

1 **TITLE 20 ENVIRONMENTAL PROTECTION**
 2 **CHAPTER 2 AIR QUALITY (STATEWIDE)**
 3 **PART 300 REPORTING OF GREENHOUSE GAS EMISSIONS**

4
 5 **20.2.300.1 ISSUING AGENCY:** Environmental Improvement Board.
 6 [20.2.300.1 NMAC - N, 01/01/11]

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 8 **20.2.300.2 SCOPE:** All persons who own or operate an applicable source of greenhouse gas emissions in the
 9 geographic area within the jurisdiction of the environmental improvement board.
 10 [20.2.300.2 NMAC - N, 01/01/11]

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 12 **20.2.300.3 STATUTORY AUTHORITY:** Environmental Improvement Act, NMSA 1978, Section 74-1-
 13 8(A)(4), and Air Quality Control Act, NMSA 1978, Sections 74-2-1 et seq., including specifically Sections 74-2-
 14 5(B)(1) & 74-2-(5)(C)(5)(d) & (e).
 15 [20.2.300.3 NMAC - N, 01/01/11]

16
 17 **20.2.300.4 DURATION:** Permanent.
 18 [20.2.300.4 NMAC - N, 01/01/11]

19
 20 **20.2.300.5 EFFECTIVE DATE:** January 1, 2011 except where a later date is cited at the end of a section.
 21 [20.2.300.5 NMAC - N, 01/01/11]

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 23 **20.2.300.6 OBJECTIVE:** The objective of this part is to establish requirements for the annual reporting of
 24 greenhouse gas emissions to the department.
 25 [20.2.300.6 NMAC - N, 01/01/11]

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 27 **20.2.300.7 DEFINITIONS:** The definitions included in this part shall also apply to the terms used in
 28 20.2.301 NMAC. The definitions included in 20.2.2 NMAC shall apply to the terms used in this part, unless such
 29 term is defined or incorporated in this part. Except as otherwise provided, the following modifications, exceptions
 30 and omissions are made to 40 CFR 98 definitions that are incorporated into this part pursuant to Section
 31 20.2.300.100 NMAC.

- 32 **A. "Acid gas"** means hydrogen sulfide (H₂S) and carbon dioxide (CO₂) contaminants that are
 33 separated from sour natural gas by an acid gas removal.
- 34 **B. "Acid gas removal unit" or "AGR"** means a process unit that separates hydrogen sulfide and/or
 35 carbon dioxide from sour natural gas using liquid or solid absorbents or membrane separators.
- 36 **C. "Acid gas removal vent stack emissions"** means the acid gas separated from the acid gas
 37 absorbing medium (for example, an amine solution) and released with methane and other light hydrocarbons to the
 38 atmosphere or a flare.
- 39 **D. "Administrator"** means the secretary of the New Mexico environment department or his or her
 40 designee.
- 41 **E. "cap emissions"** means all emissions that are required to be reported under 20.2.300 NMAC,
 42 except those that are defined as reporting-only emissions.
- 43 **F. "CFR"** means the United States code of federal regulations.
- 44 **G. "Cogeneration system"** means individual cogeneration components including the prime mover
 45 (heat engine), generator, heat recovery, and electrical interconnection, configured into an integrated system that
 46 provides sequential generation of multiple forms of useful energy (usually electrical and thermal), at least one form
 47 of which the facility consumes on-site or makes available to other users for an end-use other than electricity
 48 generation.
- 49 **H. "Cogeneration unit"** means a stationary fuel combustion device which simultaneously generates
 50 electrical and thermal energy that is (i) used by the owner or operator of the facility where the cogeneration unit is
 51 located; or (ii) transferred to another facility for use by that facility.
- 52 **I. "Compliance period"** means a three-calendar-year time period. The first compliance period is
 53 from January 1, 2012 through December 31, 2014. Each subsequent sequential three-calendar-year period is a
 54 separate compliance period.
- 55 **J. "Emissions"** means the release of greenhouse gases into the atmosphere from sources and
 56 processes in a facility.

1 **K.** **“EPA”** means the New Mexico environment department, except in subsection 98.3(h), section
 2 98.7, paragraph 98.33(a)(5), and subpart D of 40 CFR 98, and in reference to EPA publications and EPA methods
 3 published elsewhere than in 40 CFR 98..
 4

5 **L.** **"General stationary combustion source"** means any device that combusts solid, liquid, or
 6 gaseous fuel for the purpose of generating steam or providing useful heat or energy for industrial, commercial, or
 7 institutional use; or reducing the volume of waste by removing combustible matter. General stationary combustion
 8 sources include boilers, combustion turbines, engines, incinerators, and process heaters, and any other stationary
 9 combustion device the combustion greenhouse gas emissions of which are not specifically addressed under the
 10 provisions in 20.2.103 NMAC through 20.2.108 NMAC.

11 **M.** **“Reporting-only emissions”** means the following emissions that are reported under 20.2.300
 12 NMAC.

13 (1) Fugitive hydrofluorocarbon emissions from cooling towers at electrical generating units,
 14 as required by Paragraph 2 of Subsection A of 20.2.300.103 NMAC;

15 (2) As required to be reported by petroleum refineries under 40 CFR 98 Subpart Y and
 16 20.2.300.106 NMAC, emissions from:

17 (a) asphalt blowing operations, as specified in 40 CFR 98.253(h);

18 (b) equipment leaks, as specified in 40 CFR 98.253(l);

19 (c) storage tanks, as specified in 40 CFR 98.253(m); and

20 (d) loading operations, as specified in 40 CFR 98.253(n).

21 (3) Emissions of any greenhouse gas other than carbon dioxide, methane, nitrous oxide,
 22 hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride.

23 (4) Emissions data submitted by a facility not subject to verification under 20.2.301 NMAC.

24 **N.** **“Reporting year”** means the calendar year for which emissions are being reported in the
 25 emissions data report.

26 [20.2.300.7 NMAC - N, 01/01/11]
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28 **20.2.300.8 SEVERABILITY:** If any provision of this part, or the application of such provision to any
 29 person or circumstance, is held invalid, the remainder of this part, or the application of such provision to persons or
 30 circumstances other than those as to which it is held invalid, shall not be affected thereby.

31 [20.2.300.8 NMAC - N, 01/01/11]
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33 **20.2.300.9 CONSTRUCTION:** This part shall be liberally construed to carry out its purpose.

34 [20.2.300.9 NMAC - N, 01/01/11]
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36 **20.2.300.10 SAVINGS CLAUSE:** Repeal or supersession of prior versions of this part shall not affect any
 37 administrative or judicial action initiated under those prior versions.

38 [20.2.300.10 NMAC - N, 01/01/11]
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40 **20.2.300.11 COMPLIANCE WITH OTHER REGULATIONS:** Compliance with this part does not relieve
 41 a person from the responsibility to comply with any other applicable federal, state, or local regulations.

42 [20.2.300.11 NMAC - N, 01/01/11]
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44 **20.2.300.12 AVAILABILITY OF CITED DOCUMENTS:** Copies of 40 CFR Section 98, and the
 45 standardized methods that are cited in the sections of 40 CFR Section 98 incorporated by reference into this Part,
 46 may be viewed at the New Mexico environment department air quality bureau [located at 1301 Siler Road, Building
 47 B, Santa Fe NM 87507].

