions shall be repaired as expeditiously as practicable. However, the Director shall not excuse
13 excess emissions caused by malfunctions from a source for more than 15 percent of the operating time
14 during each calendar year. The Director may require the owner or operator of a facility to maintain
15 records of the time that a source operates when it or its air pollution control equipment is
16 malfunctioning or otherwise has excess emissions.

17 (d) All electric utility boiler units shall have a malfunction abatement plan approved by the Director as satisfying the
18 requirements of Subparagraphs (1) through (3) of this Paragraph. In addition, the Director may require any other source
19 to have a malfunction abatement plan approved by the Director as satisfying the requirements of Subparagraphs (1)
20 through (3) of this Paragraph. If the Director requires a malfunction abatement plan for a source other than an electric
21 utility boiler, the owner or operator of that source shall submit a malfunction abatement plan within 60 days after receipt
22 of the Director's request. The malfunction plans of electric utility boiler units and of other sources required to have them
23 shall be implemented when a malfunction or other breakdown occurs. The purpose of the malfunction abatement plan is
24 to prevent, detect, and correct malfunctions or equipment failures that could result in excess emissions. A malfunction
25 abatement plan shall contain:

- 26 (1) a complete preventive maintenance program including:
 - 27 (A) the identification of individuals or positions responsible for inspecting, maintaining and
28 repairing air cleaning devices;
 - 29 (B) a description of the items or conditions that will be inspected and maintained;
 - 30 (C) the frequency of the inspection, maintenance services, and repairs; and
 - 31 (D) an identification and quantities of the replacement parts that shall be maintained in inventory
32 for quick replacement;
- 33 (2) an identification of the source and air cleaning operating variables and outlet variables, such as
34 opacity, grain loading, and pollutant concentration, that may be monitored to detect a malfunction or
35 failure; the normal operating range of these variables and a description of the method of monitoring or
36 surveillance procedures and of informing operating personnel of any malfunctions, including alarm
37 systems, lights or other indicators; and

1 (3) a description of the corrective procedures that the owner or operator will take in case of a malfunction
2 or failure to achieve compliance with the applicable rule as expeditiously as practicable but no longer
3 than the next boiler or process outage that would provide for an orderly repair or correction of the
4 malfunction or 15 days, whichever is shorter. If the owner or operator anticipates that the malfunction
5 would continue for more than 15 days, a case-by-case repair schedule shall be established by the
6 Director with the source. The owner or operator shall maintain logs to show that the operation and
7 maintenance parts of the malfunction abatement plan are implemented. These logs are subject to
8 inspection by the Director or his designee upon request during business hours.

9 (e) The owner or operator of any source required by the Director to have a malfunction abatement plan shall submit a
10 malfunction abatement plan to the Director within six months after it has been required by the Director. The malfunction
11 abatement plan and any amendment to it shall be reviewed by the Director or his designee. If the plan carries out the
12 objectives described by Paragraph (d) of this Rule, the Director shall approve it. If the plan does not carry out the
13 objectives described by Paragraph (d) of this Rule, the Director shall disapprove the plan. The Director shall state his
14 reasons for his disapproval. The person who submits the plan shall submit an amendment to the plan to satisfy the
15 reasons for the Director's disapproval within 30 days of receipt of the Director's notification of disapproval. Any person
16 having an approved malfunction abatement plan shall submit to the Director for his approval amendments reflecting
17 changes in any element of the plan required by Paragraph (d) of this Rule or amendments when requested by the
18 Director. The malfunction abatement plan and amendments to it shall be implemented within 90 days upon receipt of
19 written notice of approval.

20 (f) The owner or operator of a source of excess emissions that last for more than four hours and that results from a
21 malfunction, a breakdown of process or control equipment or any other abnormal conditions, shall:

22 (1) notify the Director or his designee of any such occurrence by 9:00 a.m. Eastern time of the Division's
23 next business day of becoming aware of the occurrence and describe:

24 (A) name and location of the facility,

25 (B) the nature and cause of the malfunction or breakdown,

26 (C) the time when the malfunction or breakdown is first observed,

27 (D) the expected duration, and

28 (E) an estimated rate of emissions;

29 (2) notify the Director or his designee immediately when the corrective measures have been
30 accomplished;

31 (3) submit to the Director within 15 days after the request a written report that includes:

32 (A) name and location of the facility,

33 (B) identification or description of the processes and control devices involved in the malfunction
34 or breakdown,

35 (C) the cause and nature of the event,

36 (D) time and duration of the violation or the expected duration of the excess emission if the
37 malfunction or breakdown has not been fixed,

- 1 (E) estimated quantity of pollutant emitted,
- 2 (F) steps taken to control the emissions and to prevent recurrences and if the malfunction or
- 3 breakdown has not been fixed, steps planned to be taken, and
- 4 (G) any other pertinent information requested by the Director. After the malfunction or
- 5 breakdown has been corrected, the Director may require the owner or operator of the source
- 6 to test the source in accordance with Section .2600 of this Subchapter to demonstrate
- 7 compliance.

8 (g) Start-up and shut-down. Excess emissions during start-up and shut-down are considered a violation of the
9 appropriate rule if the owner or operator cannot demonstrate that the excess emissions are unavoidable. To determine if
10 excess emissions are unavoidable during startup or shutdown the Director shall consider the items listed in Paragraphs
11 (c)(1), (c)(3), (c)(4), (c)(5), and (c)(7) of this Rule along with any other pertinent information. The Director may specify
12 for a particular source the amount, time, and duration of emissions allowed during start-up or shut-down. The owner or
13 operator shall, to the extent practicable, operate the source and any associated air pollution control equipment or
14 monitoring equipment in a manner consistent with best practicable air pollution control practices to minimize emissions
15 during start-up and shut-down.

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17 *History Note:* Authority G.S. 143-215.3(a)(1);143-215.107(a)(4); 143-215.107(a)(5);
18 Eff. March 1, 1983;
19 Amended Eff. _____; June 1, 2008; April 1, 2001; July 1, 1998; July 1, 1996; October 1,
20 1991; May 1, 1990; April 1, 1986; July 1, 1984.

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1 15A NCAC 02D .0545 is proposed for adoption as follows:

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3 **15A NCAC 02D .0545 TREATMENT OF MALFUNCTION EVENTS AND WORK PRACTICES FOR**
4 **START-UP AND SHUT-DOWN OPERATIONS**

5 (a) Applicability. In the event that United States Environmental Protection Agency's regulation, *State*
6 *Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA's SSM Policy*
7 *Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls to Amend Provisions Applying to Excess*
8 *Emissions During Periods of Startup, Shutdown and Malfunction*, published in the Code of Federal Regulations
9 (CFR) at 40 CFR 52 on June 12, 2015, is:

10 (1) Declared or adjudged to be invalid or unconstitutional or stayed by the United States Court of
11 Appeals for the Fourth Circuit, by the District of Columbia Circuit, or by the United States
12 Supreme Court; or

13 (2) Withdrawn, repealed, revoked or otherwise rendered of no force and effect by the United States
14 Environmental Protection Agency, Congress, or Presidential Executive Order;

15 such action shall render this Rule as invalid, void, stayed, or otherwise without force and effect upon the date such
16 action becomes final and effective. At the time of such action, sources that were subject to this Rule shall be subject
17 to Rule .0535 of this Subchapter. This Rule does not apply to sources to which Rule .0524, .1110, or .1111 of this
18 Subchapter applies.

19 (b) For the purposes of this Rule, the following definitions apply:

20 (1) "Excess Emissions" means an emission rate that exceeds any applicable emission limitation or
21 standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of this Subchapter; or by a
22 permit condition; or that exceeds an emission limit established in a permit issued pursuant to 15A
23 NCAC 02Q .0700.

24 (2) "Malfunction" means any unavoidable failure of air pollution control equipment, process
25 equipment, or process to operate in a normal and usual manner. Failures caused entirely or in part
26 by poor maintenance, careless operations or any other upset condition within the control of the
27 emission source are not considered a malfunction.

28 (3) "Start-up" means the commencement of operation of any source that has shut-down or ceased
29 operation for a period sufficient to cause temperature, pressure, process, chemical, or a pollution
30 control device imbalance that would result in excess emissions.

31 (4) "Shut-down" means the cessation of the operation of any source for any purpose.

32 (c) Malfunctons. All facilities subject to this rule shall:

33 (1) Comply with the applicable emissions limits at all times; or

34 (2) Comply with the source specific malfunction work practice standard permit limit described in 15A
35 NCAC 02D .0545(d).

36 (d) Source Specific Malfunction Work Practice Standard Permit Limit.