48 [20.2.300.12 NMAC - N, 01/01/11]
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50 **20.2.300.13 EMISSIONS REPORTS TO THE ENVIRONMENTAL PROTECTION AGENCY.** On
 51 approval by the secretary, reports that conform to this part and that are submitted to the United States environmental
 52 protection agency shall be deemed to satisfy, in whole or in part, the requirement to submit a report under this part.

53 [20.2.300.13 NMAC - N, 01/01/11]
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55 **20.2.300.14 to 20.2.300.99 [RESERVED]**
 56

1 **20.2.300.100 ADOPTION OF 40 CFR PART 98.** Except as otherwise provided, the following subparts of 40
 2 CFR Part 98, as amended in the Federal Register through the publication date of the final rule to make technical
 3 corrections and other changes proposed June 15, 2010 (75 FR 33950), are hereby incorporated by reference.
 4 [Note: this includes amendments made in the final rule published July 12, 2010 (75 FR 39736).]

- 5 **A.** 40 CFR Part 98 Subpart A – General Provisions, which includes Sections 98.1 through 98.8 and
 6 Tables A-1 through A-5 of Subpart A.
- 7 **B.** 40 CFR Part 98 Subpart C – General Stationary Fuel Combustion Sources, which includes
 8 Sections 98.30 through 98.38 and Tables C-1 and C-2 of Subpart C.
- 9 **C.** 40 CFR Part 98 Subpart D – Electricity Generation, which includes Sections 98.40 through 98.48.
- 10 **D.** 40 CFR Part 98 Subpart H – Cement Production, which includes Sections 98.80 through 98.88.
- 11 **E.** 40 CFR Part 98 Subpart P – Hydrogen Production, which includes Sections 98.160 through
 12 98.168.
- 13 **F.** 40 CFR Part 98 Subpart R – Lead Production, which includes Sections 98.180 through 98.188.
- 14 **G.** 40 CFR Part 98 Subpart S – Lime Manufacturing, which includes Sections 98.190 through 98.198
 15 and Table S-1 of Subpart S.
- 16 **H.** 40 CFR Part 98 Subpart V – Nitric Acid Production, which includes Sections 98.220 through
 17 98.228.
- 18 **I.** 40 CFR Part 98 Subpart X – Petrochemical Production, which includes Sections 98.240 through
 19 98.248.
- 20 **J.** 40 CFR Part 98 Subpart Y – Petroleum Refineries, which includes Sections 98.250 through
 21 98.258.
- 22 **K.** 40 CFR Part 98 Subpart GG – Zinc Production, which includes Sections 98.330 through 98.338.
 23 [20.2.300.100 NMAC - N, 01/01/11]

24
 25 **20.2.300.101 MODIFICATIONS, EXCEPTIONS AND OMISSIONS TO 40 CFR PART 98.** Except as
 26 otherwise provided, the following modifications, exceptions and omissions are made to incorporated 40 CFR Part
 27 98.

- 28 **A.** Each reference to “25,000 metric tons CO₂e” is modified to “10,000 metric tons CO₂e”.
- 29 **B.** Except as otherwise provided, each reference to “any calendar year starting in 2010” is modified
 30 to “any calendar year starting in 2011”.
- 31 [20.2.300.101 NMAC - N, 01/01/11]

32
 33 **20.2.300.102 MODIFICATIONS, EXCEPTIONS AND OMISSIONS TO 40 CFR PART 98 SUBPART A**
 34 **– GENERAL PROVISIONS.** Except as otherwise provided, the following modifications, exceptions and
 35 omissions are made to incorporated 40 CFR Part 98 Subpart A – General Provisions.

- 36 **A.** In 98.1(a) and (b), references to "suppliers", "fossil fuel suppliers", and "industrial GHG suppliers"
 37 are omitted.
- 38 **B.** In 98.2(a), the phrase "located in the United States" is modified to "located in the geographic area
 39 within the jurisdiction of the environmental improvement board."
- 40 **C.** Paragraph 98.2(a)(1) is modified to read: A facility that contains, in any calendar year starting in
 41 2011, any source category that is listed in Table A-3 of Subpart A of 40 CFR 98. For these facilities, the annual
 42 GHG report shall cover stationary fuel combustion sources (subpart C) and all applicable source categories listed in
 43 20.2.300.100 NMAC and 20.2.300.107 NMAC. .
- 44 **D.** Paragraph 98.2(a)(2) is modified to read: A facility containing any source category listed in
 45 20.2.300.107 NMAC, or in both Table A-4 of 40 CFR 98 and 20.2.300.100 NMAC, that emits, in any calendar year
 46 starting in 2011, 10,000 metric tons CO₂e or more in combined emissions from all applicable source categories
 47 listed in 20.2.300.100 NMAC and 20.2.300.107 NMAC. For these facilities, the annual GHG report shall cover all
 48 source categories and GHGs for which calculation methodologies are provided in 20.2.300 NMAC.
- 49 **E.** Paragraph 98.2(a)(3) is modified to read: A facility that in any calendar year starting in 2011
 50 meets all three of the following conditions: (i) The facility does not meet the requirements of either paragraph (a)(1)
 51 or (a)(2) of this section; (ii) The aggregate maximum rated heat input capacity of the stationary fuel combustion
 52 units at the facility is 12 mmBtu/hr or greater; and, (iii) The facility emits 10,000 metric tons CO₂e or more per year
 53 in combined emissions from all stationary fuel combustion sources. For these facilities, the annual GHG report must
 54 cover emissions from stationary fuel combustion sources only.
- 55 **F.** In Table A-3 of Subpart A [relating to applicable source categories], the following source
 56 categories are omitted: adipic acid production, aluminum production, ammonia manufacturing, HCFC-22

1 production, HFC-23 destruction processes, phosphoric acid production, silicon carbide production, soda ash
 2 production, titanium dioxide production, municipal solid waste landfills, manure management systems, underground
 3 coal mines, and any other source category added after November 1, 2009.

4 **G.** In Table A-4 of Subpart A [relating to applicable source categories], the following source
 5 categories are omitted: ferroalloy production, glass production, iron and steel production, pulp and paper
 6 manufacturing, magnesium production, industrial wastewater treatment, industrial waste landfills, and any other
 7 source category added after November 1, 2009.

8 **H.** Subsection 98.2(a)(4) [relating to fuel suppliers and industrial greenhouse gas suppliers] is
 9 omitted.

10 **I.** Amend subsection 98.2(b)(2) as follows:

11 (1) Omit the sentence "Exclude carbon dioxide emissions from the combustion of biomass,
 12 but include emissions of CH₄ and N₂O from biomass combustion."

13 (2) Add the following subparagraph 98.2 (b)(2)(i): For stationary combustion units, carbon
 14 dioxide emissions from the combustion of biomass fuels shall be included in determining whether a facility is
 15 subject to the reporting requirements of 20.2.300 NMAC with the following exceptions: (1) Until such time as the
 16 department has made a determination regarding the carbon neutrality of any biomass fuels, a maximum of 15,000
 17 metric tons of carbon dioxide emissions from the combustion of pure solid biomass fuel may be excluded from
 18 calculation of GHG emissions for comparison to the 10,000 metric ton CO₂e per year emission threshold in
 19 paragraph (a)(2) of this section, provided that total GHG emissions including emissions from solid biomass fuel are
 20 less than 25,000 metric tons CO₂e; and (2) After such time as the department has made a determination regarding
 21 the carbon neutrality of any biomass fuels, the carbon dioxide emissions from the combustion of those fuels may be
 22 excluded from calculation of GHG emissions for determining whether the 10,000 metric tons CO₂e per year
 23 emission threshold in paragraph (a)(2) of this section has been met."

24 (3) Add the following subparagraph 98.2(b)(2)(ii): The exceptions in paragraphs (b)(2)(i) of
 25 this section shall not apply in determining whether a facility is subject to the reporting requirements of 40 CFR Part
 26 98.

27 **J.** Paragraph 98.2(b)(3) [regarding miscellaneous uses of carbonate] is omitted.

28 **K.** The introductory sentence of Paragraph 98.2(b)(4) is modified to: Sum the emissions estimates
 29 from paragraphs (b)(1) and (b)(2) of this section for each GHG and calculate metric tons of CO₂e using Equation A-
 30 1 of this section.

31 **J.** Subsections 98.2(d) through 98.2(f) [relating to fuel suppliers and importers and exporters of
 32 industrial greenhouse gases and CO₂] are omitted.

33 **K.** Subsection 98.2(i) [relating to the discontinuation of reporting requirements for facilities emitting
 34 less than the reporting threshold] is modified as follows.

35 (1) Paragraph 98.2(i)(1) is omitted.

36 (2) Paragraph 98.2(i)(2) is modified to: If the operations of a facility change such that
 37 emissions fall below 10,000 metric tons CO₂e per year, then the following reporting requirements shall apply:

38 (a) If, prior to the emission reduction, the facility was required to report under
 39 20.2.300 NMAC and to verify emissions under 20.2.301 NMAC, then the owner or operator shall continue to submit
 40 emission reports until reported emissions are below 10,000 metric tons CO₂e per year for a minimum of three
 41 consecutive years. If reported emissions are less than 10,000 metric tons CO₂ per year for three consecutive years
 42 then the owner or operator may discontinue submissions of annual emissions reports required by this part, provided
 43 that the owner or operator submits a notification to the department that announces the cessation of reporting and
 44 explains the reasons for the reduction in emissions. The notification shall be submitted no later than March 31 of the
 45 year immediately following the third consecutive year of emissions less than 10,000 tons CO₂e per year. The owner
 46 or operator shall maintain the corresponding records required under 40 CFR 98.3(g) for each of the three
 47 consecutive years and retain such records for three years following the year that reporting was discontinued. The
 48 owner or operator shall resume reporting if annual emissions in any future calendar year increase to 10,000 metric
 49 tons CO₂e per year or more.

50 (b) If, prior to the emission reduction, the facility was required to report under
 51 20.2.300 NMAC but was not required to verify emissions under 20.2.301 NMAC, then in lieu of submitting a report
 52 otherwise specified by this part, the owner or operator shall submit to the department a signed statement certifying
 53 that emissions were less than 10,000 metric tons CO₂e during the prior year. After certifying that emissions are
 54 below 10,000 metric tons CO₂e per year for three consecutive years under this paragraph, the owner or operator
 55 shall be exempted from further reporting until CO₂e emissions again exceed 10,000 metric tons in any future
 56 calendar year.

- 1 **(3)** In Paragraph 98.2(i)(3) the reference to "supplier" is omitted.
- 2 **L.** In Subsection 98.3(b), the phrase "or supplier" is omitted, and references to the years 2010 and
3 2011 are changed to 2011 and 2012, respectively.
- 4 **M.** In 98.3(c)(4)(i) through (iii), modify the phrase "listed in Table A-3 and Table A-4 of this subpart"
5 to "all applicable source categories in the 40 CFR 98 Subparts listed in Subsections B through K of 20.2.300.100
6 NMAC, and in 20.2.300.107 NMAC."
- 7 **N.** 98.3(c)(5) [relating to content of annual report for fuel suppliers and industrial greenhouse gas
8 suppliers] is omitted.
- 9 **O.** 98.3(c)(9) is modified to: A signed and dated certification statement.
- 10 **(1)** For facilities required to report to EPA under 40 CFR 98, the certification statement shall
11 be signed and provided by the designated representative of the owner or operator, who shall be the same individual
12 recognized as the designated representative or alternate designated representative by EPA. The certification
13 statement submitted to the the department shall follow the requirements of 40 CFR 98.4(e)(1).
- 14 **(2)** For facilities not required to report to EPA under 40 CFR 98, the certification statement
15 shall be signed by the owner, operator or authorized representative and shall certify, to the best of his or her
16 knowledge, the truth of all information in the report.
- 17
- 18 **P.** Section 98.3(d) [special provisions for reporting year 2010] is replaced as follows: Abbreviated
19 emissions report for facilities containing only general stationary fuel combustion sources and emitting less than
20 25,000 metric tons CO₂e per year, exclusive of reporting-only emissions.
- 21 **(1)** An owner or operator that is otherwise subject to the requirements of this part may
22 submit an abbreviated emissions report in lieu of the report required by 40 CFR 98.3(c) if all of the following apply:
- 23 **(a)** total emissions exclusive of reporting-only emissions are less than 25,000 metric
24 tons CO₂e;
- 25 **(b)** no emissions are required to be reported by this part other than those required to
26 be reported by 40 CFR 98 Subpart C-General Stationary Fuel Combustion, as incorporated in this part with
27 modifications in 20.2.300.103 NMAC, including CO₂ from combustion of biomass-derived fuels;
- 28 **(c)** the facility is not required to report greenhouse gas emissions to the US EPA
29 under 40 CFR 98; and
- 30 **(d)** the facility emissions report is not subject to verification requirements under
31 20.2.301 NMAC
- 32 **(2)** The abbreviated report shall contain the following information:
- 33 **(a)** facility, operating or construction permit number or notice of intent number, and
34 physical street address including the city, state and zip code, or geographical location if not at a street address;
- 35 **(b)** the year and months covered by the report;
- 36 **(c)** date of submittal;
- 37 **(d)** total facility GHG emissions aggregated for all stationary fuel combustion units
38 calculated according to any method specified in 40 CFR 98.33(a) and expressed in metric tons of total CO₂, CO₂
39 from biomass fuels, CH₄, N₂O, and CO₂e;
- 40 **(e)** identification of the methods used to determine emissions;
- 41 **(f)** any facility operating data or process information used for the GHG emission
42 calculations;
- 43 **(g)** a signed and dated certification statement provided by the designated
44 representative of the owner or operator, according to the requirements 40 CFR 98.3(c)(9) as modified in Subsection
45 O of this section ;
- 46 **(h)** for facilities with on-site electricity generation or cogeneration, the information
47 specified in Paragraphs 1 and 2 of Subsection D of 20.2.300.103 NMAC; and
- 48 **(i)** a signed and dated certification statement provided by the designated
49 representative of the owner or operator, according to the requirements of paragraph (e)(1) of 40 CFR 98.4.
- 50 **Q.** Section 98.3(f) after the heading [Verification] is modified as follows: Owner or operators subject
51 to the verification requirements of 20.2.301 NMAC shall obtain verification services and submit a verification
52 statement meeting the requirements of 20.2.301 NMAC, if applicable.
- 53 **R.** Section 98.3(g) [Recordkeeping] is modified as follows:
- 54 **(1)** Records shall be retained for at least seven years;
- 55 **(2)** The records required under this section shall be made available to the department within
56 twenty days after the request;

1 (3) The introductory phrase of 40 CFR 98.3(g)(5) is modified to: For sources subject to
 2 reporting under 40 CFR Part 98, a written GHG monitoring plan; and

3 (4) Subparagraph (5)(iv) is modified to: Upon request by the department, the owner or
 4 operator shall make all information that is collected in conformance with the GHG Monitoring Plan available for
 5 review during an audit within twenty days after the request. Electronic storage of the information in the plan is
 6 permissible, provided that the information can be made available in hard copy upon request during an audit.