- 1 (1) A facility may request a source specific malfunction work practice standard to be included in the
2 state and federal enforceable section of their air permit, after review by EPA and the public.
- 3 (2) The work practice standard shall minimize emissions during the malfunction event and require the
4 malfunction duration to be minimized.
- 5 (3) 15A NCAC 02D .0545(e)(1) and (5) shall be addressed in the work practice standard. Any facility
6 requesting a malfunction work practice standard shall meet the requirements of 15A NCAC 02D
7 .0545(f) (1), (2) and (3).
- 8 (4) Such requests shall be made through the application for a permit, permit modification, or permit
9 renewal pursuant to the permit application requirements in 15A NCAC 02Q .0300 or 02Q .0500.
10 The public notice requirements specified in 15A NCAC 02Q .0306 and 02Q .0307 shall be
11 followed for all proposed alternative work practice standards in non-Title V permits. Public notice
12 requirements specified in 15A NCAC 02Q .0521 shall be followed for all proposed alternative
13 work practice standards in Title V permits.
- 14 (5) At all times, the source shall be operated in a manner consistent with good practice for minimizing
15 emissions and the source uses best efforts regarding planning, design, and operating procedures.
16 The owner or operator's actions during malfunction periods are documented by properly signed,
17 contemporaneous operating logs or other relevant evidence.
- 18 (6) Failure to implement or follow the Source Specific Malfunction Work Practice Standard Permit
19 Limit shall be a violation of 15A NCAC 02D .0545(d).
- 20 (7) Any permit without a malfunction work practice standard limit will be required to comply with
21 any applicable emission limit.
- 22 (8) Facilities that follow a Source Specific Malfunction Work Practice Standard Permit Limit during a
23 malfunction that has been addressed in the Source Specific Malfunction Work Practice Standard
24 Permit Limit shall be deemed in compliance.
- 25 (e) The Director will determine the appropriate enforcement response for excess emissions due to a malfunction.
26 The Director shall consider, along with any other pertinent information, the following:
- 27 (1) The air cleaning device, process equipment, or process has been maintained and operated, to the
28 maximum extent practicable, consistent with good practice for minimizing emissions;
- 29 (2) Repairs have been made expeditiously when the emission limits have been exceeded;
- 30 (3) The amount and duration of the excess emissions, including any bypass, have been minimized to
31 the maximum extent practicable;
- 32 (4) All practical steps have been taken to minimize the impact of the excess emissions on ambient air
33 quality;
- 34 (5) The excess emissions are not part of a recurring pattern indicative of inadequate design, operation,
35 or maintenance;
- 36 (6) The requirements of Paragraph (h) of this Rule have been met; and

1 (7) If the source is required to have a malfunction abatement plan, it has followed that plan. All
2 malfunctions shall be repaired as expeditiously as practicable. The facility shall maintain records
3 of the time that a source operates when it or its air pollution control equipment is malfunctioning
4 or otherwise has excess emissions.

5 (f) All electric utility boiler units shall have a malfunction abatement plan approved by the Director as satisfying the
6 requirements of Subparagraphs (1) through (3) of this Paragraph. In addition, the Director may require any other
7 source to have a malfunction abatement plan approved by the Director as satisfying the requirements of
8 Subparagraphs (1) through (3) of this Paragraph. If the Director requires a malfunction abatement plan for a source
9 other than an electric utility boiler, the owner or operator of that source shall submit a malfunction abatement plan
10 within 60 days after receipt of the Director's request. The malfunction plans of electric utility boiler units and of
11 other sources required to have them shall be implemented when a malfunction occurs. The purpose of the
12 malfunction abatement plan is to prevent, detect, and correct malfunctions that could result in excess emissions. A
13 malfunction abatement plan shall contain:

14 (1) a complete preventive maintenance program including:

15 (A) the identification of individuals or positions responsible for inspecting, maintaining and
16 repairing air cleaning devices;

17 (B) a description of the items or conditions that will be inspected and maintained;

18 (C) the frequency of the inspection, maintenance services, and repairs; and

19 (D) an identification and quantities of the replacement parts that shall be maintained in
20 inventory for quick replacement;

21 (2) an identification of the source and air cleaning operating variables and outlet variables that may be
22 monitored to detect a malfunction; the normal operating range of these variables and a description
23 of the method of monitoring and of informing operating personnel of any malfunctions; and

24 (3) a description of the corrective procedures that the owner or operator will take in case of a
25 malfunction or failure to achieve compliance with the applicable rule as expeditiously as
26 practicable. The owner or operator shall maintain logs to show that the operation and maintenance
27 parts of the malfunction abatement plan are implemented.