7 S. Section 98.3(h) is modified to consist of the heading “annual GHG report revisions” and the
 8 following subparagraphs:

9 (1) 98.3(h)(1): The owner or operator of a facility subject to reporting under both 20.2.300
 10 NMAC and 40 CFR Part 98 shall submit a revised report within 45 days of discovering or being notified by EPA of
 11 errors in an annual GHG report. The revised report must correct all identified errors. The owner or operator shall
 12 retain documentation for 7 years to support any revisions made to an annual GHG report.

13 (2) 98.3(h)(2): The owner or operator of a facility subject to reporting under 20.2.300 NMAC
 14 but not 40 CFR Part 98 shall submit a revised report within 30 days of finding that a report contains an error, or
 15 accumulation of errors, greater than 5 percent of the total CO₂e emissions reported. To the extent possible, the
 16 revised report must correct all identified errors. A revised report will be accepted only if approved by the
 17 department. The owner or operator shall retain documentation for 7 years to support any revisions made to an
 18 annual GHG report.

19 T. Section 98.3(i) [calibration accuracy requirements] is modified as follows:

20 (1) The dates "January 1, 2010" and “April 1, 2010” are modified to "January 1, 2011" and
 21 “April 1, 2011”, respectively.

22 (2) All references to "suppliers" are omitted.

23 (3) Paragraph (i)(6) is modified to: “For units and processes that operate continuously with
 24 infrequent outages, it may not be possible to meet the April 1, 2011 deadline for the initial calibration of a flow
 25 meter or other measurement device without removing the device from service and shipping it to a remote location,
 26 thereby disrupting normal process operation. In such cases, the owner or operator may postpone the initial
 27 calibration until the next scheduled maintenance outage, and may similarly postpone the subsequent recalibrations.
 28 Such postponements shall be documented in the monitoring plan that is required under section 98.3(g)(5) and
 29 submitted before December 31, 2011 to the department for approval.”

30 U. The following subsections and paragraphs are added to Section 98.3:

31 (1) 98.3(j): Where 20.2.300 NMAC requires sampling of a parameter on a more frequent
 32 basis than the corresponding rule in 40 CFR Part 98, the following shall apply unless in conflict with any other
 33 provision in 40 CFR Part 98;

34 (2) 98.3(j)(1): The samples must be spaced apart as evenly as possible over time, taking into
 35 account the operating schedule of the relevant unit or facility.

36 (3) 98.3(j)(2): The owner or operator shall calculate and report a weighted average of the
 37 values derived from the samples by using equation 102-1:
 38

$$V_E = \frac{\sum_{j=1}^n (V_j \times M_j)}{\sum_{j=1}^n M_j} \quad \text{Equation 102-1}$$

39
 40 Where:

41 V_E = The value of the parameter to be reported under 40 CFR Part 98 for period E.

42 j = Each period during period E for which a sample is required by this part.

43 n = The number of periods j in period E.

44 V_j = The value of the sample for period j.

45 M_j = The mass of the sampled material processed or otherwise used by the relevant unit or facility in period
 46 j.

47 (4) 98.3(j)(3): You must keep records of the date and result for each sample and mass
 48 measurement used in the equation in subsection (j)(2) and of the calculation of each weighted average included in
 49 your report.

50 (5) 98.3(k): Where 20.2.300 NMAC specifies a choice between use of a fuel-based or mass
 51 balance-based calculation or use of a continuous emissions monitoring system (CEMS) to calculate GHG emissions,

1 the owner or operator shall make this choice and continue to use the method chosen for all future emissions data
 2 reports, unless the use of the alternative calculation method is approved in advance by the department.”

3 (6) 98.3(l): The owner or operator may elect to designate as de minimis one or more sources
 4 or pollutants that collectively emit no more than 3 percent of the facility’s total CO₂e emissions, but not to exceed
 5 20,000 metric tons CO₂e. Where 20.2.300 NMAC otherwise requires the use of a more stringent method for
 6 monitoring and reporting emissions than the method required by 40 CFR Part 98, the owner or operator may elect to
 7 use any other method allowed under 40 CFR Part 98 for the sources or pollutants designated as de minimis.

8 (7) 98.3(m): Notwithstanding the missing data procedures specified in 20.2.300 NMAC, the
 9 failure to conduct monitoring in accordance with 20.2.300 NMAC shall constitute a violation of this regulation.

10 V. Section 98.4 [authorization and responsibilities of the designated representative] is omitted.

11 W. Table A-5 of Subpart A is omitted.
 12 [20.2.300.102 NMAC - N, 01/01/11]
 13

14 **20.2.300.103 MODIFICATIONS, EXCEPTIONS AND OMISSIONS TO 40 CFR PART 98 SUBPART C**
 15 **– GENERAL STATIONARY FUEL COMBUSTION SOURCES.** Except as otherwise provided, the following
 16 modifications, exceptions and omissions are made to incorporated 40 CFR Part 98 Subpart C – General Stationary
 17 Fuel Combustion Sources.

18 A. Section 98.32 [GHGs to report] is modified as follows.

19 (1) 98.32(a): You must report CO₂, CH₄, and N₂O mass emissions from each stationary
 20 fuel combustion unit. [renumbering only]

21 (2) 98.32(b): Facilities that generate electricity either for sale or for use onsite shall also
 22 report fugitive HFC emissions from cooling units by following the requirements of 40 CFR 98.33(f) [added as
 23 Paragraphs 16 through 18 of Subsection B of this section].

24 B. Section 98.33 [Calculating GHG emissions] is modified as follows.

25 (1) Subparagraph 98.33(a)(2)(iii) is modified to: For units that combust municipal solid
 26 waste (MSW) and that produce steam, use Equation C-2c of this section. Equation C-2c of this section may also be
 27 used for any solid biomass fuel listed in Table C-1 of this subpart provided that steam is generated by the unit.
 28 Equation C-2c is not modified.

29 (2) The first sentence of Subparagraph 98.33(a)(4)(iv) is modified to: An oxygen (O₂)
 30 concentration monitor may be used in lieu of a CO₂ concentration monitor in a CEMS installed before January 1,
 31 2011, to determine the hourly CO₂ concentrations, in accordance with Equation F-14a or F-14b (as applicable) in
 32 appendix F to 40 CFR part 75, if the effluent gas stream monitored by the CEMS consists solely of combustion
 33 products (i.e., no process CO₂ emissions are mixed with the combustion products) and if only fuels that are listed in
 34 Table 1 in section 3.3.5 of appendix F to 40 CFR part 75 are combusted in the unit.

35 (3) Subparagraph 98.33(b)(1)(i) is modified to: [The Tier 1 Calculation Methodology] May
 36 be used for any fuel listed in Table C-1 of this subpart that is combusted in a unit with a maximum rated heat input
 37 capacity of 250 mmBtu/hr or less at a facility that is not subject to verification under 20.2.301 NMAC, and may be
 38 used for any fuel listed in Table C-1a of this subpart that is combusted in a unit with a maximum rated heat input
 39 capacity of 250 mmBtu/hr or less at any facility.