28 (g) The owner or operator of any source required by the Director to have a malfunction abatement plan shall submit
29 a malfunction abatement plan to the Director within six months after it has been required by the Director. The
30 malfunction abatement plan and any amendment to it shall be reviewed by the Director or his designee. The owner
31 or operator shall submit an amendment to the plan to satisfy the plan requirements within 30 days of receipt of the
32 Director's notification. Any person having an approved malfunction abatement plan shall submit to the Director for
33 his approval amendments reflecting changes in any element of the plan required by Paragraph (f) of this Rule or
34 amendments when requested by the Director. The malfunction abatement plan and amendments to it shall be
35 implemented within 90 days upon receipt of written notice of approval.

36

1 (h) The owner or operator of a source of excess emissions that last for more than four hours and that results from a
 2 malfunction shall:

3 (1) notify the Director or his designee of any such occurrence by 9:00 a.m. Eastern time of the
 4 Division's next business day of becoming aware of the occurrence and describe:

5 (A) name and location of the facility;

6 (B) the nature and cause of the malfunction or breakdown;

7 (C) the time when the malfunction or breakdown is first observed;

8 (D) the expected duration; and

9 (E) an estimated rate of emissions;

10 (2) notify the Director or his designee immediately when the corrective measures have been
 11 accomplished;

12 (3) submit to the Director within 15 days after the request a written report that includes:

13 (A) name and location of the facility;

14 (B) identification or description of the processes and control devices involved in the
 15 malfunction or breakdown;

16 (C) the cause and nature of the event;

17 (D) time and duration of the violation or the expected duration of the excess emission if the
 18 malfunction or breakdown has not been fixed;

19 (E) estimated quantity of pollutant emitted;

20 (F) steps taken to control the emissions and to prevent recurrences and if the malfunction or
 21 breakdown has not been fixed, steps planned to be taken; and

22 (G) any other pertinent information requested by the Director.

23 After the malfunction or breakdown has been corrected, the Director may require the owner or operator of the source
 24 to test the source in accordance with Section .2600 of this Subchapter to demonstrate compliance.

25 (i) During periods of start-up and shut-down, sources at facilities subject to this rule shall comply with:

26 (1) The applicable SIP emission limit in the 15A NCAC 02D rules, or a permit limit established in a
 27 permit issued pursuant to 15A NCAC 2Q .0700; or

28 (2) The applicable work practice standards in 15A NCAC 02D .0545(j)(1) through (12);

29 (3) Work practice standards currently in effect for federal rules promulgated since 2009 that address
 30 compliance during start-up and shut-down operations for equipment that would be subject to the
 31 federal rule except for rule applicability exemptions; or

32 (4) Apply for the source specific start-up and shut-down work practice standard permit limit described
 33 in 15A NCAC 02D .0545(k)

34 Excess emissions during start-up and shut-down are considered a violation of the appropriate rule if the owner or
 35 operator cannot demonstrate that the work practice standards in 15A NCAC 02D .0545(i)(2), (3), or (4) were
 36 followed. Facilities may comply with 15A NCAC 02D .0545(i)(1) or (2) during start-up and shut-down without a
 37 specific permit condition. Facilities which choose to comply with 15A NCAC 02D .0545(i)(3) during start-up and

1 shut-down shall apply for and receive a permit condition that indicates the specific federal work practice standard
2 that will be followed. Failure to implement or follow the work practice standard shall be considered a violation of
3 15A NCAC 02D .0545(i)(3). Facilities that choose to comply with 15A NCAC 02D .0545(i)(4) during start-up and
4 shut-down shall apply for and receive a permit condition described in 15A NCAC 02D .0545(k). Failure to
5 implement or follow the work practice standard shall be considered a violation of 15A NCAC 02D .0545(i)(4).