40 (4) Subparagraph 98.33(b)(1)(ii) is omitted.

41 (5) Subparagraph 98.33(b)(1)(iii) is omitted.

42 (6) Subparagraph 98.33(b)(1)(iv) is modified to: [The Tier 1 Calculation Methodology] May
 43 not be used if you routinely perform fuel sampling and analysis for the fuel high heat value (HHV) or routinely
 44 receive the results of HHV sampling and analysis from the fuel supplier at the minimum frequency specified in 40
 45 CFR 98.34(a), or at a greater frequency. In such cases, Tier 2 or a higher tier method shall be used.

46 (7) Subparagraph 98.33(b)(2)(i) is modified to: [The Tier 2 Calculation Methodology] May
 47 be used for the combustion of pipeline quality natural gas, or any fuel listed in Table C-1a of this subpart, in a unit
 48 with a maximum rated heat input capacity of 250 mmBtu/hr or less.

49 (8) Subparagraph 98.33(b)(2)(iii) is modified to: [The Tier 2 Calculation Methodology] May
 50 be used for MSW or solid biomass fuel in a unit of any size that produces steam, if Equation C-2c is employed and
 51 if the use of Tier 4 is not required.

52 (9) Subparagraph 98.33(b)(3)(ii) is modified to: [The Tier 3 Calculation Methodology] Shall
 53 be used for a unit with a maximum rated heat input capacity greater than 250 mmBtu/hr, unless either of the
 54 following conditions apply: (A) The use of Tier 2 is permitted, as described in paragraph (b)(2)(ii) of this section; or
 55 (B) The use of Tier 4 is required.

(10) Subparagraph 98.33(b)(3)(iii) is modified to: [The Tier 3 Calculation Methodology] Shall be used for a fuel not listed in Table C-1 of this subpart provided that the use of Tier 4 is not required..

(11) A new subparagraph 98.33(c)(6) is added to: The owner or operator may elect to calculate CH₄ or N₂O emissions using source-specific emission factors derived from source tests conducted at least annually under the supervision of the department. Upon approval of a source test plan, the source test procedures in that plan shall be repeated in each future year to update the source specific emission factors annually.

(12) The first sentence of subparagraph 98.33(e)(1) is modified to: If CEMS are not used to measure CO₂, use Equation C-1 or C-2c of this subpart to calculate the annual CO₂ mass emissions from the combustion of biomass (except MSW) for a unit of any size.

(13) The last sentence of the introductory paragraph of subparagraph 98.33(e)(2) is modified to: If MSW or a fossil fuel/biomass mixture containing an undeterminable quantity of fossil fuels is combusted in the unit, follow the procedures in 40 CFR 98.33(e)(3).

(14) A new section 98.33(f) is added: Calculating fugitive HFC emissions from cooling units. Owner or operators of electricity generating facilities shall calculate fugitive HFC emissions for each HFC compound used in cooling units that support power generation or are used in heat transfers to cool stack gases using either the methodology in paragraph (f)(1) or (f)(2). The owner or operator is not required to report GHG emissions from air or water cooling systems or condensers that do not contain HFCs.

(15) A new section 98.33(f)(1) is added: Use Equation 103-1 to calculate annual HFC emissions:

$$HFC = HFC_I + HFC_{P/A} - HFC_{S/D} + HFC_{CC} \quad \text{Equation 103-1}$$

Where:

HFC = Annual fugitive HFC emission, metric tons;

HFC_I = The difference between the quantity of HFC in storage at the beginning of the year and the quantity in storage at the end of the year. Stored HFC includes HFC contained in cylinders (such as 115-pound storage cylinders), gas carts, and other storage containers. It does not include HFC gas held in operating equipment. The change in inventory will be negative if the quantity of HFC in storage increases over the course of the year.

HFC_{P/A} = The sum of all HFC acquired from other entities during the year either in storage containers or in equipment.

HFC_{S/D} = The sum of all the HFC sold or otherwise transferred offsite to other entities during the year either in storage containers or in equipment.

HFC_{CC} = The net change in the total nameplate capacity (i.e. the full and proper charge) of the cooling equipment). The net change in capacity will be negative if the total nameplate capacity at the end of the year is less than the total nameplate capacity at the beginning of the year.

(16) A new subparagraph 98.33(f)(2) is added: Use service logs to document HFC usage and emissions from each cooling unit. Service logs should document all maintenance and service performed on the unit during the report year, including the quantity of HFCs added to or removed from the unit, and include a record at the beginning and end of each report year. The owner or operator may use service log information along with the following simplified material balance equations 103-2, 103-3, and 103-4 to quantify fugitive HFCs from unit installation, servicing, and retirement, as applicable. The owner or operator shall include the sum of HFC emissions from the applicable equations in the greenhouse gas emissions data report.

$$HFC_{INSTALL} = R_{NEW} - C_{NEW} \quad \text{Equation 103-2}$$

$$HFC_{SERVICE} = R_{RECHARGE} - R_{RECOVER} \quad \text{Equation 103-3}$$

$$HFC_{RETIRE} = C_{RETIRE} - R_{RETIRE} \quad \text{Equation 103-4}$$

Where:

HFC_{INSTALL} = HFC emitted during initial charging/installation of the unit, kilograms;

HFC_{SERVICE} = HFC emitted during use and servicing of the unit for the report year, kilograms;

HFC_{RETIRE} = HFC emitted during the removal from service/retirement of the unit, kilograms;

R_{NEW} = HFC used to fill new unit (omit if unit was precharged by the manufacturer), kilograms;

C_{NEW} = Nameplate capacity of new unit (omit if unit was pre-charged by the manufacturer), kilograms;

1 R_{RECHARGE} = HFC used to recharge the unit during maintenance and service, kilograms;
 2 R_{RECOVER} = HFC recovered from the unit during maintenance and service, kilograms;
 3 C_{RETIRE} = Nameplate capacity of the retired unit, kilograms; and
 4 R_{RETIRE} = HFC recovered from the retired unit, kilograms.
 5

6 **C.** Section 98.34 [Monitoring and QA/QC requirements] is modified as follows.

7 (1) A new sentence is added at the end of the introductory paragraph of 98.34(b)(3)(ii)(E):
 8 The equipment necessary to perform daily sampling and analysis of carbon content and molecular weight for
 9 refinery fuel gas shall be installed no later than January 1, 2012.

10 (2) [Reserved]

11 **D.** Section 98.36 [Data reporting requirements] is modified as follows.

12 (1) A new section 98.36(b)(11) is added: For units that generate electricity, nameplate
 13 generating capacity (MW) and net power generated (MWh) during the reporting year.

14 (2) A new section 98.36(b)(12) is added: For each cogeneration unit, indicate whether
 15 topping or bottoming cycle and provide useful thermal output as applicable, in mmBtu. Where steam or heat is
 16 acquired from another facility for the generation of electricity, report the provider and amount of acquired steam or
 17 heat in mmBtu. Where supplemental firing has been applied to support electricity generation or industrial output,
 18 report this purpose and fuel consumption by fuel type using the following units: (i) For gases, report in units of
 19 million standard cubic feet; (ii) For liquids, report in units of gallons; (iii) For non-biomass solids, report in units of
 20 short tons; (iv) For biomass-derived solid fuels, report in units of bone dry short tons.

21 (3) In subsection 98.36(d) the following subparagraphs are added as follows.

22 (a) 98.36(d)(1)(iv): Annual fuel consumption, if not reported under
 23 40 CFR part 75. (A) For gases, report in units of thousands of standard cubic feet. (B) For liquids, report in units of
 24 gallons. (C) For non-biomass solids, report in units of short tons. (D) For biomass solid fuels, report in units of
 25 bone dry short tons.

26 (b) 98.36(d)(1)(v): Average carbon content of each fuel, if used to compute CO₂
 27 emissions but not reported under 40 CFR part 75.

28 (c) 98.36(d)(1)(vi): Average high heating value of each fuel, if used to compute
 29 CO₂ emissions but not reported under 40 CFR part 75.

30 (d) 98.36(d)(1)(vii): For units that burn both fossil fuels and biomass, the annual
 31 CO₂ emissions from combustion of all fossil fuels combined and the annual CO₂ emissions from combustion of all
 32 biomass fuels combined. Reporting CO₂ emissions by type of fuel is not required.

33 (e) 98.36(d)(1)(viii): For units that generate electricity, nameplate generating
 34 capacity (MW) and net power generated (MWh) during the reporting year.

35 (f) 98.36(d)(1)(ix): For each cogeneration unit, indicate whether topping or
 36 bottoming cycle and provide useful thermal output as applicable, in mmBtu. Where steam or heat is acquired from
 37 another facility for the generation of electricity, report the provider and amount of acquired steam or heat in mmBtu.
 38 Where supplemental firing has been applied to support electricity generation or industrial output, report this purpose
 39 and fuel consumption by fuel type using the units in Paragraph 2 of Subsection D of 20.2.301.103 NMAC.

40 (g) 98.36(d)(2)(iv): The information required in paragraphs (d)(1)(iv) through
 41 (d)(1)(ix) of 40 CFR 98.36 [added as Subparagraphs (a) through (f) of Paragraph 3 of Subsection D of 20.2.300.103
 42 NMAC], as applicable.

43 (4) Subsection 98.36(e) is modified as follows:

44 (a) The introductory sentence of 98.36(e)(3) is modified to: "Within 20 days of
 45 receipt of a written request from the secretary, you shall submit explanations of the following:".

46 (b) The introductory sentence of 98.36(e)(4) is modified to: Within 20 days of
 47 receipt of a written request from the secretary, you shall submit the verification data and information described in
 48 paragraphs (e)(2)(iii), (e)(2)(v), and (e)(2)(vii) of this section.

49 **E.** Section 98.38 [Definitions] is modified as follows.

50 (1) The introductory sentence is modified to read: Except as specified in this section, all
 51 terms used in this subpart have the same meaning given in the Clean Air Act and subpart A of this part.

52 (2) The following definitions are added.

53 (a) "Bottoming cycle plant" means a cogeneration plant in which the energy input
 54 to the system is first applied to a useful thermal energy application or process, and at least some of the reject heat
 55 emerging from the application or process is then used for electricity production.

1 (b) "Cogeneration unit" means a stationary fuel combustion device which
 2 simultaneously generates electrical and thermal energy that is (i) used by the owner or operator of the facility where
 3 the cogeneration unit is located; or (ii) transferred to another facility for use by that facility.

4 (c) "Cogeneration system" means individual cogeneration components including
 5 the prime mover (heat engine), generator, heat recovery, and electrical interconnection, configured into an integrated
 6 system that provides sequential generation of multiple forms of useful energy (usually electrical and thermal), at
 7 least one form of which the facility consumes on-site or makes available to other users for an end-use other than
 8 electricity generation.

9 (d) "Liquefied petroleum gases (LPG)" means the mixture of hydrocarbon gases
 10 containing predominantly propane and smaller amounts of butane, propylene or other hydrocarbons, including
 11 standard grades such as HD-5, and sold commercially under the name "propane".

12 (e) "Pipeline quality natural gas" means natural gas having a high heat value greater
 13 than 970 Btu/scf and equal to or less than 1,100 Btu/scf, and which is at least ninety percent methane by volume and
 14 less than five percent carbon dioxide by volume.

15 (f) "Topping cycle plant" means a cogeneration plant in which the energy input to
 16 the plant is first used to produce electricity, and at least some of the reject heat from the electricity production
 17 process is then used to provide useful thermal output.

18 F. A new Table C-1a is added, as follows:
 19

Table C-1a of Subpart C—Fuels for which Tier 1 or Tier 2 Calculation Methodologies May Be Used

Fuel Type	Default High Heat Value	Default CO ₂ Emission Factor
Petroleum Products	mmBtu/gallon	kg CO ₂ /mmBtu
Distillate Fuel Oil No. 1	0.139	73.25
Distillate Fuel Oil No. 2	0.138	73.96
Distillate Fuel Oil No. 4	0.146	75.04
Kerosene	0.135	75.20
Liquefied petroleum gases (LPG)	0.092	62.98
Propane	0.091	61.46
Propylene	0.091	65.95
Ethane	0.096	62.64
Ethylene	0.100	67.43
Isobutane	0.097	64.91
Isobutylene	0.103	67.74
Butane	0.101	65.15
Butylene	0.103	67.73
Natural Gasoline	0.110	66.83
Motor Gasoline	0.125	70.22
Aviation Gasoline	0.120	69.25
Kerosene-Type Jet Fuel	0.135	72.22

20 [20.2.300.103 NMAC - N, 01/01/11]
 21
 22

23 **20.2.300.104 MODIFICATIONS, EXCEPTIONS AND OMISSIONS TO 40 CFR PART 98 SUBPART D**
 24 **– ELECTRICITY GENERATION.** Except as otherwise provided, the following modifications, exceptions and
 25 omissions are made to incorporated 40 CFR Part 98 Subpart D – Electricity Generation.

26 A. Section 98.46 [Data reporting requirements] is modified to: The annual report shall comply with
 27 the data reporting requirements specified in 40 CFR 98.36(d) and, if applicable, 40 CFR 98.36(c)(2) or (c)(3).

28 B. [Reserved]

29 [20.2.300.104 NMAC - N, 01/01/11]
 30

1 **20.2.300.105 MODIFICATIONS, EXCEPTIONS AND OMISSIONS TO 40 CFR PART 98 SUBPART P**
 2 **– HYDROGEN PRODUCTION.** Except as otherwise provided, the following modifications, exceptions and
 3 omissions are made to incorporated 40 CFR Part 98 Subpart P – Hydrogen Production.

4 **A.** Subsection 98.160(a) is modified to: A hydrogen production source category consists of facilities
 5 that produce hydrogen gas for use onsite or sold as a product to other entities

6 **B.** Section 98.163 [Calculating GHG emissions] is modified as follows.

7
 8 (1) For Equation P-1 in Subsection 98.163(b)(1), the factor CC_n is modified to mean:
 9 Weighted average carbon content of the gaseous fuel and feedstock, from the results of one or more analyses for
 10 month n for natural gas or from daily analysis for gaseous feedstocks other than natural gas (kg carbon per kg of fuel
 11 and feedstock).

12 (2) For Equation P-2 in Subsection 98.163(b)(2), the factor CC_n is modified to mean:
 13 weighted average carbon content of the liquid fuel and feedstock, from the results of daily sampling for month n (kg
 14 carbon per gallon of fuel and feedstock). Daily samples may be combined to generate a monthly composite sample
 15 for carbon content analysis.