6 (j) Generally Available Work Practices for Start-Up and Shut-Down operations. The owner or operator shall, to the
7 extent practicable, operate the source and any associated air pollution control equipment or monitoring equipment in
8 a manner consistent with best practicable air pollution control practices to minimize emissions during start-up and
9 shut-down. The following generally available work practice standards shall be followed:

10 1) Periods of start-up and shut-down shall be documented in a permanent form suitable for inspection
11 and submission to the Division. Documentation of start-ups and shut-downs shall include, as a
12 minimum, specific identification of each period of start-up or shut-down where a work practice
13 standard is used and information required to demonstrate compliance with the applicable work
14 practice(s). Start-up and shut-down operations shall occur as expeditiously as possible while
15 minimizing emissions.

16 2) Boilers / Combustion sources – All combustion sources shall commence operations while firing on
17 the cleanest permitted fuel, to the extent practicable. The source shall minimize the start-up and
18 shut-down periods to the extent practicable.

19 A) For sources for which the manufacturer has established recommended procedures for
20 startups and shutdowns, the source shall follow the manufacturer's recommended
21 procedures.

22 B) For sources for which there is no manufacturer-recommended procedures for startups and
23 shutdowns, the source shall follow recommended procedures for a unit of similar design
24 for which manufacturer's recommended procedures are available.

25 3) Baghouses shall be operated upon start-up of emission unit, or when baghouse temperature
26 exceeds the dew point, whichever occurs later or as specified by manufacturer.

27 4) Cyclones shall be operated at all times, including start-up and shut-down of the emission unit.

28 5) Electrostatic precipitators (ESP) shall be operated upon start-up of emission unit, or when effluent
29 temperature exceeds the dew point, whichever occurs later except as provided by fire protection
30 protocols and process safety protocol or as specified by manufacturer.

31 6) Selective catalytic reduction (SCR) units shall be operated if catalyst bed temp is greater than
32 400°F, or as specified by manufacturer.

33 7) Non-selective catalytic reduction (NSCR) units shall be operated when the effluent temperature is
34 between 700°F and 1500°F, or as specified by manufacturer.

35 8) Scrubbers shall be operated at all times from initialization of start-up to completion of shut-down.

36 9) Carbon adsorption shall be operated at all times from initialization of start-up to completion of
37 shut-down.

1 10) Biofilters shall be operated at all times from initialization of start-up to completion of shut-down.

2 11) Sorbent injection shall be operated at all times the gas stream temperature is greater than 300°F, or
 3 as specified by manufacturer.

4 12) Regenerative Thermal Oxidizers (RTO), thermal and catalytic oxidizers shall be operated at all
 5 times and may only be bypassed as required by fire prevention and process safety protocols.

6 13) Safety and fire protection protocols shall be followed during start-up and shut-down of all sources.

7 (k) Source Specific Start-Up and Shut-Down Work Practice Standard Permit Limit. A facility may request a source
 8 specific start-up and shut-down work practice standard to be included in the state and federal enforceable section of
 9 their air permit, after review by EPA and the public. Such requests shall be made through the application for a
 10 permit, permit modification, or permit renewal pursuant to the permit application requirements in 15A NCAC 02Q
 11 .0300 or 02Q .0500. The public notice requirements specified in 15A NCAC 02Q .0306 and 02Q .0307 shall be
 12 followed for all proposed alternative work practice standards in non-Title V permits. Public notice requirements
 13 specified in 15A NCAC 02Q .0521 shall be followed for all proposed alternative work practice standards in Title V
 14 permits. Requests for alternative work practice standards for periods of start-up and shut-down shall include the
 15 following considerations:

16 (1) The work practice standard is specific to a source and the associated control strategy;

17 (2) Demonstration that the use of the control strategy for the source is technically infeasible during
 18 start-up or shut-down periods;

19 (3) The alternative emission limitation requires that the frequency and duration of operation in start-
 20 up or shut-down mode are minimized to the greatest extent practicable;

21 (4) At all times, the source shall be operated in a manner consistent with good practice for minimizing
 22 emissions and the source uses best efforts regarding planning, design, and operating procedures;
 23 and

24 (5) The owner or operator’s actions during start-up and shut-down periods are documented by
 25 properly signed, contemporaneous operating logs or other relevant evidence.

26 Any permit without a start-up and shut-down work practice standard limit shall be required to comply with any
 27 applicable emission limit. Facilities that follow a Source Specific Start-up and Shut-down Work Practice Standard
 28 Permit Limit during start-up and shut-down shall be deemed in compliance.

31 History Note: Authority G.S. 143-215.3(a)(1);143-215.107(a)(4); 143-215.107(a)(5);

32 Eff. _____.