16 (3) For Equation P-3 in Subsection 98.163(b)(3):

17 (a) CO₂ is modified to mean: Annual CO₂ emissions from fuel and feedstock
 18 consumption in metric tons per year (metric tons/yr); and

19 (b) the factor CC_n is modified to mean: weighted average carbon content of the
 20 solid fuel and feedstock, from the results of daily sampling for month n (kg carbon per kg of fuel and feedstock).
 21 Daily samples may be combined to generate a monthly composite sample for carbon content analysis.

22 **C.** Section 98.164 [Monitoring and QA/QC requirements] is modified as follows.

23 (1) Subparagraph 98.164(b)(2) is modified to: Determine the carbon content and the
 24 molecular weight monthly for natural gas. For other gaseous fuels and feedstocks (e.g., biogas, refinery gas, or
 25 process gas), daily sampling and analysis is required to determine the carbon content and molecular weight of the
 26 fuel and feedstock.

27 (2) Subparagraph 98.164(b)(3) is modified to: Determine the carbon content of fuel oil,
 28 naphtha, and other liquid fuels and feedstocks daily, or collect daily samples and determine the carbon content of a
 29 monthly composite sample.

30 (3) Subparagraph 98.164(b)(4) is modified to: Determine the carbon content of coal, coke,
 31 and other solid fuels and feedstocks daily, or collect daily samples and determine the carbon content of a monthly
 32 composite sample.

33 **D.** Section 98.166 [Reporting data requirements] is modified as follows.

34 (1) Subparagraph 98.166(b)(5) is modified to: Monthly or daily analyses of carbon content
 35 for each fuel and feedstock used in hydrogen production (kg carbon/kg of gaseous and solid fuels and feedstocks,
 36 kg carbon per gallon of liquid fuels and feedstocks).

37 (2) Subparagraph 98.166(b)(6) is modified to: Monthly or daily analyses of the molecular
 38 weight of gaseous fuels and feedstocks (kg/kg-mole) used, if any.

39 (3) A new subparagraph 98.166(b)(7) is added: Amount of carbon in unconverted feedstock
 40 for which GHG emissions are calculated and reported by your facility using other calculation methods provided in
 41 this regulation (metric tons CO₂e/year). For example, carbon in waste diverted to a fuel system or flare, where the
 42 CO₂ and CH₄ emissions are calculated and reported using other methods provided in 20.2.301 NMAC.
 43 [20.2.300.105 NMAC - N, 01/01/11]
 44

45 **20.2.300.106 MODIFICATIONS, EXCEPTIONS AND OMISSIONS TO 40 CFR PART 98 SUBPART Y**
 46 **– PETROLEUM REFINERIES.** Except as otherwise provided, the following modifications, exceptions and
 47 omissions are made to incorporated 40 CFR Part 98 Subpart Y – Petroleum Refineries.

48 **A.** Section 98.253 [Calculating GHG emissions] is modified as follows.

49 (1) In subsection (b)(1)(iii), the following subparagraphs are modified to read as follows.

50 (a) The introductory paragraph of subsection (b)(1)(iii): Alternative Method for
 51 Startup, Shutdown, and Malfunctions. For startup, shutdown, and malfunctions during which you were unable to
 52 measure the parameters required by Equations Y-1 and Y-2 of this section, determine the quantity of gas discharged
 53 to the flare separately for each start-up, shutdown, or malfunction, and calculate the CO₂ emissions as specified in
 54 paragraphs (b)(1)(iii)(A) and (b)(1)(iii)(C) of 40 CFR 98.253.

1 (b) Paragraph 98.253(b)(1)(iii)(A) is replaced as follows: For periods of start-up,
 2 shutdown, or malfunction, use engineering calculations and process knowledge to estimate the carbon content of the
 3 flared gas for each start-up, shutdown, or malfunction event.

4 (c) Paragraph 98.253(b)(1)(iii)(B) is omitted.

5 (d) Equation Y-3 in section 98.253(b)(1)(iii)(C) is replaced with:
 6

$$CO_2 = 0.98 \times 0.001 \times \left(\sum_{p=1}^n \left[\frac{44}{12} \times (Flare_{SSM})_p \times \frac{(MW)_p}{MVC} \times (CC)_p \right] \right) \quad \text{Equation 106-1}$$

8
 9 (2) The introductory paragraph in subparagraph 98.253(c)(2) is modified to: For catalytic
 10 cracking units and fluid coking units that do not use a continuous CO2 CEMS for the final exhaust stack, you must
 11 continuously or no less frequently than hourly monitor the O2, CO2, and (if necessary) CO concentrations in the
 12 exhaust stack from the catalytic cracking unit regenerator or fluid coking unit burner prior to the combustion of
 13 other fossil fuels and calculate the CO2 emissions according to the requirements of paragraphs (c)(2)(i) through
 14 (c)(2)(iii) of this section.

15 (3) Subparagraph 98.253(c)(3) is omitted.

16 (4) The following definitions for Equation Y-18 in section 98.253(i)(1) are modified as
 17 follows.

18 (a) f_{void} : Volumetric void fraction of coking vessel prior to
 19 steaming based on engineering calculations(cf gas/cf of vessel).

20 (b) MF_{CH_4} : Average mole fraction of methane in coking vessel gas based on the
 21 analysis of at least two samples per year, collected at least four months apart (kg-mole CH₄/kg-mole gas, wet basis).

22 (5) Section 98.253(k) is modified to read: For uncontrolled blowdown systems, you must
 23 use the methods for process vents in paragraph (j) of 40 CFR 98.253.

24 **B.** Section 98.254 [Monitoring and QA/QC requirements] is modified as follows.

25 (1) A new section 98.254(m) is added to read: For purposes of 40 CFR 98.34(b)(3)(ii)(E),
 26 the equipment necessary to take daily measurements of carbon content and molecular weight for refinery fuel gas
 27 shall be in place, and daily sampling and analysis shall therefore be required, by no later than January 1, 2012.

28 (2) [Reserved]

29 **C.** Section 98.256 [Data reporting requirements] is modified as follows.

30 (1) Subparagraph 98.256(e)(8) is modified to: If you use Equation 106-1 of Subsection A of
 31 20.2.300.106 NMAC, the number of SSM events, and the volume of gas flared (in scf/event) and the average
 32 molecular weight (in kg/kg-mole) and carbon content of the flare gas (in kg carbon per kg flare) for each SSM event.

33 (2) Subparagraph 98.256(f)(9) is omitted.

34 (3) Subparagraph 98.256(f)(10) is omitted.

35 (4) Subparagraph 98.256(m)(2) is modified to: The information required for process vents in
 36 40 CFR 98.256(l).

37 (5) Subparagraph 98.256(m)(3) is omitted.

38 **D.** Section 98.257 [Records that must be retained] is modified as follows.

39 (1) A new section 98.257(b) is added: For each process vent for which the concentration of
 40 CO2, N2O and CH4 are determined to be below the thresholds in 40 CFR 98.253(j), the owner or operator shall
 41 maintain records of the method used to determine the CO2, N2O, and CH4 concentration and all supporting
 42 documentation necessary to demonstrate the thresholds in 40 CFR 98.253(j) are not exceeded during the reporting
 43 year.

44 (2) [Reserved]

45 [20.2.300.106 NMAC - N, 01/01/11]

46
 47 **20.2.300.107 EMISSIONS FROM ACID GAS REMOVAL VENT STACKS.** The owner or operator shall
 48 report any non-combustion emissions of carbon dioxide from acid gas removal vent stacks as described in this
 49 section.

50 **A.** Calculating CO2 emissions. For AGR (including but not limited to processes such as amine,
 51 membrane, molecular sieve or other absorbents and adsorbents), calculate emissions for CO2 using equation 107-1.
 52

$$E_{a,CO_2} = (V_1 \times \%Vol_1) - (V_2 \times \%Vol_2) \tag{Equation 107-1}$$

Where:

E_{a,CO_2} = Annual volumetric CO2 emissions at ambient condition, in cubic feet per year.

V_1 = Metered total annual volume of natural gas flow into AGR unit in cubic feet per year at ambient condition.

$\%Vol_1$ = Volume weighted CO2 content of natural gas into the AGR unit.

V_2 = Metered total annual volume of natural gas flow out of the AGR unit in cubic feet per year at ambient condition.

$\%Vol_2$ = Volume weighted CO2 content of natural gas out of the AGR unit.

(1) If a continuous gas analyzer is installed, then the continuous gas analyzer results must be used. If continuous gas analyzer is not available, quarterly gas samples must be taken to determine $\%Vol_1$ and $\%Vol_2$ according to methods set forth in Subsection B of this section.

(2) Calculate CO2 volumetric emissions at standard conditions using calculations in Subsection C of this section.

(3) Mass CO2 emissions shall be calculated from volumetric CO2 emissions using calculations in Subsections D and E of this section.

B. All flow meters, composition analyzers and pressure gauges that are used to provide data for the GHG emissions calculations shall use measurement methods, maintenance practices, and calibration methods, prior to the first reporting year and in each subsequent reporting year using an appropriate standard method published by a consensus standards organization such as, but not limited to, ASTM International, American National Standards Institute (ANSI), and American Petroleum Institute (API). If a consensus based standard is not available, you must use manufacturer instructions to calibrate the meters, analyzers, and pressure gauges.

C. Volumetric emissions. Calculate volumetric emissions at standard conditions as specified in paragraphs 1 or 2 of this subsection.

(1) Calculate natural gas volumetric emissions at standard conditions by converting ambient temperature and pressure of natural gas emissions to standard temperature and pressure natural gas using equation 107-2.

$$E_{s,n} = \frac{E_{a,n} \times (460 + T_s) \times P_a}{(460 + T_a) \times P_s} \tag{Equation 107-2}$$

Where:

$E_{s,n}$ = Natural gas volumetric emissions at standard temperature and pressure (STP) conditions.

$E_{a,n}$ = Natural gas volumetric emissions at ambient conditions.

T_s = Temperature at standard conditions. (degrees Fahrenheit).

T_a = Temperature at actual emission conditions. (degrees Fahrenheit).

P_s = Absolute pressure at standard conditions (inches of mercury).

P_a = Absolute pressure at ambient conditions (inches of mercury).

(2) Calculate GHG volumetric emissions at standard conditions by converting ambient temperature and pressure of GHG emissions to standard temperature and pressure using equation 107-3.

$$E_{s,i} = \frac{E_{a,i} \times (460 + T_s) \times P_a}{(460 + T_a) \times P_s} \tag{Equation 107-3}$$

Where:

$E_{s,i}$ = GHG i volumetric emissions at standard temperature and pressure (STP) conditions.

$E_{a,i}$ = GHG i volumetric emissions at actual conditions.

T_s = Temperature at standard conditions. (degrees Fahrenheit).

T_a = Temperature at actual emission conditions. (degrees Fahrenheit).

P_s = Absolute pressure at standard conditions (inches of mercury).

1 P_a = Absolute pressure at ambient conditions (inches of mercury).
 2

3 **D.** CO2 volumetric emissions. Calculate CO2 volumetric emissions at standard conditions as
 4 specified in paragraphs 1 and 2 of this section.

5 (1) Estimate CO2 emissions from natural gas emissions using Equation 107-4.
 6

$$7 \quad E_{s,CO2} = E_{s,n} \times M_{CO2} \quad \text{Equation 107-4}$$

8
 9 Where:

10 $E_{s,CO2}$ = CO2 volumetric emissions at standard conditions.

11 $E_{s,n}$ = Natural gas volumetric emissions at standard conditions.

12 M_{CO2} = Mole percent of CO2 in the natural gas.
 13

14 (2) For Equation 107-4 of this section, the mole percent of carbon dioxide, M_{CO2} , shall be the
 15 annual average mole percent of carbon dioxide in feed natural gas for all emissions sources upstream of the de-
 16 methanizer and CO2 mole percent in facility specific residue gas to transmission pipeline systems for all emissions
 17 sources downstream of the de-methanizer overhead for onshore natural gas processing facilities. If you have a
 18 continuous gas composition analyzer on feed natural gas, you must use these values in calculating emissions. If you
 19 do not have a continuous gas composition analyzer, then quarterly samples must be taken according to methods set
 20 forth in Subsection B of this section.

21 **E.** CO2 mass emissions. Calculate CO2 mass emissions in carbon dioxide equivalent at standard
 22 conditions by converting the CO2 volumetric emissions into mass emissions using Equation 107-5 of this section.
 23

$$24 \quad Mass_{s,CO2} = E_{s,CO2} \times \rho_{CO2} \times GWP \times 10^{-3} \quad \text{Equation 107-5}$$

25
 26 Where:

27 $Mass_{s,CO2}$ = CO2 mass emissions at standard conditions in metric tons CO2e.

28 $E_{s,CO2}$ = CO2 volumetric emissions at standard conditions, in cubic feet.

29 ρ_{CO2} = Density of CO2, 0.053 kilograms per cubic foot.

30 GWP = Global warming potential, 1 for CO2.
 31

32 **F.** Procedures for estimating missing data. A complete record of all estimated and/or measured
 33 parameters used in the GHG emissions calculations is required. If data are lost or an error occurs during annual
 34 emissions estimation or measurements, you must repeat the estimation or measurement activity for those sources as
 35 soon as possible, including in the subsequent reporting year if missing data are not discovered until after December
 36 31 of the reporting year, until valid data for reporting is obtained. Data developed and/or collected in a subsequent
 37 reporting year to substitute for missing data cannot be used for that subsequent year's emissions estimation. Where
 38 missing data procedures are used for the previous year, at least 30 days must separate emissions estimation or
 39 measurements for the previous year and emissions estimation or measurements for the current year of data
 40 collection.

41 **G.** Data reporting requirements. In addition to the information required by 40 CFR 98.3(c), the
 42 owner or operator of each natural gas processing shall include in each annual report the following information for
 43 each acid gas removal unit:

- 44 (1) total volume of natural gas flow into the acid gas removal unit;
- 45 (2) total volume of natural gas flow out of the acid gas removal unit;
- 46 (3) volume weighted CO2 content of natural gas into the acid gas removal unit; and
- 47 (4) minimum, maximum and average throughput for the acid gas removal unit.

48 **H.** Records to be retained. In addition to the information required by 40 CFR 98.3(g), the owner or
 49 operator shall retain the following records:

- 50 (1) dates on which measurements were conducted;
- 51 (2) results of all emissions detected and measurements;
- 52 (3) calibration reports for detection and measurement instruments used; and
- 53 (4) inputs and outputs of calculations or emissions computer model runs used for engineering
 54 estimation of emissions.

1 [20.2.300.107 NMAC - N, 01/01/11]